

# SUPPLEMENTAL CONDITIONS

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### **1.0 GENERAL**

These Supplemental Conditions, along with the General Terms and Conditions are part of the subcontract. Inconsistencies shall be resolved in the order of precedence stated in the General Terms and Conditions. The term Seller shall include all of the Seller's lower-tier subcontractors.

Companies responding to Requests for Proposals for Construction work shall submit a copy of their Corporate QA and ES&H Programs to the Company for approval prior to award of the subcontract.

Normal Construction work hours are 7:00 a.m. – 5:30 p.m., Monday through Thursday. The Company observes the holidays specified in the Construction Labor Agreement for crafts persons. The Company will process submittals and Seller requests for training, badges, vehicle access, and permits during normal Construction work hours only. The Seller shall obtain Company approval in writing at least two (2) calendar weeks in advance of scheduling work outside the normal Construction work hours.

The Seller shall work safely and professionally in compliance with the subcontract. 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.

The Seller shall ensure compliance with Company's warning systems for the project including evacuation alarms, accountability rosters, location of assembly points, etc.

In the event of an emergency or fire while within the Y-12 National Security Complex (NSC) boundary, a cell phone or a phone on the Y-12 plant system may be used to contact the Plant Shift Superintendent's (PSS) office at 574-7172. Dialing 911 from a cell phone does not contact the Y-12 Plant's emergency services and will therefore delay assistance.

Forms commonly used in the execution of subcontracted work are contained in Appendix A, *Forms*.

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### **2.0 ACTIVITIES TO BE COMPLETED BEFORE STARTING FIELD WORK**

After being awarded the Subcontract, the Seller shall complete to the Company's satisfaction certain Company-designated preliminary activities before the Company issues a formal written Notice-to-Proceed authorizing the Seller to mobilize. The following items require formal written Company approval. They consist of plans for organizing, staffing, scheduling, directing, and controlling the execution of the work safely in a manner that achieves the goals of the Subcontract, protects the environment, and minimizes impact on other plant activities.

#### **2.1 Plans**

##### **2.1.1 *Work Plan***

The Seller shall submit a Work Plan specific to the scope of the subcontract. It shall include activity sequencing, labor, equipment, lower-tier subcontractors, work locations, work start authorization methodology, permits, outages, Company services required, accident/incident response, material storage and control including, material delivery, receipt, inspection, non-conforming material control, methodology for incorporation of storage requirements, inventory control, hazardous material control, and maintenance of warranties. It shall describe the methods of complying with the security requirements identified by the Company. It shall describe the control of specific processes, materials, and equipment such as welding, hoisting and rigging, fall prevention harnesses, electrical hazards, respirators, negative air machines, radiological sources, etc. It shall list atypical or special processes, operations, or systems requiring non-standard personnel safety systems, i.e., those that are not specifically addressed under OSHA Construction Standards 29 CFR 1926, OSHA General Industry Standards 29 CFR 1910, or National Consensus Standards. Examples of these include but are not limited to engineered work platforms, construction aids, shop built equipment and specialty processes involving proprietary information, hot tapping, etc. The hazards and risks associated with atypical processes along with mitigating controls shall be presented in the Activity Hazard Analysis (AHA). If requested by the Company, the Seller shall provide supporting calculations, tests, evaluations, proprietary information, etc.

##### **2.1.2 *Baseline Schedule***

Seller shall submit the initial schedule to the Company within two calendar weeks after Notice of Award. The Schedule shall include the Seller's work activity sequence in sufficient detail to provide assurance that it encompasses the entire scope of the subcontract and to serve as a basis for the Company's internal planning and interfacing activities, e.g., outages, road closures, etc. The schedule shall allow for uncertainties of weather. The basis of rain, temperature, etc. shall be data from the National Climatic Data Center (NCDC) for Oak Ridge, Tennessee ([www.ncdc.noaa.gov](http://www.ncdc.noaa.gov)). Weather conditions that lie within 30-year historical norms as measured by the NCDC for Oak Ridge, Tennessee, shall not be considered an excusable delay. Once the Company formally approves the Seller's initial schedule in writing, it becomes the baseline schedule for the subcontract. The Company's approval does not relieve the Seller's responsibility for schedule logic, feasibility, activity selections, durations, etc.

The Schedule shall be a Critical Path Method (CPM) Schedule presented in graphic format.

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#### **2.1.3      *Quality Assurance/Quality Control (QA/QC) Plan***

The Seller shall submit a QA/QC Plan that is specific to the subcontract and that defines the methodology for identifying activities requiring documentation and other quality criteria applicable to the Scope of the subcontract. It shall include all applicable elements of NQA-1-2008, define how the requirements will be implemented, and address all applicable codes and standards. It shall describe the methodology and processes for flowing down the applicable QA/QC requirements to the Seller's lower tier subcontractors, ensuring that all work is performed by qualified personnel, controlling technical documents in the Subcontract, controlling measuring and test equipment, and executing witness and inspection hold points.

#### **2.1.4      *Vehicle or Pedestrian Traffic Plan***

Two (2) calendar weeks in advance of required road or pedestrian closings, the Seller shall submit for Company approval a Traffic Control Plan identifying traffic routes, road closures, lane closures, and potential impediments to Company emergency vehicles. The traffic control plan must conform to American National Standards Institute (ANSI) D 6.1 and Manual of Uniform Traffic Control Devices (MUTCD) Part 5. The Seller shall provide adequate concrete barriers at open trenches adjacent to vehicle traffic. Substitutes for concrete barriers require Company approval. When pedestrian traffic is affected, the plan shall include pedestrian walkways and maximize building access. Pedestrian areas shall be flagged with orange plastic barrier fencing and applicable signs. The Seller shall provide structurally sound walkways over open excavations. The Seller shall provide ramping and protection for hoses and cords that cross pedestrian walkways or roads. The Seller shall inspect and repair temporary vehicular or pedestrian structures each normal plant work day.

#### **2.1.5      *ES&H Plan***

The ES&H Plan shall be specific to the Subcontract and shall describe how the Seller's Corporate ES&H Program will be implemented including the following:

- Seller roles and responsibilities for compliance with requirements, including means for ensuring supervisors, ES&H Representative, workers, and lower tier subcontractors analyze the work to define hazards.
- Methods to ensure employees: have the requisite knowledge, training, certification, and skills to discharge ES&H responsibilities; maintain awareness of their rights and obligations to report unsafe work conditions and express ES&H-related concerns without reprisal; understand hazards and risks, and how to mitigate them; and have the requisite knowledge, training, certification and skill to perform work activities and operate equipment/tools.
- An environmental Best Management Practices (BMP) plan for all construction and demolition work.
- A written blood borne pathogen exposure control plan for work activities that have a potential for exposing employees to blood borne pathogens (e.g., personnel qualified in first-aid) including training records.
- A written Hazard Communication Program Plan per 29 CFR 1910.1200 & 1926.59. Seller shall maintain a comprehensive list of chemicals used or stored onsite and will update this list monthly.
- Exposure action levels for compounds or contaminants to which Seller's employees are expected to be exposed while working on the Subcontract.
- Credentials of any laboratories to be used during the Subcontract.
- Seller programs, requirements, and procedures for confined space work, fall protection, respiratory protection, PPE, hazard communication, noise exposure, thermal stress, machine

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guarding, lockout-tagout, hoisting and rigging, excavation/penetration work, hot work, emergencies, first aid and other work activities.

- Processes to control, inspect, certify, maintain, and repair equipment and tools, including emergency equipment.
- Disciplinary program for violations of ES&H requirements.
- Processes for self-assessment and safety inspection, sampling, and monitoring.
- Processes for securing and preserving accident, injury, spill, release, fire, near miss, or other abnormal event scenes, obtaining personnel statements, determining event chronology, investigation and reporting.
- Processes for periodic reporting and document management.
- Incorporation of National Association of Demolition Subcontractors Demolition Safety Manual as guidance for good practices on demolition projects.
- Method of implementing changes to the ES&H Plan.

#### ***2.1.6 Activity Hazard Analysis (AHA)***

The AHA shall be specific to the work on the Subcontract. If Company characterization data is provided, the Seller shall use it as well as additional characterization data obtained by Seller to develop the AHA. The AHA shall define the work activities and identify associated hazards that could adversely affect health, safety, or the environment. It shall identify specific actions to eliminate or minimize each hazard and shall address permit requirements, hold points, training, engineering and administrative controls, personal protective equipment (PPE), etc. It shall be signed by the Seller certifying that it that the AHA requirements will be met. The AHA and subsequent revisions shall have an issue date on the cover page. If work activities or conditions change to the extent that different or additional hazards may be present, the Seller shall revise the AHA and obtain written Company approval before proceeding.

#### ***2.1.7 Tennessee Department of Environmental Compliance (TDEC) Construction General Permit (GCP)***

If the Subcontract involves disturbance of one (1) acre or more, the Seller shall employ a Competent Person to prepare a Construction General Permit (CGP). The Competent Person shall be a licensed Professional Engineer, Landscape Architect, or a Certified Professional in Erosion and Sediment Control (CPESC), and have successfully completed the sixteen (16) hour "Level II Design Principles for Erosion Prevention and Sediment Control for Construction Sites" course. The CGP shall contain the Tennessee Department of Environment and Conservation (TDEC) Notice of Intent (NOI) for General National Pollutant Discharge Elimination System (NPDES) Permit for Stormwater Discharges from Construction Activities, Form CN-0940 and a comprehensive Stormwater Pollution Prevention Plan (SWPPP). No construction activities shall commence until the Seller receives the TDEC Notice of Coverage (NOC) document. The Seller shall provide copies of the CGP and NOC to the Company. The Seller shall submit TDEC approved revisions to the SWPPP and copies of the twice-weekly TDEC Construction Storm Water Inspection Certification Forms (Inspection Reports) to the Company. The Inspection Reports shall be prepared by a Competent Person who is a certified Tennessee Erosion Prevention and Sediment Control Inspector.

#### ***2.1.8 Plan for Turnover, Testing, and Start-Up***

The Seller shall identify the methodology to be used to transition ownership of systems, structures, and components within the scope of the subcontract including requesting final inspection for areas, rooms and/or systems, configuration control of turned over items (as-constructed drawings/specifications), startup and test and warranties.

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### **2.2 Organization and Staffing**

The Company must approve the individuals filling the following positions. The Seller shall assign Company-approved individuals for the duration of the Subcontract and may submit alternates for Company approved positions:

- Project Manager
- Superintendent
- QA/QC Manager
- Others Specifically Designated in the Scope of Work

The Superintendent and the ES&H Representative must be full time positions and must be on site any time field work is being performed.

#### **2.2.1 Project Manager**

This position requires a minimum of seven (7) years combined experience with project management and supervisory experience in managing work.

#### **2.2.2 Superintendent**

This position requires a high school diploma or equivalent (GED) or related training, such as graduation from a Building Trades Apprentice Training program. The candidate shall have a minimum of five (5) years of experience supervising craftsmen during the performance of construction projects. The candidate shall be knowledgeable of general construction processes, building codes, and worker protection methods to ensure worker safety.

#### **2.2.3 ES&H Representative**

This position requires, as a minimum, a four-year technical degree in an ES&H discipline plus three (3) years safety and health experience in a related construction work environment. Experience with Department of Energy related work is preferred and may be substituted for the technical degree if approved by the Company. The ES&H Representative must have completed "Occupational Safety and Health Standards in the Construction Industry" 30-hour training course (OTI 510) or equivalent and must have understanding of TDEC or General Storm Water Permit requirements. Additionally, the ES&H Representative must produce three (3) professional references having first-hand knowledge of the candidate's safety and health experience. The Seller's ES&H Representative shall be a full time position and have no other responsibilities unless Company approves otherwise in writing.

#### **2.2.4 Competent Persons**

The Seller shall identify all employees to be designated as "Competent Persons" in specific operations. Competent Person is defined as one who is capable of identifying existing and predictable hazards in the surroundings or working conditions which are unsanitary, hazardous, or dangerous to employees, and who has authorization to take prompt corrective measures to eliminate them. Seller shall provide documentation of certification, training, and experience. Examples of operations requiring "Competent Persons" include but are not limited to scaffolding, excavation, lead, asbestos, hoisting, rigging, signal persons, Tennessee Erosion Prevention & Sediment Control Program (EPSC) Level I certified person for subcontracts disturbing one acre or more and electrical inspector qualified in accordance with National Fire Protection Association (NFPA) 70 and 70E. Competent Persons shall remain on site when work requiring their observation is in progress.

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### **2.3 First Aid**

Seller shall have one person certified to administer first aid and cardiopulmonary resuscitation (CPR) on-site when work is being performed and shall have a first aid log with sufficient information to trend injuries and replenish first aid supplies. Seller shall provide first aid supplies and fire extinguishing equipment in accordance with 29 CFR 1926.23 and 29 CFR 1926, Subpart F. The Seller shall immediately notify the Subcontract Technical Representative (STR) of an injury requiring first aid.

### **2.4 Submittals**

For the purposes of the subcontract, a submittal shall be defined as a document that requires written approval by the Company before the Seller is allowed to proceed past a designated milestone (e.g., mobilization, hoisting of a certain component, etc.) The Company will furnish a list of required submittals to the Seller based upon the scope of the subcontract (see Appendix B, *Submittals*). In contrast, the Seller is also required by the General Terms and Conditions and the Supplemental Conditions to provide various reports, correspondence, and forms to the Company on a routine or event (e.g., vehicle accident or injured employee) basis. Such documents are not considered submittals. Routine reports are listed on Appendix C, *Periodic Reports*.

#### **2.4.1 Submittal Types**

- Technical documents that will be approved by Y-12 Engineering.
- Management documents that describe how the Seller will plan, organize, direct, and control safety, security, quality, schedule, and other aspects of the work within the scope of the subcontract. These documents will be approved by Company subject matter experts within the Quality, Environmental, Safety & Health, RADCON, Industrial Hygiene, Fire Protection, and/or Waste Management organizations.
- Commercial documents that will be approved by the Subcontract Administrator assigned to the Subcontract.

#### **2.4.2 Submittal Transmittal and Administration**

The Seller shall electronically transmit Submittals to the Construction Document Management Center (CDMC) in PDF file format, be legible, and be attached to Construction form CFN-0095, Submittal Transmittal Form. Each submittal shall have a unique CFN-0095, Submittal Transmittal form (only one Submittal per form), and shall be numbered on every page in a manner that indicates the page sequence and total number of pages in the document (e.g., for a 25-page document, begin with Page 1 of 25). If there are attachments to the Submittal, they shall be labeled as such, and be clearly identified on the Submittal Transmittal Form.

### **2.5 Training**

See Appendix D, *Training Requirements Matrix*, for Company and Seller provided training requirements.

#### **2.5.1 Company-Provided Training**

The Company will provide and document General Employee Training (GET) and other specifically designated Y-12 training at no cost to the Seller. The Seller shall bear all other associated costs (e.g., employee pay, travel, meals, lodging, etc.) The Seller shall notify the Company of employee furloughs or terminations within 2 days so that the Company can inactivate training records to avoid Seller training compliance deficiencies. The Seller shall

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turn in UCN-21364, Subcontractor Request for Y-12 National Security Complex Training, to the Company two (2) calendar weeks in advance of need.

#### **2.5.2 Seller-Provided Training**

The Seller is responsible for providing personnel who are trained and qualified in the skill of their craft, discipline, or specialty. The Seller is responsible for providing its employees all non-Y-12 specific training required by Federal and State laws, codes, and standards or required for the employee to be able to perform the work assigned by the Seller. Revision to task-specific documents (e.g., AHAs, Work Plans) requires re-training of the Seller's personnel. Seller shall document training and provide records to the Company upon request.

#### **2.6 Areas Assigned to the Seller**

Seller shall maintain excellent housekeeping in all assigned areas and shall immediately correct deficiencies noted by the Company. The Seller shall sweep, mow, and otherwise maintain all assigned areas in an orderly manner that presents a clean, professional appearance at all times. Items that are not needed in the near term, such as excess supplies, unneeded tools and equipment, broken items, items being cannibalized for spare parts, etc., shall be removed from the Y-12 site. The area and the items stored within it shall be organized to facilitate ease of access and minimize movement, i.e., tools, materials, equipment, etc., shall be arranged and stored according to their size, weight and frequency/urgency of use. Items shall be segregated by type, and containers shall be labeled to indicate their current contents. An adequate size and number of trash receptacles shall be provided by the Seller. The Seller shall ensure the availability of the fire protection and suppression equipment required by 29 CFR 1926, Subpart F. Fire Extinguisher shall be Nationally Recognized Testing Laboratory (NRTL) listed, appropriately sized, properly spaced, and properly selected for the jobsite hazards. A documented inspection shall be performed on all in-service fire extinguishers by the Seller on a monthly basis. Inspection criteria shall conform to the requirements listed in NFPA 10.

Seller shall furnish and install fencing, flagging, signs, and barricades for storage and work areas. All areas shall be fenced unless approved in writing by the STR. Fencing material shall be 48" high, orange plastic, Vallen Safety, catalog number FNC-450 or equal. Signs shall be posted indicating the title and number of the subcontract and the Seller's name as well as the names and contact information of the Company STR and the Seller's Project Manager, Superintendent, Safety Manager and other appropriate Seller management and staff personnel. The following signs shall be posted at appropriate locations in the Seller controlled area:

- OSHA Job and Health Safety Protection
- Equal Employment Opportunity is the Law
- Employee Rights Under the Fair Labor Standards Act
- Employee Rights and Responsibilities Under the Family and Medical Leave Act
- Uniformed Services Employment and Reemployment Rights Act
- Employee Rights Under the Davis Bacon Act
- Employee Rights on Government Contracts
- Employee Polygraph Protection Act
- Employee Rights for Workers with Disabilities Paid at Special Minimum Wages
- Job Loss? Extend Your Health Care Coverage
- This Employer Participates in E-Verify
- If You Have The Right to Work Don't Let Anyone Take It Away

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- TOSHA Safety and Health
- TN Unemployment Insurance
- TN Worker's Compensation Posting Notice
- TN Discrimination in Employment
- Affirmative Action Programs for Veterans and Persons with Disabilities
- Anti-Harassment Policy
- DOE Employee Concerns
- The Secretary's Statement on the Employee Concerns Program
- DOE Employee Concerns – Reporting Form
- DOE Office of Inspector General Hotline
- DOE, You Have a Right to a Safe and Healthful Workplace
- Worker Protection for DOE Contractor Employees
- Your Rights Under the Energy Reorganization Act
- Occupational Noise and Exposure Standard and Hearing Conservation Amendment

The Seller shall remove all fencing, barriers, barricades, signs, and other temporary items upon completion of the work.

### **2.6.1 Temporary Electrical and Water Service**

The Seller is responsible for furnishing, installing, maintaining, and removing temporary lines and distributing equipment to existing Y-12 electric and water utilities. Tie-in and disconnection to Y-12 utilities will be performed by the Company. Seller consumption of Company-provided electricity and water is at no cost to the Seller.

### **2.6.2 Electrical**

If electric power is not available, Seller shall provide portable power, with ground fault circuit interrupters for temporary electrical lines in accordance with NFPA 70 (NEC) requirements. The Seller's electrical installation of temporary facilities shall pass an inspection by the Y-12 Authority Having Jurisdiction (AHJ) prior to tie-in to the Y-12 distribution system or connection to a portable generator greater than 5KW.

### **2.6.3 Water**

The Company will provide a water source at existing locations, and will furnish and install backflow preventers on all hydrants to be used by the Seller. The Seller shall notify the STR, who will contact the Company Fire Department prior to initial use of fire hydrants. The Seller is responsible for providing distribution lines (e.g., hoses, nozzle) from the backflow preventer/water source to the work area. Seller shall provide booster pump(s) if necessary. The Seller shall provide portable water holding tanks with discharge pumps or mobile water tanker where Company does not provide a water source convenient to the Seller's work area.

### **2.7 Chemical Toilets**

The Seller shall provide chemical toilets, pump them out, and maintain them in a safe and sanitary condition.

### **2.8 Temporary Structures**

Temporary structures shall conform to the International Building Code. Temporary structures include office trailers, change facilities, and other structures that will be removed upon completion of the work. Company approval is required prior to the Seller setting up any temporary structures. Maximum height for temporary structures is 30 feet. Temporary

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structures shall be located a minimum of 35 feet from existing buildings. A platform, stairs, and handrails shall be provided at each exterior door. Steps shall have a non-skid surface. If the temporary structure is a trailer, it shall be anchored and supported in accordance with ANSI A225.1 and NFPA 501A.

#### **2.9 Material Storage and Control**

The Seller shall obtain written approval from the Company prior to staging material in a height higher than 12 feet. Stockpiles of soil and aggregate material with a natural angle of repose are exempt. Seller shall notify the Company of changes in deliveries or circumstances that affect timely delivery of equipment, materials, and services. Seller is responsible for all costs related to the acquisition and care of all Seller-purchased equipment and materials. Permanent materials shall be delivered in a new condition and the Seller shall handle, protect and maintain them according to manufacturer's instructions. Manufacturer's instructions may include such activities as rotating the shafts of equipment to prevent permanent deflection or storing sensitive instrumentation in temporary warehouses having controlled humidity and temperatures. Seller shall protect materials, equipment and the environment, and shall comply with Federal and State regulations, including use of covered storage if necessary to prevent pollution from storm water. Seller shall document compliance with all requirements and shall provide records to the Company upon request. Damaged materials shall be replaced or repaired at the Seller's expense, including all expediting expenses. Repairs require Company approval.

All bills of lading for deliveries shall be addressed to the Seller and state the specific delivery location and point of contact. The Company will not accept deliveries for the Seller. Seller shall identify materials delivered to Y-12 with a weather-resistant tag or label with Seller's name and contact information, subcontract number, and contents. Only materials and equipment used in the performance of currently active Subcontracts may be stored at Y-12 Complex.

The Seller shall be responsible for all loss, destruction, or damage to Seller material (including work in progress). Seller shall limit storage to areas designated by the Company. Excess government owned material and equipment shall be returned to the Company. All other excess material and equipment shall be removed from the Y-12 Complex by the Seller.

#### **2.10 Regulatory Requirements**

The following regulatory requirements are incorporated by reference:

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

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### **3.0 COMMUNICATION**

Before starting work, the Seller shall orient workers to Seller's corporate programs and scope specific plans that are applicable to the scope of the subcontract. Examples include the Workplace Substance Abuse Program, ES&H Plan, Work Plan, QA/QC Plan, Material Safety Data Sheets (MSDS), AHA, etc. The orientation shall be documented.

#### **3.1 Pre-Shift and Post-Shift Briefings**

The Seller shall conduct and document a daily Pre-Shift Briefing with employees and visitors prior to beginning each shift's work activities or when conditions change, and for others reporting after the start of shift work activities. The Seller shall conduct and document a Post-Shift Briefing at the end of each work shift and note crew feedback and any unusual events occurring during that shift. Sign-in sheets for the Pre- and Post-Shift Briefings shall be provided to the STR on the next workday. The Pre-Shift Briefing shall include scope of work, hazards, and controls associated with the work. The chemicals to be used, the hazards associated with them, methods for detection of presence or release, protective measures, and location of MSDS and labeling information shall be included in the briefings as well as the applicable parts of the Task-Specific Activity Hazard Analysis (AHA), redlines or revisions to the Task-Specific AHA, training requirements, any particular security, radiological, or environmental concerns/conditions, tools, materials, and equipment needed, hold or witness points for quality, safety, etc., identification of manufacturers' material installation and equipment operating instructions, work Permit requirements (Radiological, Excavation, Hot Work, Beryllium etc.), and feedback from the crew to ascertain that they understand the Pre-Shift Briefing or to share information.

#### **3.2 Schedule Revisions and Weekly Updates**

Changes to the accepted schedule sequence shall be discussed with the Company and may require a revised baseline Schedule to be provided by the Seller for acceptance by the Company. Weekly schedule updates shall show both the baseline Schedule and current status of activities. Seller shall provide copies of the Schedule updates and a 3-week look-ahead schedule for the weekly Progress Meetings.

Company acceptance of subsequent revisions to the baseline Schedule is also required prior to approval of Applications for Payment.

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 recover schedule. The Company may require the Seller to provide a recovery plan and a schedule in the same format as the original schedule. If the Company determines that the Seller is not executing the work in a manner that ensures completion within the subcontract period of performance, the Company may, in addition to any other remedy, perform or have the work performed by others on behalf of the Seller and deduct the cost incurred from the subcontract value.

Extensions of the Subcontract period of performance shall be granted only via Subcontract Modification. In the event the Company changes the Subcontract period of performance, the Seller shall provide a revised baseline Schedule to the Company for acceptance within eight (8) workdays after receipt of the Subcontract Modification changing the period of performance. Extensions of time to the Subcontract completion date will be granted only to the extent that activities adjusted due to a Subcontract Modification or delays affect the Seller's critical path and Subcontract completion date.

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### **4.0 ES&H**

#### **4.1 Seller's ES&H Representative's Responsibilities**

The Seller's ES&H Representative shall have the following responsibilities:

- Meet with Company prior to start of on-site work to establish evacuation instructions, site access control, fire protection, spill response and control, emergency management, medical and drug testing, and reporting.
- Ensure that workers have read, understand, and have documented the Seller's AHA and all Company provided permits, e.g., Radiation Work Permit (RWP), Excavation Permit, Confined Space Permit, Lockout Tag Out (LOTO) Permit, etc.
- Perform daily ES&H inspections.
- Ensure stop or suspend work deficiencies are corrected and work start authorization received before resumption of work.
- Ensure barriers and postings are adequate and in place.
- Conduct (or participate in) and document daily ES&H briefings (at beginning and end of each work shift) with workers to discuss the day's tasks, hazards, relevant ES&H topics, and follow-up to obtain feedback.
- Implement and evaluate the effectiveness of the Seller's work related to ES&H, correct problems, and continuously improve.
- Maintain documentation of inspections, briefings, and meetings.
- Participate in all safety meetings with workers.
- Ensure workers review and sign off as having read and understood the Seller's AHA and Company's RWP for the work being performed before entering the work area.
- Ensure workers have reviewed permits for the work being performed before beginning permitted work.
- Serve as the Seller's point of contact for ES&H concerns.
- Administer the ES&H Plan including any changes.
- Review and analyze injury and illness reports and investigate accidents.
- Participate in ES&H-related investigations, approve corrective actions, and maintain records.
- Ensure housekeeping is maintained and work and laydown areas are kept clean and free of tripping hazards, pathways remain open, fire prevention is implemented, and storm water pollution prevention controls are maintained.
- Post all ES&H-related permits in a designated area at the work area.
- Initiate timely corrective actions to deficiencies identified by self-assessments, inspections, investigations, or Company oversight.
- Review training records and ensure each individual's training and certifications are current to meet job requirements.
- Ensure environmental compliance requirements are met and environmental inspections are completed and documented in a timely manner.
- Ensure monitoring is performed and maintain current exposure assessments for noise, thermal stress, and hazardous chemical and physical agents, as applicable.
- Maintain and submit monthly updates of the Hazardous Material Inventory Report (HMIR) and Material Safety Data Sheets (MSDS) for products being stored or in use.
- Ensure sub-tier subcontract personnel work safely by coordinating briefings, training, and oversight activities needed.

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### **4.2 Clean Water Compliance**

Water discharge authorization shall be obtained from the Company prior to discharging water to the storm or sanitary sewer system, unless specifically permitted. The Seller shall immediately report leaks or spills to the STR and to the Y-12 Plant Shift Superintendent (PSS) office.

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

- Plug all drain openings inside the building being demolished before contaminants are removed and demolition begins. Safeguard building floor drains adjacent to work areas from debris.
- Cover storm drains adjacent to the work area with filter fabric or other appropriate materials to protect storm drains from debris and sediment generated by work activities.
- Implement and maintain erosion controls (e.g., straw bales, silt fence, sandbags) and stabilize bare soil areas within the work area.
- Cover contaminated waste stockpiles to protect against migration from wind and storm water.
- Protect raw materials and new supplies from storm water and high winds.
- Identify potential sources of storm water pollution and inspect them periodically (e.g., transformers, generators, equipment, etc.) and correct any deficiencies.
- After removal of demolition debris and/or completion of construction activities, remove sediment, paint chips, and other wastes that have been collected near drains and erosion control devices.

The Seller shall maintain a container marked "Spill Kit" with absorbent materials and other controls consistent with the hazardous materials present at the work area to assist in spill control.

Provide secondary containment for stored hazardous or regulated liquids and solid items that may contain these liquids (e.g., batteries, motors). A secondary containment shall be set up on level ground and be able to hold 100% of the volume of the largest container or 10% of the total volume of all the containers, whichever is larger. Secondary containment shall be leak tight and compatible with the contents of the containers. A minimum of 20 mil plastic shall be used when half pipe berm and plastic liner is used for secondary containment. Berm shall have 6" height or higher. A 6 oz. or more geotextile mat shall be used under the plastic liner.

Equipment with free oils or oil residue that could become mobile if exposed to rain water should be wrapped in plastic if stored outside.

Equipment and/or material with metal dust, loose rust, metal cuttings and/or other pollutants which are to be stored outside shall have the pollutants removed and/or be wrapped/covered (plastic wrap) in a manner to prevent dissemination of the pollutants into the environment.

### **4.3 Safety**

The Seller shall perform work in a manner that provides safe working conditions and protects workers' health, minimizes potential risk, protects the public and the environment, prevents pollution, complies with applicable regulations, and continuously seeks opportunities to

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improve performance. Subcontractors at any tier are subject to civil penalties for failure to comply with applicable 10 CFR 851, Worker Safety and Health Program requirements.

#### **4.3.1 Orientation**

Before starting work, the Seller shall provide an orientation of the Workplace Substance Abuse Program, ES&H Program, the task-specific ES&H Plan and other plans, Hazard Communication, Hazardous Materials Information System (HMIS), and task-specific Activity Hazards Analysis (AHA) to on-site employees.

The Seller shall document the orientation and provide records to the Company. The Seller shall inform workers of their rights and responsibilities.

#### **4.3.2 Stop/Suspend Work Authority**

The Seller shall ensure that all workers are informed of their authority to stop/suspend work, without reprisal by management or co-workers, when a situation exists which will place them, their co-worker(s), or the environment in imminent danger. The Seller is responsible for costs incurred when either the Seller or the Company stops or suspends work under this provision and the Seller shall not be entitled to an adjustment under the Suspension of Work clause in the General Terms and Conditions. These provisions supplement the Environment, Safety & Health clause of the General Terms and Conditions but do not modify or alter any provisions in the General Terms and Conditions.

"Stop Work" is defined as stopping the task or activity that poses imminent danger to human health and/or the environment. The resolution of a "Stop Work" requires the Seller to write a corrective action plan and provide it to the Company for approval. Resumption of work requires Company authorization.

"Suspend Work" is defined as temporarily interrupting a specific activity that could pose an unsafe situation to human health or the environment. The resolution of a "Suspend Work" requires authorization from the STR. The Seller's Safety Representative shall ensure that resolution of the issue(s) has occurred and the work can be performed safely.

#### **4.3.3 Integrated Safety Management (ISM)**

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

- Define the Scope of Work.
- Analyze the Hazards and Risks.
- Develop and implement hazard controls.
- The order of preference of hazard controls is (1) substituting less hazardous processes, materials, or equipment; (2) engineering controls; (3) administrative controls; and (4) personal protective equipment (PPE).
- Perform work within the controls.
- Provide feedback and continuous improvement.

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#### **4.3.4 Permits**

The Company will provide Excavation/Penetration Permits, Radiological Work Permits, Hot Work Permits, Confined Space Permits (for existing confined spaces), authorizations for Storm and Sanitary Water Discharge (per regulatory permits), Asbestos Removal, and Building Demolition permits. Seller shall request Excavation/Penetration Permits, Asbestos Removal, and Building Demolition Authorization twenty (20) workdays prior to need, and other permits or authorizations four (4) workdays prior to need.

##### **4.3.4.1 Excavation Permit**

Initial layout of Excavation/Penetration Permits shall be marked by the Company. The Seller shall maintain the integrity of the penetration/excavation markings provided by the Company until the Permit is closed and returned to the STR. Excavation/Penetration Permits expire 60 calendar days after issue date if the work described on the permit has not started.

Company-provided Excavation Permits do not relieve the Seller of responsibility to contact and comply with the Tennessee One-Call System prior to excavation. An Excavation Permit is required for excavation work activities, including installation of post, ground rods, etc., except for the following:

- Work associated with the maintenance, removal, and/or replacement of pavement and sidewalks not in excess of their thickness.
- Maintenance replacement of the same location, depth, and size as the items being replaced (i.e., sign post, poles, etc.).
- Earth/rock excavations twelve (12) inches or less in depth, utilizing hand tools. Jackhammers shall not be used.

##### **4.3.4.2 Penetration Permit**

A Penetration Permit is required for all penetrations in walls, floors, ceilings and roofs except for the following conditions:

- Where the wall penetrations are less than eight (8) inches in any direction, the Seller shall obtain a review from Company Fire Protection Engineer and a scan of the penetration area for energized electrical conductors.
- Where the penetrations are within a floor or column, the Seller shall obtain a review from the Company Structural Engineer and Fire Protection Engineer and a scan of the penetration area for energized electrical conductors.
- Work associated with the installation of fasteners  $\frac{3}{4}$  inch or less in embedded depth into floors, walls, ceilings and roofs.
- Penetrations of pavement and sidewalk not in excess of their thickness.
- Penetrations of masonry not exceeding the face shell thickness.
- Penetrations in single layer surface where both sides of the surface are clearly visible.

#### **4.3.5 Event Condition Responsibilities**

The Seller shall initiate appropriate actions to mitigate or control the event or condition. Secure the scene to protect relevant evidence and information for any subsequent investigation. Provide preliminary information on the event/condition to the STR. Seller shall provide follow-up notifications to the STR if the event/condition worsens, becomes an emergency or if requested. Seller shall report suspected employee exposure to contaminants

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exceeding ES&H requirements, and sampling and monitoring results exceeding ES&H thresholds to the STR or Company Safety Representative.

The Seller shall report any actual or potentially adverse event or condition to the STR immediately (within 15 minutes) upon identification (e.g., pipe break, valve failure, loss of power, environmental spill, fire, overheating equipment, any as-found state which may have adverse safety, health, quality, security, operational or environmental implications.)

Included in the immediate notification to the STR are those events/conditions impacting the Company in the following categories:

- Operational Emergencies (Impact to the Y-12 Complex);
- Personnel Safety and Health (First aid, occupational illness/injury, fire/explosion, hazardous energy control);
- Nuclear Safety Basis (Impact to Technical Safety Requirements; or nuclear criticality);
- Facility Status (Degradation of a Structure, System, or Component; Identification of suspect counterfeit or defective items/materials);
- Environmental (Release or impact to ecological and cultural resources);
- Contamination/Radiation Control (Loss of control of radioactive material or spread of radioactive contamination, Radiation exposure or personnel contamination);
- Nuclear Explosive Safety;
- Transportation (Release or incident involving hazardous material, including radioactive material, during transportation or packaging);
- Vehicle or Equipment Accident (incident or on-site accident involving Seller owned vehicle or construction equipment);
- Noncompliance Notifications (Any enforcement action or written notification from an outside regulatory agency); and/or
- Management Concerns/Issues.

#### ***4.3.6 Post-Incident Drug and Alcohol Screening***

In the event of an incident or accident involving Seller owned vehicles or construction equipment on the Y-12 site, the Seller shall provide post-incident drug and alcohol screening of driver or equipment operator. The driver or equipment operator shall be restricted from operating a vehicle or equipment onsite until the screening results are obtained from the Seller and evaluated by the Company.

#### ***4.3.7 Investigation and Documentation***

Seller shall conduct an investigation and provide to the STR records pertinent to the event/condition, such as personal statements, chronology, fact sheets, root cause analysis results, and other pertinent documents. Personal statements and draft chronology are due within 1 workday of the event/condition identification unless requested otherwise. Documents submitted shall contain sufficient detail to enable the Company to assess the significance, consequences, or implications of the event/condition, and to allow evaluation of the controls/mitigation being proposed or employed. The Company may elect to conduct a critique of the event/condition; the Seller shall participate in the critique providing documents from investigation results and complete the assigned corrective actions within the Seller's control. The Seller is accountable for costs incurred due to event /conditions caused by the Seller. The costs include those incurred by the Seller and may include Company incurred costs.

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The Seller shall complete and provide to the Company form DOE F 5484.3, Individual Accident/Incident Report, within four workdays of property damage, 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.

#### **4.3.8      *Personal Protective Equipment (PPE)***

The Seller shall provide PPE in accordance with 29 CFR 1926, Subpart E and the following:

- 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.
- Safety glasses with rigid side shields in accordance with ANSI Z87.1 and face shields are required when performing high impact hazard work (e.g., grinding, chipping, etc.)
- Safe and appropriate footwear is required for Seller's employees, lower-tier subcontractors, and visitors.
- Safety-toe work boots in accordance with ASTM-F2412 and ASTM-F2413 are required for persons involved in work activities or entering areas posted accordingly.
- Appropriate footwear for office, shower, non-construction and otherwise posted areas include shoes with:
  - Closed toes and heels or heel supports (sling backs)
  - Low heels that provide good ankle support and stability (heels 3" or less in height and heel base width 1" minimum and sole thickness less than 1").
  - Non-skid soles
  - Shower shoes are acceptable while showering, participating in lung counter monitoring, or when otherwise required. Molded plastic and flip flops shoes are otherwise prohibited.
- Additional PPE shall be used as required by the AHA.

#### **4.3.9      *Excavations***

Seller's Competent Person shall be on-site during excavation work inside trenches greater than 4 feet deep. The Seller shall provide shoring calculations to the Company and perform excavations per 29 CFR 1926, Subpart P. The Seller shall control dust emissions in accordance with TN 1200-3. Seller shall limit use of water to prevent erosion and run-off into storm drains. The generation of excess soil from excavation shall be minimized and managed to prevent migration from the work area. The Seller shall notify STR two (2) workdays prior to any excavation activities for RADCON support. Excavation material stockpiles shall be kept 2 feet or more from edge of excavations. Seller shall not perform excavations or disturb any area on the Y-12 Complex without approval of the Company.

#### **4.3.10     *Confined Space***

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

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Work areas greater than 4 feet deep and welding in a confined space shall be evaluated by the Seller for risk classification.

#### ***4.3.11 Lockout/Tagout***

A Lockout/Tagout permit is not required where energy source has been air gapped. 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. Hazardous energy sources will be de-energized and locked out before the Seller can begin certain work. The Seller shall work under the Company's Y73-107, Lockout/Tagout for Personnel Protection Manual, and complete Company provided training.

##### ***4.3.11.1 Regulatory Requirements***

Perform lockout/tagout in accordance with 29 CFR 1910.269, Electric Power Generation, Transmission, and Distribution, and 29 CFR 1910.333, Working On Or Near Exposed De-energized Parts, and/or 29 CFR 1910.147, The Control of Hazardous Energy (Lockout/Tagout).

##### ***4.3.11.2 Initial Lockout/Tagout***

The Company will perform the initial lockout/tagout of existing Y-12 systems and equipment or issue the permit for electrical distribution systems or equipment, and will remove the final lock or tag, respectively. A four (4) workday notice is required for the Company to perform the initial lockout/tagout. The Seller shall confirm absence of energy on lockout/tagout system/components prior to commencing work. The Seller shall install a secondary lock on Company (Construction set) lock box. Seller shall complete its work and remove all locks prior to the Company removing the final lock/tag.

#### ***4.3.12 Hoisting, Rigging, and Signaling***

Hoisting and rigging operations include those accomplished with cranes as well as come-a-longs, chain falls, jacks, winches, etc. If Lift Plans are required, the Seller shall prepare and provide them. The Seller shall furnish all Hoisting and Rigging supervision, labor, equipment, rigging, hardware, perform and document required inspections, and maintain control of hoisting and rigging equipment and hardware in accordance with 29 CFR 1910 Subpart N, 29 CFR 1926 Subparts G, H, N, R, and CC, the ANSI B30 and ANSI B56 Series, and the revisions in effect at the time of award of the following Company procedures and instructions:

- Y17-64-314, Hoisting and Rigging Operations
- Y17-64-315, Construction Crane Use and Operation
- Y17-64-316, Qualification of Construction Crane and Equipment Operators
- Y17-64-317, Qualification of Construction Competent Person Riggers
- Y17-64-318, Control of Hoisting/Rigging Equipment

As required by the Scope of Work, the applicable Company procedures shall be included in the Seller's subcontract.

#### ***4.3.13 Company Hoisting and Rigging Procedures***

The following includes a listing, not necessarily complete, of major elements contained in the Company procedures:

- All Seller hoisting, rigging, and heavy hauling operations must be reviewed and approved by the Company for lift classification. Lift classifications include Critical Lift, Engineered Lift and Ordinary Lift. See Company Procedure Y17-64-314, Appendix A.

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- Where applicable, the Seller shall prepare and provide lift/haul plans and Hoisting and Rigging Electrical Hazard Evaluations to the Company for approval. Seller shall complete a Pre-Lift Safety Checklist and conduct a Pre-Lift Brief for all lifts utilizing a crane or other lifting equipment in a similar manner. See Company Procedure Y17-64-314, *Hoisting and Rigging Operations*.
- Seller crane operations must comply with the requirements of Company Procedure Y17-64-315, *Construction Crane Use and Operation*. Refer to Section C, Mobile Cranes-Subcontractor.
- All Seller operators of cranes, forklifts, and related equipment shall meet Company required pre-requisite qualifications and pass a Company administered written or oral exam and practical test. See Company Procedure Y17-64-316, *Qualification of Construction Crane and Equipment Operators*, Appendix B. A written or oral competency exam is not required for forklift operations. Operators qualified under the Company written and practical examination shall re-qualify every 3 years, or upon unsatisfactory performance or a change in equipment.
- All Rigging activities must be supervised by a Seller Competent Person Rigger. The Seller Competent Person Rigger must be present when hoisting and rigging activities are being performed. The Seller Competent Person Rigger shall meet all Company pre-requisite qualifications and training and pass a Company administered written and practical exam. See Company Procedure Y17-64-317, *Qualification of Construction Competent Person Riggers*. An annual refresher is required to maintain Competent Person Rigger qualifications.
- Seller control, inspection and testing of hoisting and rigging equipment, slings and hardware shall meet requirements of Company Procedure Y17-64-318, *Control of Hoisting/Rigging Equipment*. Inspection and testing of hoisting and rigging equipment includes, annual, periodic and prior to use (daily) inspections.
- Hoisting and rigging equipment shall be inspected for suspect/counterfeit items in accordance with DOE requirements. Items found defective shall be promptly tagged out and secured to prevent further use.
- Hoisting and rigging hardware brought on site shall be maintained in a controlled access storage area while not in use and Seller shall maintain an inventory of hoisting and rigging equipment on site. Documentation of inspections shall be maintained and made available to the Company.
- Certificate of Compliance and documentation of Proof Test for hoisting and rigging hardware shall be provided to the Company prior to use. Seller shall use Company provided forms unless otherwise approved by the Company.
- The Company shall approve a Seller prepared Work Plan addressing contamination controls prior to hoisting, rigging, or securing wrapped contaminated items.

Seller-furnished hoisting and rigging personnel includes:

- Superintendent
- Rigging Engineer
- A minimum of one Certified Competent Person Rigger
- Certified Riggers to perform all rigging
- Certified Signalpersons to perform all signaling
- Equipment Operators

The Company will provide oversight of all the Seller's hoisting and rigging processes and activities, including guidance and direction for lift classification, review and approval of lifting and hauling plans, and personnel and equipment qualification review. The Company will also provide training and administration of written, oral, and practical examinations and

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certifications as indicated in Company procedures Y17-64-316 and Y17-64-317 and Appendix D, *Training Requirements Matrix*. Coordination of hoisting and rigging activities between the Seller and the Company will be through the STR.

#### ***4.3.14 Cranes and High Profile Equipment***

In addition to the requirements identified in 29 CFR 1926, Seller shall use the Company's "Mobile Crane Overhead Electrical Lines Checklist," form UCN-22330 for crane work being performed near energized overhead electrical lines. Seller shall use the Company's form CFN-0087, Overhead Power Line Hazards and Controls Evaluation, for all other high profile lifting equipment (e.g., Telescopic Forklifts, etc.). The Seller shall determine grounding requirements for overhead work in proximity to energized lines and for underground work having the potential to come into contact with energized lines. When moving equipment, the booms or masts shall be in a retracted traveling position, and a flagman donned in a contrasting color vest that is reflective shall be assigned to direct movement and prevent contact with objects on the ground or overhead. Seller shall verify roadway clearances before work start, equipment movement, and after significant weather events. Seller shall contact the STR to verify clearances through security portals and other Y-12 width and height restrictions. The Seller's ES&H Representative shall be present when equipment is moved from one location to another, and when equipment is near energized electrical conductors or equipment.

#### ***4.3.15 Electrical***

##### ***4.3.15.1 Electrical Safety Program***

The Seller shall prepare and submit an Electrical Safety Program for electrical installation and maintenance operations in accordance with 29 CFR 1910, 29 CFR 1926, Subpart K, the National Electrical Code (NFPA 70) and Standard for Electrical Safety in the Workplace (NFPA 70E). The Company will approve the Electrical Safety Program as a Prior to Mobilization submittal, before a Notice to Proceed is issued to the Seller. Seller's qualified electrical inspector shall complete compliance inspections prior to requesting Company Authority Having Jurisdiction (AHJ) electrical inspection and acceptance of the work.

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. Electrical equipment shall be listed, labeled, and approved by a Nationally Recognized Testing Laboratory (NRTL) for intended purpose, or inspected and approved for use by the Seller's electrical AHJ in accordance with and as described in NFPA 70 and 70E, or equivalent.

##### ***4.3.15.2 PPE for Electrical Work***

Seller shall provide the PPE for electrical installation, voltage checks, testing and maintenance operations in accordance with 29 CFR 1910, 29 CFR 1926, National Electrical Code, and NFPA 70E. Company will supply electrical work protective clothing where needed in radiological controlled areas.

Clothing and PPE for confirmation of isolation (absence of voltage checks):

- Less than 300 volts,
- 100% long-sleeve cotton coveralls, 100% long-sleeve cotton shirt and pants,
- RAD coveralls,
- safety glasses with side shields or safety goggles,

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- hearing protection (ear canal inserts),
- leather shoes,
- insulated gloves with protectors, and
- Insulated tools.
- Greater than 300 volts but less than 600 volts
- Flame-resistant FR coveralls or FR long-sleeve shirt and FR pants (minimum ATPV of 8) or electrical RAD FR coveralls (marked on back with ATPV 11)
- 100% cotton, wool or silk, non-synthetic material or FR shall be worn under FR clothing.
- leather shoes
- safety glasses with side shields or safety goggles
- Hearing protection (ear canal inserts)
- electrical rated FR face shield or arc flash suit hood
- insulated gloves with protectors, and
- Insulated tools.

#### **4.4 Elevated Work**

The Seller shall prepare and submit a Fall Protection Plan(s) for Company approval that provides for roof work activities, leading edge work, safety net systems, warning line systems and controlled access zones as applicable. Minimum horizontal distance from the roof edge is 6 feet for roofing activities and 10 feet for general rooftop activities. All manufactured equipment utilized for fall protection shall be rated, inspected, and properly implemented in practice.

#### **4.5 Equipment and Tools**

Tools and equipment brought to Y-12 shall be used only for the purpose for which they are designed and must comply with 29 CFR 1926, Subpart I. The Seller shall inspect or certify tools and equipment and determine them to be adequate for the intended use. The Seller shall conduct routine inspections to ensure repairs and maintenance activities keep items ready for use and compliant with all requirements. Seller shall tag defective or otherwise unsafe items "Do Not Use" and immediately remove 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 safe operating condition. The evaluation and its resolution shall be documented on the inspection record prior to use. Hand and portable powered tools and other hand held equipment shall comply with 29 CFR 1910, Subpart P.

##### **4.5.1 Tools and Equipment Modifications, Replacement Parts, or Repairs**

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. The Seller shall maintain a comprehensive log of each power tool and piece of equipment at Y-12. The Seller shall provide a copy of the power tool and equipment log to the Company.

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. Seller shall ensure employees are trained in the use of tools and equipment appropriate to the task and the installation of materials and equipment in accordance with manufacturer's instructions. When unique or special tools or equipment are required, the Seller shall have manufacturer or vendor manuals available on site and ensure users are trained on safe operation. Seller shall maintain a copy of manufacturer's

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installation instructions and train workers prior to the installation of the material or equipment. Seller shall document employee training and provide records to the Company upon request. The briefing shall also include reviewing the vendor-supplied operation and instruction manual for any special conditions or safety warnings. The Seller shall maintain a list of employees who have been briefed. The Seller shall provide a copy of the list of briefed employees to the Company.

#### **4.5.2      *Operation and Instruction Manuals***

The Seller shall maintain an on-site file of operation and instruction manuals for power tools and equipment. The manuals shall be available on-site for review by the Seller's workforce.

#### **4.5.3      *Scaffolds and Aerial Device Self Retracting Lifelines (SRLs) or Fall Restraint Systems (FRS)***

Scaffolds and Aerial Device Self Retracting Lifelines (SRLs) or Fall Restraint Systems (FRS) shall be used at fall distances less than 18.5 feet to ground or lower obstruction. Engineered Fall Protection Systems may substitute SRL or FRS with approval of Company's ES&H Representative. Horizontal Lifelines (HLL) shall not be utilized without approval of Company's ES&H Representative. SRLs or FRS shall be utilized in Articulating Aerial Devices.

#### **4.6      Scaffolds**

The Seller shall use metal planking for all scaffolding. Pressure treated fire retardant lumber painted with a clear intumescent paint may be used where metal scaffolding is inappropriate and only when specifically approved by the Company. Wood platforms shall not be covered with opaque finishes, except that platform edges may be covered or marked for identification. The Seller shall provide a trained Competent Person to inspect and sign off on scaffold erection prior to use. Scaffold users shall be trained in Company provided Fall Protection Safety Training and Scaffold & Ladder User Training (See Training Matrix, Appendix D). Seller shall comply with 29 CFR 1926, Subpart L.

#### **4.7      Aerial Devices**

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

Some of the requirements listed or contained elsewhere in the Supplemental Conditions are more restrictive for construction activities (e.g., American Conference of Government Industrial Hygienists (ACGIH), Threshold Limit Values (TLV) for Chemical Substances and Physical Agents and Biological Exposure Indices (BEI) and ANSI Z88.2, Respiratory Protection). The Seller is responsible to execute the more restrictive requirements.

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### **4.8 Transportation**

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:

- Commercial vehicle operators are properly licensed, medically certified, and participate in Workplace Substance Abuse Program.
- Commercial vehicles have a current annual inspection and are in compliance with the Federal Motor Carrier Safety Regulations (FMCSR).
- Seller has sufficient liability insurance as outlined in the FMCSR.
- Seller employees engaged in hazardous materials transportation activities receive the requisite training.
- Loads being transported do not exceed transport vehicle manufacturer's rated capacity and are properly secured.

Seller must provide containment for spoils, waste, and salvageable materials during transport; provide covers on open top containers and trucks; and transport waste to a designated Y-12 disposal facility utilizing shortest possible route. The Seller shall contact the landfill at least one working day in advance of delivery if spread axle flatbed trailers are to be used. Dump trailers are prohibited from delivering waste to the Y-12 Landfill unless otherwise required or authorized by the Company.

### **4.9 Flammable Liquid Transportation**

Flammable liquid tank trucks, refueling vehicles, and other vehicles transporting flammable liquids or gases shall comply with 49 CFR 382.399.

### **4.10 Hazardous Materials Transportation**

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

### **4.11 Industrial Hygiene**

#### ***4.11.1 Occupational Health Protection Threshold Exposure Limits***

The Seller shall limit employee's exposure to chemical substances, physical agents, and biological hazards to the permissible exposure limits of 29 CFR 1926, Safety and Health Regulations for Construction. The Seller shall conduct exposure sampling or monitoring in the work area if necessary to ensure that exposure levels in the ES&H Plan are not exceeded. Adjustments in PPE as well as administrative and engineering controls shall be based on data generated by sampling or monitoring.

#### ***4.11.2 Work Area Environmental Air Monitoring***

If work area sampling or monitoring indicates a significant airborne level (above the action levels), the Seller shall initiate either project boundary or perimeter monitoring to determine if any airborne contaminants (i.e., organic vapors, fugitive dust, etc.) are escaping the work area and necessitating corrective action (i.e., dust-suppression in the work area). If

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monitoring indicates that organic vapor concentration continuously exceeds the area action level, the Seller shall initiate additional sampling and continue until either organic vapors are decreased below the action level or a sufficient volume of air has been collected to allow for laboratory analysis.

#### ***4.11.3 Employee Exposure Assessments–Personal Sampling***

For each new task where a potential for exposure exists, the Seller shall collect personal baseline samples consisting of not fewer than 10 discrete samples per monitored employee per task. A minimum of 25% or 2 employees, whichever is greater, shall be sampled. The Seller shall subsequently monitor changes in conditions on a periodic basis, not less than monthly. The Seller shall immediately initiate personal sampling on the worker with the highest expected exposure if direct reading instruments indicate levels of vapors or particulates in the work area that exceed the action level for greater than 15 minutes. Monitoring shall continue until levels recorded by direct reading instruments return below the action level.

#### ***4.11.4 Industrial Hygiene Laboratory Qualifications***

The Seller shall employ an American Industrial Hygiene Association (AIHA) accredited laboratory for analysis in accordance with the appropriate National Institute of Occupational Safety and Health (NIOSH) or OSHA methodology.

#### ***4.11.5 Exposure Monitoring Results***

The Seller shall provide employees with the results of exposure monitoring in accordance with OSHA standards and shall provide the results of personnel, area, and other monitoring to the Company within 24 hours of the receipt of results.

#### ***4.11.6 Hazard Communication (HazCom)***

##### ***4.11.6.1 MSDS***

In accordance with 29 CFR 1910.1200, the Seller shall make MSDSs for hazardous substances at the work or laydown areas available for worker reference and review. The Seller shall provide a copy of MSDS sheets to the Company prior to delivery of hazardous material to Y-12. Aerosol cans shall be incorporated in the Hazardous Materials Inventory Report (HMIR) and managed in accordance with Waste Management requirements. The Company will provide MSDS for existing Y-12 hazardous substances to the Seller upon request. The Seller may access an on-line database of hazardous substances at Y-12 to obtain MSDS.

##### ***4.11.6.2 Material Types and Quantities***

The Company may restrict the amount of chemical product(s) at Y-12. Chemical or other hazardous substances banned by a Federal or Tennessee regulatory agency shall not be brought to Y-12. Asbestos, polychlorinated biphenyls (PCBs), and banned chlorofluorocarbons are prohibited. Hazardous material transferred or shipped to a Facility or area under control of a Facility Safety Basis shall receive Company Facility Operation Manager or designee approval prior to initiating transfer/shipment. The Company may restrict the hazardous material quantities to maintain quantities within the Facility Safety Basis Maximum Anticipated Quantities (MAQ).

##### ***4.11.6.3 Lead***

Seller shall perform work on lead-containing materials in accordance with 29 CFR 1926.62. All painted surfaces at Y-12 are suspect for lead-containing paint. Before starting work

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involving lead materials, the Seller shall prepare and submit a Lead Compliance Plan for Company approval. Engineering controls (e.g., wet methods, vacuum power tools, ventilation and containment structures) are mandatory regardless of PPE used. The Seller's Competent Person shall be on-site during work activities involving lead materials. Before generating a waste stream containing lead, ensure that a waste accumulation area is established.

#### ***4.11.6.4 Mercury and PCBs***

Low levels of mercury and PCBs are detectable in the soil and building materials/components in some areas of Y-12. When the Seller's work activities create a potential for exposure to mercury or PCBs, the Seller's ES&H Plan shall describe how worker exposure monitoring for these constituents will be addressed, and how compliance with applicable mercury and PCB regulations will be achieved. Painted surfaces at Y-12 are suspect for Polychlorinated Biphenyl (PCB) containing paint. Before starting work involving PCB materials, the Seller shall prepare and submit a PCB Waste Management or Environmental Compliance Plan for Company approval. Hot work is prohibited prior to removal of the PCB coating on PCB coated surfaces. Before generating a waste stream containing mercury or PCBs, Seller shall ensure that a PCB waste accumulation area is established and that it is managed in accordance with an approved Waste Management Plan.

#### ***4.11.6.5 Refrigerants***

The Seller shall comply with 40 CFR 82 and State regulations when handling equipment containing refrigerant. Only trained and certified personnel shall breach a system containing refrigerants. The Seller shall provide evidence of training or required certificates to the Company. If equipment containing refrigerant is removed from Y-12 by the Seller for reuse, Seller shall follow the requirements of 40 CFR 82 and State regulations after removal. The Seller shall indicate in the Work Plan, Waste Management Plan or by letter the final disposition for the equipment. The Seller shall indicate in the document that the equipment and the associated refrigerant are not intended for immediate disposal or resale. The Seller shall have written notice from the Company transferring responsibility for the equipment still containing refrigerant prior to being removed from Y-12. The equipment should also have a label attached by the Company indicating the presence of refrigerant. Unless otherwise specified, the Seller shall not remove equipment containing refrigerant from Y-12 for the sole purpose of the recovery of the refrigerant. The Seller shall notify the Company twelve (12) workdays prior to the disposal of equipment that contains refrigerant. The Company will recover the refrigerant from the equipment prior to the Seller disposing of the equipment. The Company will attach a label indicating removal of refrigerant from the equipment. Third parties receiving waste or materials for recycle must be approved by the Company.

#### ***4.11.6.6 Asbestos Demolition or Renovation***

The Seller shall possess a Tennessee General License for Asbestos Abatement and be accredited per the requirements of Tennessee Rule 1200-01-20 to perform asbestos work. All asbestos workers and asbestos supervisors shall be trained and accredited per 1200-01-20. The Seller shall perform work in accordance with 29 CFR 1926.1101, Asbestos, and 40 CFR Part 61, Subpart M, National Emission Standard for Asbestos, and TN 1200-3-11 and 1200-01-20. For asbestos abatement renovations less than 160 square feet or less than 260 linear feet, including incidental work disturbing asbestos-containing material (ACM), Seller shall request an Asbestos Removal Authorization (ARA) from the Company three (3) workdays in advance of need.

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For demolition of a structure, regardless if asbestos is present, or for renovations involving the abatement of greater than 160 square feet or 260 linear feet, the Seller shall request a Notification of Asbestos Demolition or Renovation (NoDR) at least twenty (20) workdays in advance of work start.

#### ***4.11.6.7 Notification of Asbestos Demolition or Renovation (NoDR)***

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:

- Name, address, contact person, and phone number of the abatement licensee and waste transporter,
- Approximate amount of ACM,
- Initial exposure assessment,
- Scheduled dates for removal,
- Description of work methods,
- Intention to leave any non-friable ACM in place during demolition, and
- Waste disposal site.

#### ***4.11.6.8 Asbestos Work Plan and AHA***

The Seller shall submit an Asbestos Work Plan (AWP) and AHA for Company approval. The AWP shall identify specific work requirements, monitoring, PPE, and training. The Seller shall prepare the AWP in accordance with the requirements of 29 CFR 1926.1101, Asbestos, specifically items (g) and (h).

The AWP shall specifically require the following:

- Workers shall wear respirators when doffing protective clothing.
- 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.
- Establish the regulated area prior to pre-cleaning activities, enclosure construction, or other activities that could disturb the ACM.
- Where feasible, a 50-ft perimeter shall be established around the work area. Only those individuals engaged in the asbestos removal process and having the appropriate training are permitted within the work area. The perimeter shall be delineated with construction fences or other Company-approved barriers and shall have asbestos warning signs affixed at a minimum of approximately 50-ft intervals along the perimeter barrier. Such barriers and signs shall remain until deemed unnecessary by Company. Otherwise flag off entrances and approaches to the area with barrier tape (Asbestos-Danger) and signs.
- Monitor personnel and area when there is not a “negative exposure assessment” (include initial exposure assessment with the AWP).
- Use portable hand tools equipped with a HEPA filtered exhaust ventilation to drill, cut, or otherwise disturb ACM.
- Mandatory use of wet method for abatement unless otherwise approved by the Company.
- Filter water from the abatement work through a 5-micrometer filter system before discharging to a Company-designated sewer.

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- Provide a two-foot square viewing window (Plexiglas) in enclosures approximately five feet above ground level at a location designated by the STR.
- Provide a negative pressure air-filter system with a minimum of one air change every fifteen minutes (4 per hour) at a minimum of 0.02 column inches of water pressure differential relative to outside pressure. System shall operate continuously (24 hours a day) until final clearance is approved. Air leaving the system shall be vented to the outside unless otherwise approved by the Company.
- Provide a decontamination unit with shower contiguous to the work area. Use of a remote decontamination unit must 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 decontamination unit. Shower wastewater filter system requires Company approval. Discharge of wastewater into the storm or sanitary sewer system requires Company authorization. Seller shall allow four (4) workdays for Company authorization.
- 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.
- Regarding the removal of asbestos material from outdoor sources, Seller shall, as applicable, secure doors, windows, or other openings (such as ventilation units for buildings) with a minimum of 4-mil-thick plastic if outdoor work is within 100 feet of such areas.
- If the Seller chooses to use alternative work practices and methods for the removal of thermal system insulation (TSI) and/or surfacing ACM or presumed materials (PACM), the decision shall be certified in writing by a certified industrial hygienist or licensed professional engineer who is an accredited (per the State of Tennessee) project designer. Any project related activities that employ alternative work practices and methods shall meet the requirements in 29 CFR 1926.1101(g)(6). The plans detailing compliance and alternative methods must be reviewed by the Company before any work with ACM or PACM is to begin. The Seller's Competent Person shall brief and oversee the personnel entering the work area and enforce all requirements. The Competent Person shall maintain an entry/exit log for regulated areas. Seller shall make available, within 24 hours and upon written request from Company, any records concerning asbestos handling, including but not limited to, entry/exit logs, exposure records and training records, in a manner that does not breach confidentiality, as described in 29 CFR 1926.33, "Access to Employee Exposure and Medical Records."

#### ***4.11.6.9 Negative Exposure Assessments***

Any negative exposure assessments (NEA) developed by the Seller shall be provided to and reviewed by the Company prior to making any applicable work practice changes related to using NEAs. Approval by Company does not constitute permission to negate other applicable requirements of federal, state, or local asbestos regulations.

#### ***4.11.6.10 Personnel and Area Monitoring***

##### *Personnel Monitoring*

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. 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). The Seller shall provide test results to the Company.

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### *Area Monitoring*

Conduct daily monitoring for the full work shift inside the negative pressure enclosure. Take at least four samples per 5,000 square feet of enclosure and three samples outside the enclosure. For each waste load out, take an additional sample at that location outside the enclosure. 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. Class II and III activities shall be monitored daily for the full shift. Collect three samples inside the regulated area and, if located outside of a building, one sample upwind and two downwind.

### *Abatement Activities*

The Seller shall utilize Engineering controls, regardless of PPE used. Material used for abatement shall equal:

- 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.
- Surfactant or amended water shall be specifically manufactured for use in ACM abatement.
- Company approval is required for use of wood enclosures. If approved, wood shall be treated with fire retardant.
- 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.

Equipment having HEPA filter shall be tested in accordance with requirements identified in Supplemental Conditions, Section 5.0, E, Item 7.

- 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.
- Upon request from the Company, Seller shall provide an examining physician's documentation acknowledging that information stated in 29 CFR 1926.1101(m)(3) has been received.
- Seller shall employ an independent testing laboratory to perform air monitoring and testing. Air monitoring will be performed per the requirements identified in 29 CFR 1926.1101 Appendix A, *Forms Commonly Used in Execution of Subcontracted Work*, and Appendix B, *Submittals*, the most current version of OSHA method ID-160, or the most current version of NIOSH Method 7400.
- Personnel performing air monitoring during abatement activities or for the purpose of final clearance shall be accredited per the Tennessee accreditation requirements for Project Monitors.
- Seller shall provide to Company documentation of successful completion of the NIOSH 582 course, Tennessee Project Monitor accreditation, and a written air monitoring plan upon request.
- Personnel performing analysis of airborne asbestos samples shall complete the NIOSH 582 Course. All samples will be analyzed per 29 CFR 1926.1101 Appendix B or the most current version of NIOSH Method 7400. Personnel performing analysis of airborne asbestos samples shall be included in the AIHA Proficiency Analytical Testing Program.
- Seller shall post sampling results at the work area immediately after obtaining the results but no later than 48 hours after samples were taken. The Seller's Competent Person shall evaluate

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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.

- All insulated materials and/or those materials suspected of containing asbestos must be treated as such until conclusive characterization data has been received and/or an Asbestos Competent Person has inspected the material and through expert knowledge determines the material is free of all asbestos. Materials of concern include but are not limited to: all insulating material, floor tile, ceiling tiles, drywall, siding materials, glues, roof flashing, caulk, and window glazing compound.
- After abatement, area must pass a visual inspection, review, and analysis of clearance samples by Seller's Competent Person per 29 CFR 1926.1101.
- The Seller shall provide test results to the Company.

#### ***4.11.6.11 Asbestos Waste Packaging and Transport***

The Seller shall complete and provide to the Company the Asbestos Waste Shipment Record (UCN 17379A) before asbestos waste is removed from the work area. The Company will provide an Asbestos Work Authorization Number upon the Seller's request. Asbestos waste shall be bagged at the removal area, moved to the designated cleaning area, and bagged again (double-bagged). Large pieces shall be wrapped with two (2) layers of 6-mil polyethylene sheeting. Vacuum and wet wipe before removing bagged or wrapped waste from the regulated area. Use of a Central Collection Point requires the Seller to cover the collection area with 6-mil poly, cover the stored bags of waste with 6-mil poly, flag off the area, and install warning signs. Provide identification as required by regulations for vehicles transporting asbestos-containing waste. Transport asbestos waste in accordance with 49 CFR 173.216. Line the truck cargo bed with two layers of 6-mil polyethylene if waste is not individually wrapped. Vehicles shall have valid DOT registration, and drivers shall have a valid Commercial Driver's License.

## **4.12 Hearing Protection**

### ***4.12.1 Hearing Conservation Guidelines***

Seller shall develop and implement a Hearing Conservation Program meeting ACGIH Threshold Limit Value (TLV) and Biological Exposure Indices (BEI) current publication guidelines. The Seller's Hearing Conservation Program shall be submitted for Company approval. The program shall include audiometric testing when sound levels exceed ACGIH limits.

### ***4.12.2 Exposure Noise***

The Seller shall ensure that unprotected noise exposure shall not exceed an 8-hour time-weighted average of 85 dBA using a 3dB exchange rate. This applies to the total duration of exposure per workday (8 hours) regardless of whether it is one continuous exposure or a number of short exposures (refer to current ACGIH TLVs for noise). Continuous noise exposure shall not exceed 115 dBA or impulse/impact noise exceeding 140 dB (peak sound pressure level).

When employees are subjected to sound levels exceeding the ACGIH TLVs for noise, feasible administrative or engineering controls shall be utilized. If such controls fail to reduce sound levels below the TLVs, personal protective equipment as required in 29 CFR 1926.101 shall be provided by the Seller and used to reduce sound levels below these TLVs. The Seller shall

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determine the boundaries where continuous or intermittent noise is expected to exceed the ACGIH TLVs for noise. The Seller shall enforce the use of hearing protection within those identified boundaries.

#### **4.12.3 Documentation**

The Seller shall maintain current documented exposure assessments for employees performing tasks where sound levels exceed 85dBA and hearing protection is not required. The Seller shall maintain a list of equipment that exceeds 85dBA noise exposure (either continuous or impulse/impact noise).

#### **4.13 Thermal Stress**

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

#### **4.14 Silica Dust**

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. Respirator protection is required when performing dust-producing concrete work unless there is a documented exposure assessment for similar work that the Company has accepted.

#### **4.15 Respiratory Protection**

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). Limit exposure to toxic and hazardous substances to the permissible exposure limits (PELs) of 29 CFR 1926, Subpart Z or TLVs of the ACGIH, whichever is more protective. Provide respirators and cartridges that are NIOSH approved. Seller shall maintain manufacturer's approved respirator configuration. Cartridges, airline-hoses, regulators, and other parts are specifically listed as elements that constitute manufacturers approved configuration. Modifications to respirators or their parts are prohibited. Air-purifying respirators (APR) shall not be worn in oxygen deficient or immediately dangerous to life or health (IDLH) environments. The Seller shall provide optical corrections when needed.

##### **4.15.1 Compressed Breathing Air**

Provide compressed breathing air when required to provide an adequate protection factor. The Seller shall provide data to the Company demonstrating the air quality meets the ANSI/CGA G7.1 requirements for Grade D breathing air. If the Company furnishes supplied-air respirator equipment and compressed breathing air, it must be arranged in advance.

##### **4.15.2 Required Records**

- The Seller shall maintain respirator protection records in accordance with ANSI Z88.2, ANSI Z 88.6, ANSI Z88.10, and 29 CFR 1910.134 to include:
- Inspection – Inspection dates, findings, and remedial actions for respirators;
- Training – Type of training received, type of respirator equipment, manufacturer of respirator, names and dates of persons trained;

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- Program Appraisal – Annual Respiratory Protection Program evaluation, findings, outcomes, and actions; and
- Program Surveillance – Spot checks of operations where respirators are in use and findings, outcomes, and actions.

#### ***4.15.3 Fit Testing***

The Seller's employees shall receive a quantitative fit test in accordance with ANSI Z88.10, Respirator Fit Test Methods and 29 CFR 1910.134(f), Fit Testing. Perform fit testing for initial fitting and update annually, except where a particular substance requires more frequent fit testing. Workers wearing Company-furnished respirators shall be fit tested by the Company.

#### ***4.15.4 Company Furnished Respirators***

For work in radiological areas, the Company will furnish respirators, cartridges, fit testing, and appropriate training for the use of Company-furnished respirators. The Seller shall bear all other costs associated with its employee's use of Company-furnished respirators (e.g., time for training, medicals, fit-test, checkout, returns). Work-specific respirator training (may be accomplished through toolbox meeting) will be provided on storing, controlling, and preparing respirators for laundry prior to use of Company-furnished respirators. Seller shall designate an individual to receive Company-supervisor training for the daily storage and checkout of Company-furnished respirators. The user shall inspect the respirator before use to ensure integrity and function. The Seller shall inspect respirators monthly that are stored for emergency or rescue use.

#### ***4.15.5 Medical Evaluation***

A medical evaluation and physician's approval is required prior to respirator use. The medical evaluation and physician's approval shall be in accordance with ANSI Z88.6, American National Standard for Respiratory Protection-Respirator Use-Physical Qualifications for Personnel and 29 CFR 1910.134(e), Medical Evaluation and shall be updated annually.

#### ***4.15.6 Training***

The Seller's employees shall complete training that conforms to ANSI Z88.2(8), Training, 29 CFR 1910.134(k) Training and Information, and the requirements listed below:

- Respirator protection and the criteria for selecting a particular type respirator and filter cartridge;
- Agent for which the respirator was selected;
- Engineering controls and when they are used;
- Characterization;
- Emergency situations;
- Practical exercises to inspect, don, wear, and doff the respirator;
- Clearing the respirator with a positive and negative pressure check;
- Maintenance, storage, recycle, and disposal instructions;
- Instructions for Company-furnished respirators; and
- Regulatory requirements for respirator use.

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

## **SUPPLEMENTAL CONDITIONS**

### **Construction (CON 04/12)**

#### **4.15.7 *Single Use of Respirators***

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. The Seller may obtain a waiver from the single-use of respirators from the Company. The Seller may then approve the reuse of respirators for workers provided good work practices are followed to ensure the unit remains serviceable and uncontaminated. Upon removal, the respirator wearer shall place the respirator in a clean plastic bag and store it in a secure location accessible only to the wearer. The Seller shall provide materials for cleaning and disinfecting the respirator to the wearer. The Seller shall monitor the proper use of respirators.

#### **4.15.8 *Respirator Assigned Protection Factors***

See Appendix E, *Respirator Assigned Protection Factors*.

#### **4.16 Abrasive Blasting and Sand Blasting**

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

#### **4.17 Beryllium**

The Seller shall comply with 10 CFR 850 Chronic Beryllium Disease Prevention Program. Work will be performed under the Y-12 Chronic Beryllium Disease Prevention Program. Key elements of the Program include medical surveillance, hazard assessment, and establishing beryllium regulated areas.

##### **4.17.1 *Beryllium Work Plan***

The Seller shall prepare and submit for Company approval a Beryllium Work Plan describing methods used to control exposures to Permissible Exposure Limit (PEL). Subsequent to the Work Plan approval, the Company will prepare and issue a Beryllium Work Permit (BWP) (UCN- 21324) to the Seller. The Seller employees performing beryllium work at Y-12 Complex are subject to Company approval and shall:

- Attend the Company-provided Beryllium Worker Training.
- Be enrolled in Seller provided medical surveillance program compliant with 10 CFR 850 Chronic Beryllium Control Program.
- Provide current respirator fit test and training records.
- Medical Information
- The Seller shall provide the following medical information:
  - Medical history,
  - Physical exam results,
  - Chest x-ray written interpretation,
  - Beryllium lymphocyte proliferation test results, and
  - Spirometer report.
- Other pertinent lab studies (i.e., blood chemistry, CBC, etc.), and
- Medical Program Clearance form (signed medical opinion).

## **SUPPLEMENTAL CONDITIONS**

### **Construction (CON 04/12)**

#### **4.18 Temporary Facilities**

Seller shall provide temporary facilities for break room, restroom, change area, and shower activities. Set up temporary facilities in a Company-designated area as close as possible to, but outside of the beryllium area.

#### **4.19 PPE**

The Seller shall provide work related clothing, including modesty garments suitable for travel from the subcontractor's changing and showering facility to the point for donning the disposable coveralls at the boundary of the beryllium area. The Seller shall provide laundry service for its employee's modesty garments, towels, wash cloths, etc.

Each visit to the beryllium area requires a one-piece disposable coverall with integral hood and booties, full face respirator, gloves, and disposable shoe covers. The one-piece disposable coveralls with integral hood and booties shall have welded seams. All items selected by the Seller shall be approved by the Company.

Respirators shall be full face MSA, North, or 3M with P100 filters for one time use, unless approved otherwise by the Company. Respirators shall be discarded after each visit to the beryllium area.

Gloves shall consist of two pairs of disposable nitrile or latex gloves, and disposable shoe scuffs shall be worn over the Tyvek® suits. Leather gloves can be used over the nitrile or latex gloves during activities which could tear nitrile or latex gloves. These leather gloves can be left in the beryllium area and reused.

#### **4.20 Tools and Equipment**

Seller's equipment and tools require survey by the Company for both radiological and beryllium contamination prior to delivery to and exit from the work area. Seller is responsible for decontamination.

#### **4.21 Personnel and Area Monitoring**

The Company will perform personnel and area monitoring which includes, Thermoluminescent Dosimetry (TLD), personnel air monitors, pumps, and breathing zone monitors. The Company will provide results to the Seller. If airborne readings exceed the PEL, a review of the data will occur with the Seller for action. The review outcome will be to reduce exposure levels by improving work methods and techniques, ensuring cleaning methods are adequate, and/or increasing worker understanding of protective measures.

#### **4.22 Waste Handling**

The Seller shall package waste and maintain a complete inventory of all containerized waste. A Waste Container Log (UCN-21482), a detailed inventory, and a Waste Container Preparation and Filling Instructions/Checklist (UCN-21668 for a ST-90 Box, UCN-21670 for a Shipping Container, and UCN-21741 for a drum) shall be completed for each container. The Company will supply containers and labels needed for the waste removed.

Containers with solid waste shall include an absorbent to trap liquid residue. Absorbent shall be appropriate to the type of liquid residue (i.e., water or aqueous liquid, use Quik-solid® or Wastelock® 770; oil or organic liquids, use Oil-Dri® or kitty litter.) Where equipment is being discarded and oil has been drained from the equipment, fill the oil reservoir with Oil-Dri® or kitty litter absorbent.

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### **Construction (CON 04/12)**

The beryllium label "Notice of Release to General Public on Non-Beryllium Area" shall be attached to the outside of containers, plastic bags, or equipment and other items when smears are  $\geq 0.01\mu\text{g}/100\text{cm}^2$  and  $< 0.2\mu\text{g}/100\text{cm}^2$ . Surface contamination shall be  $< 0.2\mu\text{g}/100\text{cm}^2$  for free release to the public and general plant areas.

The beryllium label "Danger, Contains Beryllium" shall be attached to the outside of containers and plastic bags with equipment and other labels when: (1) smear results are  $\geq 0.2\mu\text{g}/100\text{cm}^2$ , (2) contamination levels are unknown, (3) waiting for smear results, and (4) are beryllium-containing materials.

Seller shall secure unattended containers which contain waste to prevent unauthorized dumping of material into the waste container while in Seller's custody. Seller is responsible for verification of waste materials placed in containers and double wrapped or bagged items removed from the work area. The Company RADCON will survey the waste material to determine radiological conditions before the Seller begins packaging waste for transportation and disposal.

Bagged items (suitable for disposal by bagging) or personnel protective equipment (PPE doffed as waste after every entry into the beryllium area), shall be packaged by the Seller in a minimum of 0.006 inch thick plastic bag which has been evacuated using a HEPA portable vacuum and "J" tied using duct tape. The first bag is then placed into a second 0.006 inch thick, clean plastic bag at the boundary. The second bag will also be evacuated and "J" tied. Both bags shall have beryllium labels applied. Beryllium-labeled containers require Company authorization prior to removal from the beryllium buffer area.

#### **4.23 Dust Control**

Control dust emissions during work. The Seller shall prevent dust from migrating to areas adjacent to the work area. Limit use of water to prevent erosion. The Seller shall provide hoods, enclosures or other methods of containment during sandblasting or similar operations.

#### **4.24 Noise Abatement**

The Seller shall follow strict facility requirements when work activities are near or produce noise in excess of 85 dBA. The Seller shall provide noise monitoring. The Seller shall identify any work generating noise 85 dBA or more on the Facility Plan of the Day (POD) form and obtain host Facility compensatory measures. The Seller shall stop work activities that produce noise in excess of 85 dBA until Facility-specific "high noise" compensatory measures are implemented. The Seller shall allow up to a ½ hour to implement Facility-specific compensatory measures requiring the use of Company-furnished Personal Radiation Detection Instruments (PRDI). Use of a PRDI requires completion of Company-provided PRDI training. The Seller has an option to request a Facility Critical Accident Alarm System (CAAS) audibility test while Seller demonstrates work activity producing noise 85 dBA or more to establish compensatory measures.

#### **4.25 Radiological Control (RADCON)**

##### **4.25.1 Definitions**

- Radiological Work Permit (RWP): A Company-issued permit (administrative control), used to maintain the radiological exposure of personnel as low as reasonably achievable.
- Surface Contamination: Unwanted radioactive material deposited on the surfaces of structures, objects, or personnel.

## **SUPPLEMENTAL CONDITIONS**

### **Construction (CON 04/12)**

- Radiological Buffer Area: An area established to provide a secondary boundary to minimize the spread of contamination or to limit external exposure.
- Radioactive Material Area: An area accessible to individuals in which items or containers of radioactive material exist.
- Radiological Area: Area where radioactive contamination, airborne radioactive material, or radiation exists at levels necessitating work controls.

#### **4.26 Material, Services, and Equipment**

##### **4.26.1 *Company-Furnished Items***

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

##### **4.26.2 *Seller-Furnished Items***

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

##### **4.26.3 *Company-Furnished RADCON Services***

- Radiological Work Permit (RWP),
- Radiological Control Technician(s),
- Radiological surveys and evaluations,
- Bioassay labels, kits, and sampling,
- Air monitoring,
- Laundry service for PPE and cleaning service for Company-furnished respirators,
- Personnel exposure records,
- Survey and tagging of tools/equipment brought to and removed from Y-12, and
- Source custodian liaison for any radioactive source brought to Y-12.
- Take precautions to ensure equipment does not become contaminated (e.g., sleeve hoses, place plastic over surfaces, sequence work activities). Contaminated items cannot leave the radiologically controlled area.

##### **4.26.4 *Material and Equipment Surveys***

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. Radiological surveys of equipment cannot be performed during precipitation producing weather events.

## **SUPPLEMENTAL CONDITIONS**

### **Construction (CON 04/12)**

Upon completion of the work and prior to removing from radiological areas, Radiological Buffer Areas established for contamination control or from Y-12, the Company will survey Seller's tools, materials, and equipment to ensure they have not become contaminated. If contamination is encountered, Seller shall perform decontamination under the Company direction. Items that can be released will be green tagged; items that cannot be released will be yellow tagged by the Company. If Seller elects to take possession of contaminated items, the Seller shall provide a copy of appropriate license(s) that authorizes it to possess such material. The Company will only reimburse the Seller for contaminated tool or equipment items with an individual value of  $\geq$ \$500.

#### **4.27 Radioactive Sources**

##### **4.27.1 Radioactive Source Request**

The Seller shall prepare a written request to the Company, for approval, a minimum of four (4) workdays before any exempt, non-exempt or licensed radioactive source is brought to Y-12, including sources used in radiography equipment and moisture density gauges (See Item 3, Submittals, below).

The request shall contain:

- Description of source, including radionuclide(s), activity, and contact dose rate,
- Manufacturer and unique identification number,
- Current leak test report,
- A copy of license(s) permits, operating procedures, and emergency procedures,
- List of authorized users, training records, and contact phone numbers,
- Storage location,
- Date the source will be arriving and the date it is to leave Y-12,
- Seller's Source Custodian and telephone number,
- Subcontract number, and
- A description of the work and how the source will be used.

##### **4.27.2 On-Site Procedures and Policies**

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. 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. Notify the Company STR, both verbally and in writing, when the source is brought to and removed from Y-12.

##### **4.27.3 Submittals**

Submit the following to the Company STR for approval:

- Radioactive Material License(s) for sources (e.g., soil density gauges, radiography).
- Radioactive Material License(s) for laboratories used to conduct geotechnical soils testing and analyses.
- Training documentation for source users (e.g., soil density gauges, radiography sources).
- Radioactive Source Request to include manufacturer's data, inspection, and maintenance documentation for radiological sources.

# **SUPPLEMENTAL CONDITIONS**

## **Construction (CON 04/12)**

### **4.28 Radiological Work**

Work will be performed within the Y-12 Controlled Area as defined in 10 CFR 835, Occupational Radiation Protection. Remove packaging to the maximum extent possible prior to transporting material into radiological areas or Radiological Buffer Areas established for contamination control. Minimize radiologically contaminated waste by segregating from non-contaminated waste. The following is required for contaminated work areas:

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

#### **4.28.1 Training**

Personnel shall complete a 20-hour Radiological Worker II Training Program from a Company approved program and pass an examination (written test and dress-out practical exercise). Retraining is required every two (2) years. Notify the STR of employees that are "Declared Pregnant Workers" per 10 CFR 835.

Provide to Company STR a list of personnel who have received Radiological (RAD) Worker training from a Company-approved training program. Provide employee's full name, job title, title of course(s), training date, and training organization. Include a copy of the training certificate(s). Successful completion of a written Company test, dress out, and practical exercise is required by the Company in addition to classroom training.

#### **4.28.2 Bioassay Samples**

A baseline bioassay sample is required for all Seller personnel prior to working in radiological areas governed by a RWP. An exit bioassay sample is required upon completion of the RWP work for those who participated in the bioassay program. Depending upon the RWP, bioassay sample could include urinalysis as well as fecal sampling. Seller shall request Company-provided bioassay labels and Bioassay Sampling Kits one (1) week in advance of termination or completing RWP work. Seller is responsible for employee's submittal of bioassay sample(s). The Company will notify the Seller if chest counting is required. Seller shall schedule chest counting four (4) workdays in advance. Counting will require two (2) hours per employee. Sellers who allow employees (including their lower tier subcontractors) to transfer from the Subcontract or leave their employment without submitting bioassay samples may be excluded from consideration on future subcontracts at Y-12 and offending employees may be barred from entering Y-12 in the future.

#### **4.28.3 Dosimetry**

Seller employees who enter radiological areas, Radiological Buffer Areas, or Radiological Material Areas will be issued dosimetry badges by the Company before the start of work. Wear dosimetry badges in plain view above the waist at all times while working in a radiological controlled area. Collect and return all issued Thermoluminescent Dosimeters (TLDs) to the STR at the end of the last workday of each calendar quarter, at which time new TLDs will be issued, and at the end of the RWP work. If any employee fails to return a TLD and/or provide a required bioassay sample, the Seller's Application for Payment(s) could be delayed and/or the employee's access may be restricted until the issue is resolved.

## **SUPPLEMENTAL CONDITIONS**

### **Construction (CON 04/12)**

#### **4.28.4 Personnel Exposure Records**

The Company will maintain personnel exposure records for Seller employees working at Y-12. The Company will provide an annual radiation monitoring report to each Seller employee who received radiation exposure monitoring.

#### **4.28.5 Radiological Work Permit (RWP)**

The Seller shall request an RWP one (1) week before the scheduled work activity. The Seller's Work Plan and Task-Specific AHA shall accompany its request for an RWP. The RWP shall be posted at Boundary Control Stations/Access Points before access is permitted to the radiological area. The RWP will identify specific work requirements including work instructions, PPE, dosimetry, and training. Personnel entering the work area shall sign the RWP or use the RWP reader after having read and understood completely the RWP. Signing the RWP or logging in to the reader signifies that the person has read the RWP, understands its requirements, and agrees to follow the requirements. A Pre-Job Brief on the RWP and subsequent revisions shall be given to personnel prior to start of work for those signing onto the RWP or logging into the reader. The Pre-Job Brief shall be documented and sign-in sheets provided to the STR. The Company will provide respiratory protection for work under an RWP. The RWP and Company monitoring will determine when respiratory protection is required. Seller personnel wearing Company-provided respirators shall be Company trained and fit tested.

#### **4.28.6 Negative-Air Machines and Equipment with HEPA Filters**

Equipment having a HEPA filter requires dioctyl phthalate (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:

- HEPA filters are replaced.
- Negative-air machines (NAMs) with HEPA filters are relocated or moved which could impact performance of the unit. NAM's shall always be re-tested whenever relocated using motorized equipment unless otherwise approved by the Company.
- Inspect NAMs and HEPA vacuums at the initial set-up and at the beginning of each day to ensure the units' seals are not broken and that there is no damage that would compromise the equipment's function.
- NAMs are to be DOP tested when they are set into place.

Seller shall arrange for the Company's Asbestos Coordinator or designee to inspect all HEPA vacuums and negative-air machines before they are used to ensure receipt of specified testing.

Seller's Competent Person shall be responsible for determining if retesting is necessary after any movement or relocation of negative-air machines by means other than motorized equipment. Company reserves the right to require Seller retesting.

Provide manufacturer's certification for HEPA filters used in HEPA vacuums and NAMs prior to use.

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

## **SUPPLEMENTAL CONDITIONS**

### **Construction (CON 04/12)**

#### ***4.28.7 Radiological Area – Dress out Not Required***

The Seller shall review radiological hazards as identified in the RWP with the Company. An RWP will be required for entry inside areas that require the use of Personal Protective Equipment. The Seller shall maintain a log of personnel entering the radiological area, and if required by the RWP, record the entry and exit times. Eating, drinking, using tobacco or chewing gum is not allowed. Enter the area only to perform required work. Personnel monitoring is required before leaving the area.

#### ***4.28.8 Radiological Area – Dress Out Required***

The Seller shall review radiological hazards as identified in the RWP with the Company. The Seller shall maintain a log of personnel entering the radiological area, and if required by the RWP, record the entry and exit times. Eating, drinking, using tobacco or chewing gum is not allowed. Enter the area only to perform required work. Personnel monitoring is required before leaving the area.

Wear PPE as required on the RWP, which typically includes:

- No personal outer clothing,
- Anti-C coveralls,
- Shoe covers and booties,
- Work boots (provided by Seller),
- Surgeon gloves,
- Anti-C gloves,
- Hood,
- Dedicated hardhat (provided by Seller), and
- Respiratory protection required for certain work activities.

#### ***4.28.9 Characterization during Demolition***

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.

#### ***4.28.10 Personnel Monitoring***

##### ***4.28.10.1 Self-Monitoring***

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

##### ***4.28.10.2 Decontamination***

If contamination is found, remain at the monitoring station and notify the Company RADCON technician for further instructions. Decontamination must be completed before exiting the monitoring station. After being allowed to exit the radiological area, notify the STR about the occurrence, in accordance with Supplemental Conditions, Part 6.0 G, Event/Condition Reporting.

# **SUPPLEMENTAL CONDITIONS**

## **Construction (CON 04/12)**

### **4.29 Fire Protection**

#### **4.29.1 General**

The Seller shall comply with the DOE Order 420.1 requirements to minimize:

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

#### **4.29.2 Fire Prevention Activities**

The Seller shall meet the requirements of NFPA 241, Standard for Safeguarding Construction, Alteration, and Demolition Operations, 29 CFR 1910, Occupational Safety and Health Standards and 29 CFR 1926, Safety and Health Regulation for Construction, as applicable to fire protection, explosion, Life Safety and Fire Protection Operations emergency response.

As a minimum, fire prevention activities shall include the following:

- Implementation and documentation of a weekly self-inspection program with records maintained. Any deficient conditions identified during self-inspections shall be documented and tracked until corrected; provide records to the Company.
- Maintaining access to the site for emergency response vehicles;
- Using noncombustible panels or flame-resistant tarpaulins or equivalent material approved by the Company for temporary enclosures;
- Controlling the use of ordinary combustible materials (e.g., wood, paper, plastics, etc.), including transient combustibles, such that their accumulation does not present an unacceptable increase in the fire risk to facilities or personnel. Combustible materials are limited to the quantity required for current needs and are appropriately separated from ignition sources;
- Storage of Class I and II flammable/combustible liquids shall not exceed 60 gallons within 50 feet of the structure. At point of final use, these liquids shall be kept in approved safety containers;
- Collecting, storing and disposing of combustible waste and/or refuse to prevent unsafe conditions;
- Maintain a housekeeping effort to avoid accumulation or storage of combustible waste inside or adjacent to buildings being constructed;
- Maintaining a minimum distance of 30 feet for yard storage of combustible construction materials from the structure under construction or alteration;
- Idle combustible pallets inside buildings are not stacked more than 6 feet high. Each pile of no more than four stacks of pallets is separated from other pallet piles by at least 8 feet of clear space. (Note: Compliance is also required with the individual requirements for specific buildings which may be more restrictive.);
- Small, office-type receptacles for combustible waste and receptacles of 40 gallon capacity and smaller need not be metal and do not require self-closing lids when used in non-construction activity areas;
- UL listed/FM approved metal receptacles with self-closing lids are used for collection of flammable or combustible liquid soaked clothing, rags, or waste;

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### **Construction (CON 04/12)**

- To facilitate the ALARA (as low as reasonably achievable) concept in rad-controlled areas, combustible waste (other than oil-soaked waste) may be collected in receptacles constructed of combustible materials (e.g., plastic bags supported by open metal frames);
- Where automatic sprinkler protection is to be provided, placing it in service as soon as possible and prior to building occupancy;
- Installing electrical wiring and equipment for light, heat or power purposed per the requirements of NFPA 70, National Electrical Code. The electrical distribution for each temporary structure shall be arranged such that the energy can be shut off by a single switch readily identified for that purpose;
- Keeping electrical switchgear rooms free of transient combustibles and combustible storage;
- Using plastic sheeting, blotter paper, etc. for contamination control listed by an approved NRTL for compliance with the requirements of NFPA 701, Standard Methods of Fire Tests for Flame-Resistant Textiles and Films;
- Limiting the use of plastic pallets to products listed by an approved NRTL. In addition, use of plastic pallets shall be approved by the Company on a case-by-case basis and shall be in accordance with restrictions of the FHA and DSA, as applicable; and
- Restricting use or storage of combustible pallets inside buildings in areas without automatic sprinkler protection, unless approved otherwise by the Company.

#### **4.29.3 Hot Work**

##### **4.29.3.1 Hot Work Permit**

The Seller shall perform welding, burning, aggressive grinding (spark producing), and other hot work in accordance with 29 CFR 1926, Subpart J, and ANSI Z 49.1. The Seller shall ensure that the applicable AHA contains analysis of welding, cutting, and grinding using clothing ignition risk factors. The Seller shall obtain a Hot Work Permit through the STR before performing any flame or spark producing work. Return expired Hot Work Permit to the Company STR or Issuing Authority.

Seller shall comply with instructions/requirements contained in the permit and return expired Hot Work Permits and completed Excavation and Penetration Permits to the STR or Issuing Authority.

Seller applies signature on Hot Work permit as Service Supervisor. Company provided training, Issuing Authority/Service Supervisor for Welding & Burning, Training Module Q50025836, is required for Hot Work Permit Service Supervisor (See Appendix D, Training Requirements Matrix).

##### **4.29.3.2 Training**

Seller's individual supervising Hot Work activities shall complete Company-provided training for Issuing Authority/Service Supervisor (IA/SS) for Welding and Burning. Fire watches shall attend Company-provided training, maintain proximity necessary to observe the safety of the person(s) performing the hot work, and be able to respond in case of an emergency.

#### **4.29.4 PPE**

Fire Retardant (FR) clothing shall conform to ASTM D 3659 and ASTM F 1506. Spark or flame producing activities that require fall protection (e.g., body harness) shall conform to ANSI Z359.1 and ASTM F887-04.

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In determining the need for PPE for flame and thermal hazards the following risk factors shall be considered:

- Amount and duration of open flame, sparks, molten by-products.
- Potential for accidental contact with direct flame or hot surfaces.
- Position/proximity of worker relative to flames, sparks, or molten by-products.
- Risk factors created by PPE worn, such as heat stress, physical and psychological stress, impaired vision, mobility, and communications.
- 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.
- 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.

#### **4.29.5 Work Site Preparation**

The Seller shall determine the location of the nearest operating fire alarm pull station and Y-12 telephone or Y-12 communication radio. The Seller shall provide a dedicated, trained fire watch during, and for a minimum of 30 minutes after, spark/flame producing work. Torch applied roofing operations require the fire watch during, and for a minimum of 2 hours after, spark/flame producing work.

Before initiating hot work, remove combustibles within 35 feet, or provide non-combustible cover, and flammable liquids within 50 feet.

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.

#### **4.29.6 Hot Work Execution**

Use dust-reducing methods, such as vacuuming, wetting, or building an enclosure during cutting or grinding operations. Comply with the requirements of 29 CFR 1926.62 when drilling, cutting, grinding, or welding existing painted surfaces. Comply with the requirements of 29 CFR 1926, Subpart J and 29 CFR 1926.1126 when welding, cutting, grinding, or heating galvanized or stainless steel. Provide point source exhaust ventilation when welding stainless steel material and alloys. Thoriated tungsten electrodes used in tungsten inert gas welding are restricted from use at Y-12, unless first approved by the Company.

#### **4.30 Fire Barriers**

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

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#### **4.31 Fire Extinguishers**

Fire Extinguishers shall be NRTL listed, appropriately sized, properly spaced, and properly selected for the jobsite hazards. A documented inspection shall be performed on all in-service fire extinguishers by the Seller on a monthly basis. Inspection criteria shall conform to the requirements listed in NFPA 10.

#### **4.32 Temporary Facilities**

Temporary structures, partitions, or enclosures shall comply with the following:

Framing and/or scaffolding material shall be noncombustible, or shall consist of pressure treated fire retardant lumber listed by an approved NRTL, or shall consist of lumber painted with a clear intumescent paint listed by an approved NRTL, unless otherwise approved by the Company.

Plastic sheeting material or fabric used for protective coverings, partitions or enclosures shall be fire retardant material listed by an approved NRTL for compliance with the requirements of NFPA 701, Standard Methods of Fire Tests for Flame-Resistant Textiles and Films.

All temporary structures or enclosures shall be provided with an appropriate number, type and size of portable fire extinguishers per the applicable requirements of NFPA 10, Standard for Portable Fire Extinguishers.

Where automatic sprinkler protection, means of egress, and/or emergency lighting is impaired, notify the Company for determination on the need for an interim Compensatory Measure.

##### **4.32.1 Temporary Enclosures**

Temporary enclosures erected within a facility shall not be supported by piping arrangements designed for automatic sprinkler systems and other fire protection equipment and shall not interfere with or block their ability to function as designed. Combustible materials are not to be stored within the enclosure. Flammable and/or combustible liquids are to be kept to an absolute minimum and shall be stored in and dispensed from UL listed/FM approved safety cans. Combustible materials that are used in the enclosure operations (e.g., rags, paper products, etc.) shall be removed from the enclosure immediately after use or transported and stored in approved metal containers with lids. Combustible waste shall be removed from the enclosure after each work shift. Exits are to be kept unobstructed at all times. If the enclosure is to be utilized as a fabrication area with welding/hot work, the area must be permitted as a Fixed Weld Shop.

##### **4.32.2 Tents**

Large tents (designed for use by 10 or more persons) shall be considered acceptable for temporary use where the tent fabric has been manufactured to comply with the flame retardant requirements of Title 19 of the State of California Code of Regulations. Each section of top and sidewall in large tents shall have a durable label permanently affixed to indicate that the fabric has been approved and listed by the California State Fire Marshal.

Tents to be erected for long term use (7 days or longer) shall require prior written approval by the Company and shall be manufactured and arranged to comply with the requirements identified in both NFPA 101, Life Safety Code, and the Standard Fire Prevention code edition as adopted by the State of Tennessee. Tent fabric shall be manufactured to comply with the

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requirements for flame resistance as directed in NFPA 701, Standard Methods for Fire Tests for Flame Propagation of Textiles and Films.

#### **4.33 Operational Fires**

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

#### **4.34 Fire Patrols**

Seller-furnished fire patrols shall be instituted, where required by the Company, to increase the level of protection within an area because of ongoing activities, or impaired fire protection measures (passive or active).

##### **4.34.1 Fire Patrol Duties**

Personnel performing fire patrol duties shall be designated and instructed in the following subjects:

- Basic fire recognition and fire hazard identification;
- Identification of Class A, B, C, and D type fires;
- Use of the various types of portable fire extinguishers available; and
- Proper procedure for sounding the fire alarm and notifying the facility building manager/operations manager.

This designation and instruction is to be documented by completion of General Employee Training and the required reading on the Use of Portable Fire Extinguishers.

Fire patrol personnel shall have no other duties that would interfere with their ability to monitor the facility/area or immediately sound the alarm should a fire start. Fire Patrols shall ensure that all affected areas of the facility are checked for fires, including locked areas. Fire Patrols shall patrol their assigned area on a Company-designated frequency and maintain a log documenting time of completion of each scheduled route. Documentation of fire patrol activities shall be provided to the Company.

#### **4.35 Flammable Liquid Storage Cabinets**

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

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liquid cabinets shall not be used for storage of liquid, solid, or gaseous oxidizing materials, organic peroxide formulation, flammable compressed gas cylinders, or explosives.

#### **4.36 Portable Heaters**

##### **4.36.1 General**

Any deviation from the criteria of this section shall require prior written approval from the Company. Temporary heating equipment shall be listed by a Nationally Recognized Testing Laboratory (NRTL) and shall be installed, used, and maintained per the manufacturer's instructions and the following requirements.

##### **4.36.2 Requirements for Portable Electric Heaters**

Seller's portable electric heater's power cord shall be examined for defects prior to use. If a defect or evidence of equipment damage is identified, the heater shall be immediately removed from service. Small portable electric heaters shall be directly plugged into an outlet. Heaters shall not be plugged into a power strip or connected via an extension cord. Seller shall shutoff the unit and disconnects the power cord when the space being heated is unoccupied. Combustible materials, including the building structure, interior finish materials (excluding flooring), and building contents, shall be maintained at least 3 feet away from the face of a small heater. The use of a large portable electric heater (above 110/120 volt) inside a facility shall be permitted only after Company written approval is obtained. Company approval will document any special conditions related to heater use, including heater location, clearance to combustibles, and requirements for personnel attendance.

#### **4.37 Requirements for Portable Heating Devices, Liquid and Gaseous-Fired**

Gasoline-fired heaters and solid-fuel fired heaters are prohibited. Gaseous-fired heaters are certified by the American Gas Association (AGA), as applicable. Fuel for approved liquid and gaseous-fired heaters is stored and handled per the requirements of NFPA 30, Flammable and Combustible Liquids Code, and NFPA 58, Liquefied Petroleum Gas Code. Where patio style gaseous-fired heaters are used outdoors, a minimum of 3 feet of clearance shall be maintained between the front of the radiant panel and combustibles. Fuel-fired heaters are located outside buildings with the heat being ducted inside, unless otherwise approved in writing by the Company. Fuel-burning space heaters are shut off whenever the space is unattended. A space being heated by a fuel-burning heater must have sufficient fresh air both to support combustion and to maintain breathing air quality. When used inside, fuel-burning space heaters are only permitted in buildings with sprinklers, the only exception being noncombustible buildings with noncombustible contents. This type of heater is prohibited in a building where flammable or combustible liquids are used or stored.

Indoor use of liquid (other than gasoline) or gaseous-fired heaters is permitted for temporary use under the following conditions:

- In buildings under construction or undergoing repairs or modifications;
- As temporary heat in noncombustible industrial occupancies;
- In other buildings for temporary emergency heating purposes, if necessary to prevent damage to the building or contents;
- Adequate ventilation is maintained both to ensure support of combustion and to maintain breathing air quality;

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- A continuous fire watch is provided for the duration of the heater's use; and
- Combustible materials, including the building structure and interior finish materials are maintained at least 5 feet away from the heat-producing sides of the heater.

#### **4.38 Roofing Activities and Tar Kettles**

##### **4.38.1 General**

The tar kettle setup location requires Company approval, and shall be located no closer than 25 feet from any building or 10 feet from a required means of egress unless approved otherwise. Motorized vehicles shall be detached and relocated from the tar kettle prior to lighting the burners. The Seller shall remove vegetation or other combustibles from within 10 feet of the kettle (including beneath the unit) or cover with a fire retardant blanket or tarp material. Roofing operations, including tar kettles, shall be under constant attendance while tar kettle burners are operating. The attendant shall be within 25 feet of the tar kettle at all times and knowledgeable of the operations, equipment, and its hazards.

##### **4.38.2 Compressed Gas Fuel Cylinders**

Compressed gas fuel cylinders for tar kettles shall be limited to a maximum capacity of 100 lb. each. Extra cylinders, other than the cylinder(s) in active use, shall be stored at least 50 feet from buildings. Total fuel supply for roofing operations, including extra cylinders, shall be limited to a one day supply at the Y-12 site. Gas cylinders shall be properly secured at all times.

##### **4.38.3 Fire Extinguishers**

The appropriate number and type of portable fire extinguishers shall be in the work area and near the tar kettle. As a minimum, two approved fire extinguishers rated for 4A:40B:C shall be maintained within 25 feet of the tar kettle and at least one such extinguisher must be provided in the vicinity of the roof work area.

##### **4.38.4 Roofing Material Storage and Handling**

Material laydown areas for work materials such as roofing felt and insulation board shall be located at least 25 feet from buildings except for a 1-day supply. Demolition debris, including mops and cloths, shall be removed from the work area at the end of each day's work and stored at least 25 feet from buildings. Materials susceptible to spontaneous ignition, such as oily rags and used mop heads, shall be stored in listed noncombustible containers when not in use.

##### **4.38.5 Work Execution**

The vicinity of roofing operations shall be flagged and exposed combustibles removed or protected. Prior to beginning roofing activities, exit routes shall be verified to be accessible. Each crew member shall be made aware of the means of egress available for use during an emergency, portable fire extinguishers shall be available and ready for use, and personnel must be familiar with means to summon emergency equipment. In special cases, the Company may determine that roofing activities are "hot work." Seller's fire watchers may be required on the underside of combustible roofs, as defined by the Company. Tar kettles shall have a working visible temperature gauge that indicates the temperature of the material being heated. Where required for safe operation and in conformance with the vendor/manufacturer's instructions, temperature probes or sensors shall be in place and operational and check valves between the burner and the fuel source shall be in place. Where used, tar pumps and piping shall be properly supported and stabilized to prevent falling.

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### 4.39 Regulatory Requirements

The following regulatory requirements are incorporated by reference and do not release Seller of all other applicable regulatory requirements:

- 10 CFR Part 830, Nuclear Safety Management.
- 10 CFR Part 835, Occupational Radiation Protection.
- 10 CFR Part 850, Chronic Beryllium Disease Prevention Program, Final Rule
- 10 CFR Part 851, Worker Safety and Health Program.
- 10 CFR 851, Worker Safety and Health Program, including Appendix A, Subparts 2 and 3, “Fire Protection” and “Explosives Safety”, respectively.
- 29 CFR Part 1904, Recording and Reporting Occupational Injuries and Illnesses.
- 29 CFR Part 1910, Occupational Safety and Health Standards, including referenced codes and standards.
- 29 CFR Part 1910.134, Respiratory Protection.
- 29 CFR Part 1910.145, Specification for Accident Prevention Signs and Tags.
- 29 CFR Part 1910.146, Permit-Required Confined Spaces.
- 29 CFR Part 1910.147, The Control of Hazardous Energy (Lockout/Tagout).
- 29 CFR Part 1910.269, Electric Power, Generation, Transmission, and Distribution.
- 29 CFR Part 1910.333, Working On or Near Exposed De-energized Parts.
- 29 CFR Part 1910.1200, Hazard Communication.
- 29 CFR 1910 Subpart E, Exit Routes, Emergency Action Plans, and Fire Prevention Plans.
- 29 CFR 1910 Subpart F, Powered Platforms, Manlifts, and Vehicle-Mounted Work Platforms.
- 29 CFR 1910 Subpart H, Hazardous Materials.
- 29 CFR 1910 Subpart J, General Environmental Controls.
- 29 CFR 1910 Subpart L, Fire Protection.
- 29 CFR 1910 Subpart N. Materials and Storage.
- 29 CFR 1910 Subpart P, Hand and Portable Powered Tools and Other Hand-Held Equipment.
- 29 CFR 1910 Subpart Q, Welding, Cutting, and Brazing.
- 29 CFR 1910 Subpart S, Electrical.
- 29 CFR Part 1926, Safety and Health Regulations for Construction, including referenced codes and standards.
- 29 CFR Part 1926.23, First Aid and Medical Attention.
- 29 CFR Part 1926.55, Gases, Vapors, Fumes, Dusts, and Mists.
- 29 CFR Part 1926.62, Lead.
- 29 CFR Part 1926.101, Hearing Protection.
- 29 CFR Part 1926.1101, Asbestos Standard.
- 29 CFR Part 1926.1126, Chromium VI.
- 29 CFR Part 1926 Subpart C, General Safety and Health Provisions.
- 29 CFR Part 1926 Subpart D, Occupational Health and Environmental Controls.
- 29 CFR Part 1926 Subpart E, Personal Protective and Life-Saving Equipment.
- 29 CFR Part 1926 Subpart F, Fire Protection and Prevention.
- 29 CFR Part 1926 Subpart H, Materials Handling, Storage, Use, and Disposal.
- 29 CFR Part 1926 Subpart I, Tools-Hand and Power.
- 29 CFR Part 1926 Subpart J, Welding and Cutting.
- 29 CFR Part 1926 Subpart K, Electrical.
- 29 CFR Part 1926 Subpart L, Scaffolding.

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- 29 CFR Part 1926 Subpart M, Fall Protection.
- 29 CFR Part 1926 Subpart N, Cranes, Derricks, Hoists, Elevators, and Conveyors.
- 29 CFR Part 1926 Subpart P, Excavations.
- 29 CFR Part 1926 Subpart T, Demolition.
- 29 CFR Part 1926 Subpart Z, Toxic and Hazardous Substances.
- 40 CFR Part 61, National Emission Standards for Hazardous Air Pollutants, Subpart A - General Provisions, and Subpart M - National Emission Standards for Asbestos.
- 40 CFR Part 82, Protection of Stratospheric Ozone.
- 49 CFR Part 106-180, Hazardous Materials Transportation Regulations.
- 49 CFR Part 325-399, Federal Motor Carrier Safety Regulations.
- 40 CFR Part 763, Asbestos Hazard Emergency Response Act.
- TN 1200-1-20, Rules of the Tennessee Department of Health and Department of Environment and Conservation, Asbestos Accreditation Requirements.
- TN 1200-3, Rules of the Tennessee Department of Health and Department of Environment and Conservation, Division of Air Pollution.
- TN 1200-4, Rules of the Tennessee Department of Health and Tennessee Department of Environment and Conservation, Division of Water Pollution Control.
- 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.
- Tennessee Code Annotated Title 4, Chap. 3, Part 14, Titles 62 and 63.
- American Conference of Government Industrial Hygienists (ACGIH) 0022, Threshold Limit Values (TLV) for Chemical Substances and Physical Agents, and Biological Exposure Indices (BEI).
- ANSI B30 Series, Safety Standards for Cableways, Cranes, Derricks, Hoists, Hooks, Jacks and Slings.
- ANSI B56 Series, Safety Standards for Powered Industrial Trucks.
- ANSI CGA G7.1, Commodity Specification for Air.
- ANSI Z49.1, Safety in Welding, Cutting and Allied Processes.
- ANSI Z87, Practice for Occupational and Educational Eye and Face Protection.
- ANSI Z88.2, Respiratory Protection.
- ANSI Z88.6, Respiratory Protection – Respirator Use – Physical Qualifications for Personnel.
- ANSI Z88.10, Respirator Fit Test Methods.
- ANSI Z89.1, Protective Headwear for Industrial Workers.
- ANSI Z117.1, Safety Requirements for Confined Space.
- ANSI Z359.1, Safety Requirements for Personal Fall Arrest Systems, Subsystems and Components.
- ASME B30.5 Mobile and Locomotive Crane.
- ASME B30.23 Personnel Lifting Systems.
- ASME B30.26 Rigging Hardware.
- ASME N510-1989 Testing of Nuclear Air Treatment Systems.
- ASTM D2986 Method for Evaluation of Air Assay Media by the Monodisperse DOP Smoke Test.
- ASTM D-2986-95a, Standard Practice for Evaluation of Air Assay Media by the Monodisperse® DOP (Diethyl Phthalate) Smoke Test.
- ASTM D3659, Standard Test Method for Flammability of Apparel Fabrics by Semi-Restraint Method.
- ASTM F887, Standard Specifications for Personal Climbing Equipment

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- ASTM F1506, Standard Performance Specification for Flame Resistant Textile Materials for Wearing Apparel for Use by Electrical Workers Exposed to Momentary Electric Arc and Related Thermal Hazards.
- ASTM-F2412, Standard Test Methods for Foot Protection and ASTM-F2413, Standard Specification for Performance Requirements for Foot Protection.
- DEAR 970.5223-1, Integration of Environment, Safety, and Health into Work Planning and Execution.
- DOE Order 420.1B, Facility Safety.
- FMCSR, Federal Motor Carrier Safety Regulations.
- National Fire Protection Association (NFPA) Codes and Standards.
- NIOSH 582 Sampling and Evaluating Airborne Asbestos Dust.
- NIOSH Method 7400 from the NIOSH Manual of Analytical Methods.

# **SUPPLEMENTAL CONDITIONS**

## **Construction (CON 04/12)**

### **5.0 QUALITY**

#### **5.1 General**

The Seller shall have a Corporate Quality Assurance (QA) Program. The Seller shall submit a copy of its Corporate QA Program to the Company, for approval, prior to award of the subcontract. The Company shall have right of access to the Seller's, his supplier's, and its sub-tier supplier's facilities and records for surveillance, inspection, or audit by B&W Y-12 or other parties designated by B&W Y-12. The Seller is responsible for the quality of the work and for ensuring that the work is executed in compliance with the subcontract documents. Inspections shall be performed by the Seller unless otherwise specified. Witness/inspection hold points, beyond which work cannot proceed by the Seller or his suppliers without B&W Y-12 authorization, will be identified to the Seller by the Company. The Company will provide the following, as applicable.

- A Summary of Work to be performed by the Seller.
- Applicable Lessons Learned during the execution of similar work.
- Documents (such as drawings, codes, standards, regulations, procedures, or instructions) describing the technical requirements of the material, equipment, or services to be furnished, change status, test and inspection requirements, and acceptance criteria that will be used to determine the acceptability of an item or service.
- A checklist of documentation required to be submitted to B&W Y-12 for approval.

#### **5.2 B&W Y-12 QA Program Requirements**

The Company will identify to the Seller applicable requirements of the B&W Y-12 Quality Assurance Program that are consistent with the scope, nature, and complexity of the material, equipment, or service, including a list of the following NQA-1-2008, Part II subparts that are applicable to the Summary of Work in the subcontract:

- Subpart 2.1 Quality Assurance Requirements for Cleaning of Fluid Systems and Associated Components for Nuclear Power Plants.
- Subpart 2.2 Quality Assurance Requirements for Packaging, Shipping, Receiving, Storage, and Handling of Items for Nuclear Power Plants. (Y60-503).
- Subpart 2.3 Quality Assurance Requirements for Housekeeping for Nuclear Power.
- Subpart 2.4 Installation, Inspection, and Testing Requirements for Power, Instrumentation, and Control Equipment at Nuclear Facilities. (Y17-011).
- Subpart 2.5 Quality Assurance Requirements for Installation, Inspection, and Testing of Structural Concrete, Structural Steel, Soils, and Foundations for Nuclear Power Plants.
- Subpart 2.8 Quality Assurance Requirements for Installation, Inspection, and Testing of Mechanical Equipment and Systems for Nuclear Power.
- Subpart 2.14 (including NQA-1a-2009) Quality Assurance Requirements for Commercial Grade Items and Services.
- Subpart 2.15 Quality Assurance Requirements for Hoisting, Rigging, and Transporting of Items for Nuclear Power Plants.
- Subpart 2.18 Quality Assurance Requirements for Maintenance of Nuclear Facilities.
- Subpart 2.20 Quality Assurance Requirements for Subsurface Investigations for Nuclear Power Plants.

# SUPPLEMENTAL CONDITIONS

## Construction (CON 04/12)

### 6.0 SECURITY

#### 6.1 Access to Y-12

##### 6.1.1 General

A request for visitor badges, General Site Passes and Protected Area vehicle passes shall be submitted to the STR via email or fax.

Photo badges, temporary passes, or visitor badges may be picked up at New Hope Visitors Center, 602 Scarboro Road, Oak Ridge, Monday – Thursday, 6:30AM – 4:00PM. Photo identification (e.g., driver license) is required for pickup.

Seller personnel shall present badge or temporary pass to Security when entering Y-12. Badges/passes 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.

##### 6.1.2 Visitor Passes

Visitors requiring access to Y-12 must declare they are U.S. citizens or be processed as a foreign national.

If delivery, service, or vendor personnel are not United States citizens, the Company may authorize restricted access with an escort. Seller shall provide an escort from a Company approved Construction Escort Subcontractor to accompany them while at Y-12.

##### 6.1.3 Badging/Access

For access, the Seller shall complete and submit UCN-21519, *Badge Request* to the STR to obtain photo badges for Seller's employees and lower-tier subcontractors.

Individuals requiring a Y-12 photo badge shall provide a valid government issued photo identification. Valid forms of proof of United States citizenship are:

- Birth certificate (certified copy issued by city/county/state government with raised and/or colored official seal – hospital records are not acceptable);
- Certificate of Naturalization [Immigration and Naturalization Services (INS) Form N-550 or N-570];
- Certificate of United States Citizenship issued by Immigration and Naturalization Services (INS Form N-560 or N-561);
- Report of Birth Abroad of a Citizen of the United States of America (Form FS-240);
- United States active passport;
- Seller's photo badges require validation monthly on the Badge Status Report. The Seller is to provide the STR a list of names with badge numbers for validation. Failure to submit may result in restricted access.
- General Employee Training (GET) and a Security Briefing provided by the Company are required for all Seller personnel requesting a photo badge.
- All photo badges issued to the Seller are government property. The Seller shall notify the Company and return photo badges to the STR within one (1) workday of expiration of the Subcontract, termination of the employee, or when access to Y-12 is no longer needed.

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- When terminated, persons holding L or Q clearances are required to attend a debriefing. Debriefings shall be scheduled through the STR three (3) workdays in advance of requirement. Walk-in debriefings may be conducted at the Visitor Center, as needed.
- Persons holding L or Q clearances are subject to random drug tests within 1.5 hours of notification of the individual by the Company. Individual must report to Y-12 Medical within 1.5 hours of notification. Failure to report for testing within the required time will be treated as a positive result.
- All Seller vehicles and personnel are subject to a search when entering or exiting Y-12. Cargo configuration for trailers entering Y-12 shall conform to Y-12 Security vehicle-loading requirements (refer to the Company Procurement Public Web Site).
- All packages briefcases, bags, etc. brought into the Y-12 Complex shall be marked with owners' name, organization/company and phone number. They must not be left unattended. Prohibited and controlled items are identified in Appendix F, *Controlled/Prohibited Articles in PPA, LAs, EA, and PA*.

#### **6.1.4 Other Vehicle Requirements**

- Seller's vehicles shall prominently display two Seller identification signs (one on each front door).
- Seller's vehicles and equipment are subject to a security search when entering and exiting Y-12. Containers, boxes, and compartments shall be fully accessible. Expect 20 minutes on average for inspection.
- 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.
- The Company will designate Seller vehicle parking. Seller shall furnish on-site transportation of their personnel within the PPA.
- A K-9 security checkpoint is located at the east entrance lot north of Portal 13. All deliveries are required to enter the K-9 inspection area. Arrange cargo so that K-9s and Security personnel can access the loads for inspection. Expect 30 minutes on average for inspection. Large loads may require unloading and reloading for inspection. After inspection, delivery vehicles will enter Y-12 along routes designated by the Company. Deliveries through the West End on Bear Creek Road require Company authorization and shall be scheduled through the STR a minimum of one (1) workday in advance.
- Lock all vehicles, equipment, and toolboxes when unattended and at the end of each workday.
- Do not leave keys in the ignition of unattended vehicles and equipment. Unattended keys may be confiscated by Security, resulting in work delays. Such delays are at the expense of the Seller.

#### **6.1.5 Property Protection Area (PPA) Access**

Y-12 Property Protection Area (PPA) begins at the 229 Boundary and is enforced at Portal 20 (West) and Portal 23 (East) on Bear Creek Road and at Portal 13 on New Hope Pond Road. The PPA is established to protect government property against damage, destruction, or theft.

Workers accessing the Y-12 PPA do not require a security clearance; however they must be properly badged.

Portal 20 maintains a restricted time schedule; therefore, access and egress from the west end of Bear Creek Road requires coordination and approval through the STR for use outside normal construction working hours.

## **SUPPLEMENTAL CONDITIONS**

### **Construction (CON 04/12)**

Company STR office buildings are off Bear Creek Road on Old Bear Creek Road.

#### **6.1.6 Limited Area (LA) Access**

Limited Area (LA) – LAs are designated for the protection of classified matter and Category III SNM where internal controls prevent, deter, or delay unauthorized access. Personnel clearance requirements are posted at the entrance of the LA.

Seller personnel requiring entry to the LA shall submit their personal information (name, badge number, and date of birth) to the STR a minimum of two (2) workdays prior to requirement.

Seller's personnel not meeting the clearance requirements of the LA require Q-cleared escort (as appropriate for the LA) and area posting that identifies uncleared personnel are in the area.

All personal items are subject to search and inspection. Lunch bags and enclosed containers will require opening for inspection.

Uncleared drivers will require one escort for each driver (L or Q-cleared) 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.

Coordinate access to all LAs with the Company STR.

#### **6.1.7 Exclusion Area (EA) Access**

Exclusion Area (EA) – Security areas designated for the protection of classified matter where an individual's mere presence may result in access of classified matter.

Seller's Q-cleared personnel requiring entry to the EA shall submit their personal information (name, badge number, and date of birth) to the STR a minimum of four (4) workdays prior to need to enter. An Escort Package is required for personnel without a Q-clearance.

All personal items are subject to search and inspection. Lunch bags and enclosed containers will require opening for inspection.

All vehicles and their contents are subject to a comprehensive search by Security.

Allow up to one hour for processing of deliveries into the EA.

Seller delivery trucks and other service trucks shall enter the EA through Portal 9 and have a valid vehicle pass. Supplies must be loaded in a manner to allow inspection of all contents. Loading shall allow a clear aisle for a walking inspection around the materials. Deliveries not loaded to allow inspection shall be off-loaded for inspection at the Seller's expense.

Uncleared drivers will require one escort for each driver 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.

Uncleared heavy equipment operators shall be under continual surveillance of a Q-cleared escort. Heavy equipment shall not be staged or used within 50 feet of the security fence without prior Company approval. Special Company procedures shall be followed when using boom type equipment within 50 feet of the security fence.

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While in the EA, breaks and lunches shall be held at the work area. Seller shall provide a suitable area for breaks and lunch and portable restroom facilities.

#### **6.1.8 Protected Area (PA) Access**

Protected Area (PA) – Area that protects special classified matter and material requiring Q-clearance for entry or Q-cleared escorts for uncleared or L-cleared workers.

Seller's Q-cleared personnel requiring entry to the PA shall submit their personal information (name, badge number, and date of birth) to the STR a minimum of two (2) workdays prior to requirement. An Escort Agreement is required for personnel without a Q-clearance. All personnel entering the PA must have set up a Personal Identification Number (PIN) and biometrics at the Visitor's Center prior to entry.

Allow 30 minutes on average per person or escorted group (up to five uncleared) for each entry into the PA and 20 minutes on average per person or escorted group for each exit from the PA. Each person will receive a detailed search when entering and exiting the PA. Seller shall utilize Portal 33 for PA entry and exit during normal work hours, unless Company STR authorizes another portal.

Only hand carried items that will clear the metal detector or that can be visually inspected are allowed. Seller shall require that personnel minimize personal items carried into the PA. Items such as coins, keys, billfolds, and foil wrappers can cause delays at the entry portal. All personal items shall be placed in a clear plastic bag, which allows a thorough inspection of the items. Lunch bags and enclosed containers will require opening for inspection. Items that cannot clear the metal detector and are sealed (not allowing internal inspection) are not authorized through the entrance Portal. Company is not responsible for delays caused by Seller's personnel who are unable to clear the metal detector.

To minimize the number of vehicle entries, the Seller shall arrange transportation (shuttle van) to remain within the PA as required for its workers. Deliveries shall be combined at the Seller lay-down yard or other suitable area outside the PA to minimize entries. Emergency entries must be arranged through the STR. The Company does not guarantee Seller entries in excess of one entry per workday.

All vehicles and their contents are subject to a comprehensive search by Security.

Allow additional time for processing of deliveries into the PA.

Seller delivery trucks and other service trucks shall enter the PA through Portal 33. Supplies shall be loaded in a manner to allow inspection of all contents. Loading shall allow a clear aisle for a walking inspection around the materials. Deliveries not loaded to allow inspection shall be off-loaded for inspection at the Seller's expense.

Uncleared drivers will require one escort for each driver (Q-cleared) 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.

For dump trucks hauling debris out of the PA, special requirements may be necessary due to the presence of radiation monitors. Coordinate the hauling of debris through the STR two workdays prior to need. Delivery of concrete and gravel and other items into PA shall be coordinated through the STR a minimum of two workdays prior to required date.

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Water trucks shall enter empty and be filled at the designated fill point within the PA. Provide a three- day workday notice prior to required entry.

Bed-mounted fuel tanks are prohibited in the PA.

Seller shall allow for additional crew hours lost time per month for security lock downs and other emergency drills and notifications (A crew hour is defined as the total of all hours from workers and equipment within the PA). During a lock down, work inside a building or outside within a controlled work area may continue unless directed to stop by Security. Work outside, other than a controlled work area, shall cease and await instruction from Security. Workers in transit should stop and obey all instructions from Security.

Uncleared heavy equipment operators shall be under continual surveillance of a Q-cleared escort. Heavy equipment shall not be staged or used within 50 feet of the security fence without prior Company approval. Special Company procedures shall be followed when using boom type equipment within 50 feet of the security fence.

Minimize deliveries into and out of the PA. Special arrangements might be made to expedite entry of time sensitive or other special materials if the Seller makes the required arrangement through the STR a minimum of two (2) workdays prior to need.

While in the PA, breaks and lunches shall be held at the work area. Seller shall provide a suitable area for breaks and lunch and portable restroom facilities.

Any Seller-provided trailer in the PA shall be setup and ready for use (including power) four (4) workdays prior to use.

Maintain a 50-foot wide clear zone along security fences. If work is to be performed within the 20-foot clear zone, provide three (3) workdays advance notice and receive approval from the Company.

#### **6.1.9 *Escorting Uncleared Construction Workers (Construction/Yankee Team Escorting)***

If the Seller needs access to the Protected Area (PA) for uncleared workers, the escorting of uncleared workers shall be conducted in accordance with the requirements of the Construction Escorting Program. The Escort Package and Security Plan will be prepared and Coordinated by the Company for the Seller. The Seller will bear cost of escorts for its uncleared workers and shall obtain all escorts from the Company approved Construction Escort Subcontract. The Construction Security Escort Coordinator (CSEC) shall train, administer and coordinate all escorts.

#### **6.2 Cellular and Other Portable Devices**

- Personal, non-Y-12 Government-Issued, and Business-Issued Cellular and Other Portable Information Technology (IT) Devices
- Use of Business Class Radios (not issued by Company) requires completion of UCN-16020A *Telecommunication Proposal* and Company and DOE approval before use at Y-12. The Seller shall allow two (2) months for final approval.
- Seller shall assign a qualified individual to monitor the business class radios during work activity and notify the PSS in case of an emergency.
- Seller shall submit a valid Federal Communication Commission license to operate in this geographical area to the Company for information.

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- Cellular and other portable devices include cellular telephones, Smart Phones, and other portable IT Devices such as Droid®, iPhone®, iPod®, BlackBerry®, Evo®, Pre Plus®, Rogue®, e-Readers, iPad®, netbooks, and laptop computers. These examples are not meant to be all inclusive. If camera capability, built-in recording capability, or Wi-Fi connection to the Y-12 networks features is available, the features must NOT be used. Exceptions may be approved through the Telecommunications Proposal (TP) process. Devices equipped with cameras shall NOT be used.
- Personal, non-Y-12 Government-Issued or Business-Issued cellular and other portable IT Devices may be used in the Y-12 Property Protected Area (PPA) and non-security areas unless the area is posted with Device restrictions.
- Personal portable IT Devices or media shall not be connected to Y-12 IT computing networks or devices or taken into Security areas of the Y-12 NSC where they are prohibited.
- The Seller shall maintain custody of cell phones at all times unless left in the private vehicle parked in general Plant areas or placed in Company-designated temporary storage or else be subject to confiscation by Security. IT Devices may be confiscated and subject to electronic forensics search regardless of whether the device is government or personally owned.
- Cell phones are NOT allowed in the Y-12 Limited Areas (LA), Protected Areas (PA), Exclusion Areas (EA), and Material Access Areas (MAA) unless an exception is granted through the Y-12 Telecommunication Proposal (TP) process.
- Bluetooth devices may be present in PPA buildings but may not be used. Bluetooth devices may not be introduced into security areas unless approved. They may be used outside in Facility parking lots designated as a PPA, while driving on Bear Creek Road, and while driving on access roads leading to or from PPA parking areas.
- Cordless phones are prohibited.
- In the event that any approved device is used in an unapproved manner, either intentionally or unintentionally, that device and any associated media is subject to confiscation by Safeguards & Security and a security inquiry will be initiated. Unauthorized use of any electronic device in LAs, PAs, or EAs may result in an incident of Security Concern (IOSC) and resulting security infraction and/or discipline. In the event of an IOSC, the device may be sanitized and/or destroyed, as is necessary, in accordance with applicable Company policy, without compensation to the Seller or Owner.

#### **6.2.1 *Wireless Devices***

- Wireless devices may not be used at the Y-12 NSC without prior approval through the TP approval process. Wireless laptop computers cannot be taken into the LA, PA, EA, and MAA areas of the Y-12 NSC without an individually approved TP and a laptop Memorandum of Understanding (MOU).
- Wireless devices may only be used within the PPA under existing approved telecommunications proposal. Examples are , Smart Phones, iPods/MP3 players, personal laptops, tablets, eReaders, etc. Devices such as surveying equipment and ground penetration devices which utilize wireless capabilities require an approved Telecommunications Proposal prior to being brought on site at Y-12.
- Seller shall not bring Seller-owned computing devices (e.g., laptops, desktops, PDAs, printers, etc.) into non-public areas of Y-12 without prior written approval from the Company. Computing equipment must be provided by Y-12 with network connections to Y-12 provided by Y-12 at Seller expense. Seller business operations on Y-12 computers and networks are limited

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to the minimum required to support the subcontract. Seller communications and activities on computers will be monitored.

#### **6.3 Computer Security**

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

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

#### **6.4 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:

- 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.
- In open offices and where there is not a common need-to-know of all information, appropriate protective measures (e.g., UCNI and OUO workstations require chassis locks, keyboard locks, or approved hardware password devices) are required as directed by the Company.

#### **6.5 Output Devices**

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.

#### **6.6 Information Security**

- Seller personnel issued Unclassified Controlled Nuclear Information (UCNI) and Official Use Only (OUO) information shall complete the requisite briefing provided by the STR, a Y-12 Information Security Officer, or designee.
- Seller personnel who have received the training may brief lower-tier subcontractors and /or suppliers and issue UCNI/OUO documents to them. The Seller shall be responsible for the following relating to OUO and UCNI documents to which they have access or custody:
  - Reviewing compliance restrictions prior to release.
  - Flowing down requirements to lower-tier subcontractors and suppliers.
  - Granting access only to persons with a need-to-know.
  - 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.
- Reporting security breaches or deviations from expectations to the STR. Cooperating with investigations conducted by the Construction Division Security Officer (DSO). The Seller is responsible for Company and Seller costs incurred due to Incidents of Security Concerns (IOSC) caused by the Seller.

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### 6.7 Definitions

- Access authorization—An administrative determination that an individual is eligible for access to classified matter when required by official duties.
- 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.
- AIS Equipment—All computer equipment, peripherals, software, data, networks, and facilities.
- AIS security incident—A failure to comply with AIS security requirements, which results in attempted, suspected, or actual compromise of unclassified sensitive information.
- AIS Security Plan—A document that describes the protection of sensitive AIS against unauthorized disclosure, modification, or destruction of the system or data, and denial of service to process data, including physical, personnel, administrative, telecommunications, hardware, and software security features.
- AIS storage media—A means used by AIS systems to convey or store information.
- Computer Security Officer (CSO)—Seller person(s) responsible for the implementation of their AIS Security Plan.
- 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.
- Information Security Officer (ISO)—Seller person(s) responsible for the implementation of requirements to avoid unauthorized disclosure of information.
- Infraction—A knowing, willful, or negligent action contrary to the requirements for information security.
- Label—The marking of an item of information to reflect the sensitive information (e.g., UCNI, OOU).
- 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.
- Official Use Only (OUO)—Unclassified sensitive, but otherwise uncontrolled, information which may be exempt from public release under the Freedom of Information Act (FOIA).
- Security plan—A document that describes the protection of the facility and its assets.
- 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.
- Unclassified Controlled Nuclear Information (UCNI)—sensitive unclassified Government information concerning nuclear material, weapons, and components whose dissemination is controlled under section 148 of the Atomic Energy Act.
- Personally Identifiable Information (PII) – Any information collected or maintained by Y-12 about an individual, including, but not limited to, education, financial transactions, medical history and criminal or employment history, and information that can be used to distinguish or trace an individual’s identity such as an individual’s name in conjunction with Social Security Number, date and place of birth, mother’s maiden name, biometric data, and including any other personal information that is linked or linkable to a specific individual.

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#### **6.8 Document and Media Requirements**

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

All communications between the Seller and the Company, or between the Seller and its lower-tier subcontractors/suppliers, conveying UCNI labeled information, shall be by approved carriers (e.g., Express, Certified, or Registered Mail) or a commercial carrier that uses a signature service.

No electronic transmissions (e.g., fax, computer) of UCNI information will be allowed unless the Seller obtains prior written approval from the Company.

Fax transmissions of OOU should be protected by encryption. Unencrypted fax transmissions are permissible provided:

- 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
- 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 obtain a positive response from the recipient that the fax was received as expected.

All computers at Seller facilities shall be certified by the Company to process UCNI and OOU information and shall operate in compliance with a Company-approved AIS Security Plan. The Company shall approve the area where the AIS equipment is located. Seller shall submit a request for a certification inspection by the Company.

If Seller desires to establish a secure document room, submit a request to the Company for a certification inspection. Once the room is certified, UCNI and OOU documents may be displayed as long as the room is locked when unattended.

OOU and UCNI documents shall be kept in a secure place at all times. The Seller shall be responsible for control of documents issued to it by the Company. Further issuance of documents to lower tier subcontractors and/or suppliers does not relieve the Seller of this responsibility.

If required, the Seller shall install encryption software in compliance with Company instructions.

Computer systems and media containing UCNI and OOU information at the Seller's facility and at lower-tier subcontractors' facilities shall be dedicated to this work unless otherwise approved by the Company. UCNI and OOU information requires removable media unless prior approval by the Company is obtained through a written AIS Security Plan. All media, including CDs, DVDs, thumb-drives, hard-drives, etc., shall be encrypted utilizing Company approved encryption methods in compliance with FIPS 140.2 Level 1 or greater standards.

The Company will certify the AIS equipment and its physical location at the Seller facility and at associated lower-tier subcontractors' facilities. Seller shall schedule certification visit through the Company a minimum of ten (10) workdays prior to need.

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The Company will perform regular and unannounced assessments relative to approved information, computer, and physical security plans.

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.

The Seller shall return all UCNI and OOU electronic data, hard copies, materials and data media upon subcontract completion unless directed otherwise by the Company. When lower-tier subcontractors and suppliers have completed their work, the associated electronic data, hard copies, materials and data media shall be forwarded to the Seller for disposition in accordance with Company direction.

The computers associated with UCNI and OOU work will be decertified by the Company upon subcontract completion or sooner if the Seller indicates they are no longer required for the work.

#### **6.9 Seller Information Security Officer (ISO) Responsibilities**

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

#### **6.10 UCNI Access**

**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.

**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.

**Routine access**—means access to UCNI granted by an Authorized Individual to an individual eligible to receive UCNI in order to perform official duties or other Government-authorized activities. To be granted routine access to UCNI, a person must have a “need to know” the specific UCNI in the performance of official duties. In addition to the need-to-know requirement, the person must be a U.S. citizen. Non-U.S. citizens (i.e., foreign nationals) are not allowed any access, casual or otherwise, to UCNI information or media.

**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

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provide initial briefing to Seller personnel in the handling of UCNI documents and the Seller shall brief lower tier subcontractors and suppliers in the handling of UCNI documents.

#### **6.11 OUO Access**

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

#### **6.12 Paper Documents, Materials, and Equipment**

UCNI and OUO information shall be stored to preclude unauthorized viewing and disclosure. If an area is neither controlled nor guarded, UCNI and OUO documents, material, or equipment shall be stored in a locked container or locked room, which has been certified by the Company, to which only individuals authorized for routine access to UCNI or OUO have entry.

Reproduction of UCNI/OUO shall be limited to the minimum number of copies necessary to carry out official duties. Reproduced copies shall be protected in the same manner as the original document. Copy machine malfunctions shall be cleared with all paper paths checked for UCNI/OUO material. Completion of reproduction shall be followed by processing three blank sheets through equipment. Reproduction of UCNI and OUO shall not be performed on digital equipment, including digital copiers, without prior approval of the Company. The Company shall approve reproduction of UCNI and OUO material by a commercial reproduction provider not wholly owned by the Seller prior to reproduction.

#### **6.13 Transmission of UCNI or OUO**

Transmission of UCNI or OUO matter shall be by means that preclude unauthorized disclosure or dissemination.

The following applies to documents transmitted outside an approved facility:

- 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.
- Any of the following U.S. mail methods may be used: Express, Certified, or Registered Mail.
- Any commercial carrier using a signature service may be used.
- An authorized individual may hand carry the matter as long as he/she can control access.

The following applies to matter transmitted within an approved facility:

- A standard distribution envelope, such as the U.S. Government Messenger Envelope or equivalent, may be used.
- An authorized individual may hand carry the matter as long as he/she can control access.

#### **6.14 Destruction**

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

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### **6.15 UCNI/OUO AIS Resources and Information**

It is the responsibility of the Seller to know and provide the degree of protection required for a type of information being processed. All computer security incidents involving UCNI or OUO information or AIS resources shall be reported to the PSS, the Y-12 STR, or Computer Security officer upon recognition of the incident. Release of Y-12 Personally Identifiable Information (PII) must be reported to the Y-12 Plant Shift Superintendent (PSS) at 865-574-7172 within 10 minutes of recognition of the release.

Examples of incidents include but are not limited to the following:

- Fraudulent action involving AIS.
- Processing of information without an approved Security Plan.
- Leaving a session active while not properly protected (e.g., unattended, unsupervised).
- Unauthorized testing of certified AIS.
- Printer ribbons, cards, diskettes, hardcopy output, and/or magnetic media left unattended (not properly physically protected).
- Disclosure of sensitive information (e.g., failure to protect data files properly).
- 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).

AIS equipment shall be decertified of all UCNI/OUO information before connecting to a network or computer system of a lower category or before equipment is removed from service.

All UCNI voice and electronic data transmissions shall be over secure telephone unit or approved encrypted communication links. Applications utilized across Internet or distribution of sensitive information over Internet is not permitted unless through encryption (i.e., Entrust or Company-approved encryption) and then only after certification by the Company. When new computing systems or networks are connected to existing approved networks, they shall be documented and approved by the Company before connection and use.

OUO voice and data transmissions shall only be conducted using landline phones. Cellular and cordless phones shall not be used. OUO must be encrypted if sent electronically.

Access controls shall be used to prevent unauthorized access to information.

### **6.16 Infractions and Incidents**

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

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### **6.17 Regulatory Requirements**

The following regulatory requirements are incorporated by reference:

- 10 CFR 1017, Identifications and Protection of Unclassified Controlled Nuclear Information.
- 10 CFR 707 Workplace Substance Abuse Program
- 10 CFR 712 Human Reliability Program
- DOE M 470.4-1, Safeguards and Security Program Planning and Management
- DOE O 471.1B, Identification and Protection of Unclassified Controlled Nuclear Information
- DOE O 471.3 Identifying and Protecting Official Use Only Information
- DOE O 475.2A Identifying Classified Information
- DOE O 472.2 Personnel Security
- DOE O 206.1, Department of Energy Privacy Program
- NAP 70.2 Physical Protection
- NAP 70.4 Information Security
- DOE/NNSA NAP 14.2-C, NNSA certification and Accreditation (C&A) Process for Information Systems

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### 7.0 WASTE MANAGEMENT

#### 7.1 Waste Segregation

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

#### 7.2 Recycling

Unless otherwise authorized by the STR, the Seller shall remove packing material prior to delivery of material to the work area and recycle the packaging appropriately. The Seller shall package and transport recyclable waste to designated locations.

- Aluminum: Store cans in clear plastic bags for Company pick-up.
- Cardboard: Keep neatly stacked and dry. Transport to a Y-12 location designated by the Company.
- Scrap metal: For small quantities, palletize and band material in lengths not to exceed 6 feet. Notify the Company for pick-up. For larger quantities, the Company will provide and transport containers. Cut materials to lengths that will easily fit in the containers provided.
- Light bulbs: Unless directed otherwise by the Waste Management Plan, store light bulbs in a manner to prevent breakage, segregate broken bulbs from unbroken bulbs, package in structurally sound containers and keep containers neatly stacked, dry and out of the weather, label "Used Lamps," date the containers when the first lamp is placed inside, keep containers closed when not being filled, and deliver to the Company in approved containers during building operating hours.
- Used oil: Unless directed otherwise by the Waste Management Plan, 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.
- Batteries: Segregate by type (i.e., NiCad, Lead Acid, Hg, etc.) and tape terminals, obtain a Green Tag, place in structurally sound container, label "Batteries for Recycle," and date the container.
- Plastic Drink Bottles: Segregate from other wastes, collect them in clear plastic bags and Call Y-12 Recycle coordinator for pick up.
- Circuit Boards: Obtain a Green Tag, place in structurally sound container, and label as "Circuit Boards for Recycle," and call Y-12 Recycle coordinator for pick up.
- Mercury Filled Equipment: Obtain a Green Tag, place in plastic or metal container, label as "Mercury for Recycle," date the container, and call Y-12 Recycle coordinator for pick up.

#### 7.3 Y-12 Landfill

##### 7.3.1 General

The Seller shall deliver wastes to the appropriate Y-12 Landfill as identified in Appendix G, *Material Disposition*. Seller shall provide a schedule for Y-12 Landfill waste shipments to the Company eight (8) workdays in advance of waste disposal. Seller should assume an average of 45 minutes from arrival to dumping at Y-12 Landfill for non-asbestos, beryllium, or potential respiratory hazardous debris.

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#### **7.3.2      *Operating Schedule***

The Y-12 Landfill is closed on Fridays, Saturdays, Sundays, and holidays. Operating hours for Industrial Landfill IV, V, the Spoils Area, and Construction Landfill VII are 7:00 A.M until 3:45 P.M. The Seller shall schedule all deliveries with the Waste Acceptance Manager at least one working day (24 hours) in advance, in order to be included on the Plan of the Day. Contact the Waste Acceptance Manager, 865-241-9052, for scheduling or other questions. Friable asbestos, Beryllium, and potential respiratory hazardous wastes are accepted on Tuesdays only. Friable asbestos, Beryllium or potential respiratory hazardous wastes requiring separate special cell disposal and immediate cover shall be dumped by 3:15 P.M. Disposal schedules for large scale projects involving disposal of friable asbestos or beryllium contaminated waste will be determined on a case by case basis. Non-friable asbestos and potential respiratory hazardous wastes may be accepted other work days, but Tuesdays are preferred.

#### **7.3.3      *Request for Landfill Disposal***

The Company's Request for Landfill Disposal, UCN-21941, shall be approved six (6) working days prior to wastes being removed from the work area for disposal at the Y-12 Landfill. The Seller shall prepare the form, sign as the "Generator," and submit to the Company. The Company will then sign the form as the "Verification Officer" and "Derivative Classifier." Additionally, the Seller shall provide a minimum of one (1) workday advance notice to the STR before removal of waste from the work area.

#### **7.3.4      *Waste Acceptance Criteria***

For waste disposal at the Y-12 Landfill, reduce waste to a maximum length of eight feet. Pipe in excess of twelve inches in diameter is classified as oversize waste. Oversize waste previously approved for disposal requires a two (2) workday notification to the Y-12 Landfill. Oversize waste may require a Special Waste Permit; Seller shall consult with the Company for determination. Radioactive hazardous waste as defined in 40 CFR 261, other hazardous waste, PCB waste as defined in 40 CFR 761, and free liquid wastes will not be accepted for disposal at Landfill V or VII.

#### **7.3.5      *Asbestos, Beryllium, and Potential Respiratory Hazardous Wastes***

At least one person inside the delivery trucks accessing the landfill for disposal of friable asbestos, beryllium, or potential respiratory hazardous wastes must have a respirator in the truck available for use. The individual must be able to document up to date respirator fit test and training for respirator usage. Applicable waste streams must be packaged per the requirements defined in Master Profile S-040, Attachment 3 for Asbestos, Attachment 4 for Beryllium or Attachment 14 for Potential Respiratory Hazardous Waste. Orientation of pallets must be such that they can be removed from the side of the truck without the use of a long arm forklift. Pallets must be secured to the truck for transport and all straps and means of securing must be removed by the Seller. Non-friable Category 1 or 2 asbestos wastes may be hauled and dumped from trucks. Friable asbestos-containing material (ACM) insulation shall be properly packaged and labeled for delivery to Landfill V. Loose friable insulation will not be accepted for disposal. Seller should assume an average of 60 minutes from arrival to dumping at Y-12 Landfill V. Waste handling operation at Landfill V is suspended for a 30 minute period in the morning.

#### **7.3.6      *Driver Check-In Requirements***

Drivers shall stop at the Waste Acceptance Technicians (WAT) office and check-in. The WAT or designee will review the waste documents, inspect the incoming load and give the driver the approval to proceed as appropriate. Drivers shall follow this direction exactly. Once the

## **SUPPLEMENTAL CONDITIONS**

### **Construction (CON 04/12)**

incoming driver reaches the designated Landfill, look to the equipment operator for guidance on placement of the load for disposal.

#### **7.3.7 Respiratory Protection**

At the Y-12 Landfill, respiratory protection is required for workers who get outside the enclosed cab of a transportation vehicle hauling wastes or are within 100 feet of disposal activities identified by the Y-12 Landfill as a respiratory hazard (e.g., asbestos, beryllium, refractory ceramic fibers). All workers are required to wear hardhats, high visibility vests, safety glasses, and safety shoes while at the Y-12 Landfill and outside the enclosed cab of a transport vehicle.

#### **7.4 Waste Handling**

##### **7.4.1 Labeling**

The Seller shall label the waste package containers with assistance from the Company. Company RADCON will survey and analyze the waste material, verify that the waste meets the Y-12 Landfill radiological acceptance criteria, and issue a green tag before the Seller begins transferring waste for packaging, transportation, storage, and/or disposal. Labels for wrapped or drummed asbestos waste shall be red, black, and white and conform to 29 CFR 1910.145. Label bags, containers, or wrapped material in accordance with 49 CFR 171 and 172 including the name of the waste generator and the location where the waste was generated. Non-friable asbestos waste shall be labeled as such.

##### **7.4.2 Waste Storage**

The Seller shall store, package, transport and dispose of hazardous and/or radioactive waste as follows:

- Hazardous Waste - Store hazardous waste as defined by RCRA and corresponding State of Tennessee regulations in a Company-approved RCRA storage area. Seller shall obtain Company approval for hazardous waste Accumulation Area prior to beginning waste storage or staging. Seller shall coordinate with the STR to register the RCRA Waste Storage Area with the Company. Company provided RCRA hazardous waste generator training is required per 40 CFR 262.34(a)(4). Transport RCRA waste to the location designated by the Company for storage and management.
- Radioactive Waste - Store and package radioactive waste in Seller provided DOE-approved (e.g., 55-gallon drums, B-25 boxes) containers in accordance with DOE O 435.1. Seller shall coordinate with the STR to register Radioactive Materials Storage Area(s) (RMA) with the Company. When shipping radioactive material out of the Protective Area, prepare UCN-21822, *Shipping Plan* for Company approval prior to transport.
- Solid Waste – Containers with solid waste shall include an absorbent to trap liquid residue. Absorbent shall be appropriate to the type of liquid residue. Where equipment is being disposed and oil has been drained, fill the oil reservoir with Oil-Dri® or kitty litter.
- Oil and Solvents - Segregate oil, solvent, and sludge waste by type, origin, and contaminants. The Seller shall package waste in DOT-specification non-hazardous, non-radioactive Seller provided containers (i.e., 55 or 30-gallon polyethylene-lined bung top drums). The Seller shall package sludge in DOT-approved open top drums with polyethylene lining. Leave 5 inches of headspace in each drum to allow for expansion of contents. Ensure drums are in good condition and free of dents, rust, corrosion, and residue, and ensure drums are free of any labels

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identifying previous contents. 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.

- After filling, wipe the exterior (sides and top) of drums clean of residue. Apply tag to the side of each drum. Tags shall be a Company-furnished Hazardous Waste Identification (UCN-2114A) for RCRA hazardous wastes, or a Waste Identification (UCN-2114B) for nonhazardous waste. Insert the tag in a self-adhesive vinyl envelope and attach to the side of the drum, near the top, and angle downward to keep out water. Mark the tag with permanent ink, and print all information, including the Seller's name and subcontract number. Dispose of wipes in accordance with applicable waste regulations. If any packaging requirements are not met, the waste will not be accepted and/or transported by the Company.

#### **7.4.3 Material Disposition**

See Appendix G, *Material Disposition*. Contact STR if materials not identified in this table are encountered during the performance of the work.

#### **7.5 Regulatory Requirements**

The following regulatory requirements are incorporated by reference:

- 29 CFR 1910.145, OSHA, Specification for Accident Prevention Signs and Tags
- 40 CFR 261, EPA, Identification and Listing of Hazardous Waste
- 40 CFR 262, EPA, Standards Applicable to Generators of Hazardous Waste
- 40 CFR 266, EPA, Standards for the Management of Specific Hazardous Wastes and Specific Types of Hazardous Waste Management Facilities
- 40 CFR 273, EPA, Standards for Universal Waste Management
- 40 CFR 279, EPA, Standards for the Management of Used Oils
- 40 CFR 761, EPA, PCB Manufacturing, Processing, Distribution in Commerce, and Use Prohibition
- 49 CFR 171, EPA, General Information, Regulations, and Definitions
- 49 CFR 172, DOT, Hazardous Material Table, Special Provisions, Hazardous Materials Communications, Emergency Response Information and Training
- 49 CFR 173, DOT, Shippers-General; Requirements for Shipments and Packaging
- TN 1200-1-11, Hazardous Waste
- DOE Order, DOE O 435.1, Radioactive Waste Management

## **SUPPLEMENTAL CONDITIONS Construction (CON 04/12)**

### **8.0 PAYMENT**

Materials or equipment purchased or fabricated and stored, but not yet installed shall be listed in the application for payment and shall be accompanied by evidence that the Seller has acquired title to such material and that the material will be used to perform the work, as well as evidence of insurance or bonded warehousing for off-site storage. Temporary facilities and other distributable cost items that are not direct cost of actual work-in-place may be either shown as separate or distributed as general overhead expense. Preparatory work, overhead, and profit shall be included in the items to which they apply. The cost of bonds shall be listed in a separate line item.

#### **8.1 Final Application for Payment**

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

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**APPENDIX A**

**FORMS COMMONLY USED IN EXECUTION OF SUBCONTRACTED WORK**

FORMS REQUIRED	NO.	TITLE
*	CFN-0076	Job Brief (Daily Pre-Job and Post Job Brief) / Attendance Roster
*	CFN- 0095	Submittal Transmittal Form
*	CFN- 0131	Construction Safety Checklist
*	CFN-0153	Request for Information
*	CFN-0160	Release and Certificate of Final Payment
*	CFN-0161	Request for Inspection of Completed Work
*	CFN-0164	Request for Escort Agreement
*	UCN-21364	Subcontractor Request for Y-12 National Security Complex Training
*	UCN-21439	Subcontract Safety Performance Report
*	UCN-21445	Subcontractor Hazardous Materials Inventory Report
*	UCN-21519	Badge Request Form
*	UCN-23154	Subcontractor Request for Y-12 National Security Complex Temporary Access and Vehicle Pass
*	UCN-23155	Subcontractor Request for Y-12 National Security Complex Vehicle Pass
*	UCN-22373	Subcontract Overtime Request
	CFN-0078	Project / System Punch List
	CFN-0083	Typical Haul / Lift Plan
	CFN-0084	Lift Data Sheet – Single Crane Pick and Set
	CFN-0085	Lift Data Sheet – Two Crane Pick and Set
	CFN-0086	Pre-Lift Safety Checklist
	CFN-0087	Overhear Power Line Hazards and Controls Evaluation
	CFN-0088	Pre-Lift Brief
	CFN-0100	Competent Person Rigger Qualification Card
	CFN-0104	Hoisting and Rigging Checklist
	CFN-0126	Daily Report

## SUPPLEMENTAL CONDITIONS Construction (CON 04/12)

FORMS REQUIRED	NO.	TITLE
	CFN-0159	Release and Certificate of Interim Payment
	CFN-0167	Stored Equipment Maintenance Log
	DOE F 5484.3	Individual Accident/Incident Report
	UCN-16020A	Telecommunications Proposal
	UCN-17379A	Asbestos Waste Shipment Record
	UCN-21324	Beryllium Work Plan – Active Beryllium Worker
	UCN-21329	Subcontract Technical Representative (STR) Change Notice
	UCN-21482	Waste Container Log
	UCN-21519	Badge Request Form
	UCN-21668	Waste Container Preparation and Filling Instruction /Checklist ST-90 Box
	UCN-21670	Waste Container Preparation and Filling Instruction/Checklist Sealand
	UCN-21671	Waste Container Preparation and Filling Instruction/Checklist Drum
	UCN-21941	Request for Landfill Disposal
	UCN-21822	Shipping Plan

\*Required for most Subcontractors

# SUPPLEMENTAL CONDITIONS Construction (CON 04/12)

## APPENDIX B SUBMITTALS

DESCRIPTION	REQUIRED		MILESTONE (HOLD POINT PAST WHICH THE SELLER SHALL NOT PROCEED WITHOUT COMPANY APPROVAL OF SUBMITTAL)
	Yes	No	
Project Manager qualifications	<input type="checkbox"/>	<input type="checkbox"/>	
Superintendent qualifications	<input type="checkbox"/>	<input type="checkbox"/>	
ES&H Representative's qualifications	<input type="checkbox"/>	<input type="checkbox"/>	
Hoisting and Rigging Competent Person qualifications	<input type="checkbox"/>	<input type="checkbox"/>	
Signal Competent Person qualifications	<input type="checkbox"/>	<input type="checkbox"/>	
Scaffolding Competent Person qualifications	<input type="checkbox"/>	<input type="checkbox"/>	
ESPC Competent Person qualifications	<input type="checkbox"/>	<input type="checkbox"/>	
Excavation Competent Person qualifications	<input type="checkbox"/>	<input type="checkbox"/>	
Lead Competent Person qualifications	<input type="checkbox"/>	<input type="checkbox"/>	
Asbestos Competent Person qualifications	<input type="checkbox"/>	<input type="checkbox"/>	
Electrical Inspector qualifications	<input type="checkbox"/>	<input type="checkbox"/>	
First Aid person qualifications	<input type="checkbox"/>	<input type="checkbox"/>	
Subcontract Specific Work Plan	<input type="checkbox"/>	<input type="checkbox"/>	
Activity Hazard Analysis	<input type="checkbox"/>	<input type="checkbox"/>	
Schedule	<input type="checkbox"/>	<input type="checkbox"/>	
QA/QC Plan	<input type="checkbox"/>	<input type="checkbox"/>	
Subcontract Specific ES&H Plan.	<input type="checkbox"/>	<input type="checkbox"/>	
Environmental Best Management Plan (BMP)	<input type="checkbox"/>	<input type="checkbox"/>	
Electrical Safety Program per 29 CFR 1910, 29 CFR 1926, Subpart K, the National Electrical Code (NFPA 70) and Standard for Electrical Safety in the Workplace (NFPA 70E).	<input type="checkbox"/>	<input type="checkbox"/>	
Fall Protection Plan(s) for Company approval, which provides for roof work activities, leading edge work, safety net systems, warning line systems and controlled access zones as applicable.	<input type="checkbox"/>	<input type="checkbox"/>	

## SUPPLEMENTAL CONDITIONS Construction (CON 04/12)

DESCRIPTION	REQUIRED		MILESTONE (HOLD POINT PAST WHICH THE SELLER SHALL NOT PROCEED WITHOUT COMPANY APPROVAL OF SUBMITTAL)
	Yes	No	
Lead Compliance Plan	<input type="checkbox"/>	<input type="checkbox"/>	
PCB Compliance Plan	<input type="checkbox"/>	<input type="checkbox"/>	
Asbestos Work Plan (AWP)	<input type="checkbox"/>	<input type="checkbox"/>	
Hearing Conservation Program	<input type="checkbox"/>	<input type="checkbox"/>	
Thermal Stress Program	<input type="checkbox"/>	<input type="checkbox"/>	
Abrasive/Sand Blasting Plan	<input type="checkbox"/>	<input type="checkbox"/>	
Beryllium Work Plan (BWP)	<input type="checkbox"/>	<input type="checkbox"/>	
Radioactive Material License(s) for sources (e.g. soil density gauges, radiography).	<input type="checkbox"/>	<input type="checkbox"/>	
Training documentation for source users (e.g., soil density gauges, radiography sources).	<input type="checkbox"/>	<input type="checkbox"/>	
Radioactive Source Request with manufacturer's data, inspection, and maintenance documentation for radiological sources.	<input type="checkbox"/>	<input type="checkbox"/>	
	<input type="checkbox"/>	<input type="checkbox"/>	
	<input type="checkbox"/>	<input type="checkbox"/>	
	<input type="checkbox"/>	<input type="checkbox"/>	
	<input type="checkbox"/>	<input type="checkbox"/>	
	<input type="checkbox"/>	<input type="checkbox"/>	
	<input type="checkbox"/>	<input type="checkbox"/>	
	<input type="checkbox"/>	<input type="checkbox"/>	
	<input type="checkbox"/>	<input type="checkbox"/>	
	<input type="checkbox"/>	<input type="checkbox"/>	
	<input type="checkbox"/>	<input type="checkbox"/>	
	<input type="checkbox"/>	<input type="checkbox"/>	
	<input type="checkbox"/>	<input type="checkbox"/>	
	<input type="checkbox"/>	<input type="checkbox"/>	
	<input type="checkbox"/>	<input type="checkbox"/>	
	<input type="checkbox"/>	<input type="checkbox"/>	

**SUPPLEMENTAL CONDITIONS  
Construction (CON 04/12)**

**APPENDIX C  
PERIODIC REPORTS**

<b>REPORTS</b>	<b>FORM NO.</b>	<b>FREQUENCY</b>
Daily Report	CFN-0126	Daily
Job Brief (Daily Pre-Job and Post Job Brief) / Attendance Roster	CFN-0076	Daily
Certified Payroll	N/A	7 Days after pay period
Badge Status Report	Template	Monthly
Subcontract Safety Performance Report	UCN-21439	Monthly
Subcontractor Hazardous Materials Inventory Report	UCN-21445	Monthly

# SUPPLEMENTAL CONDITIONS Construction (CON 04/12)

## APPENDIX D TRAINING REQUIREMENTS MATRIX

MODULE TITLE	DURATION	FREQUENCY	PROVIDED BY
<b>GENERAL EMPLOYEE TRAINING (GET)</b>			
General Employee Training – Q50028732	4 hours	Every 2 years	Company
Y-12 Emergency Plan – Q50029794	½ hour	Once	Company
Annual Security Briefing – Q50193407	½ hour	Every Year	Company
Fire Extinguisher Training – Q50029592	½ hour	Every Year	Company
Hazard Recognition Training – Q50378432	½ hour	Once	Company
<b>INDUSTRIAL HYGIENE AND HEALTH</b>			
Initial Hearing Conservation Program & Refresher			Seller
American Red Cross – Cardio Pulmonary Resuscitation (CPR)			Seller
American Red Cross – Standard First Aid			Seller
Hazard Communication			Seller
Lead Awareness Training – Q50166880	½ hour	Every Year	Company
Hazardous Waste Operations and Emergency Response Initial Training (HAZWOPER)			Seller
HAZWOPER Refresher Training			Seller
HAZWOPER Supervisor Training			Seller
RCRA Hazardous Waste Generator Training			Company
Asbestos Abatement Worker Initial Training			Seller
Asbestos Abatement Worker Refresher Training			Seller
Asbestos Abatement Supervisor Initial Training			Seller
Asbestos Abatement Supervisor Refresher Training			Seller
Confined Space Supervisor (when working under Company's Program) – Q50023384	4 hours	Once	Company
Confined Space Supervisor Training (when using Company approved Seller program)			Seller
Authorized Entrant/Attendant for Confined Space Entry (When using Company program) – Q50023383	4 hours	Once	Company
Authorized Entrant/Attendant for Confined Space Entry (When using Company approved Seller program)			Seller
Beryllium Worker Training – Q50030170	4 hour	Every 2 years	Company
<b>INDUSTRIAL HEALTH</b>			
Lockout/Tagout Initial Training (when working under Company approved Seller's Program)			Seller
Lockout/Tagout Training (when working under Company's Program) – Q50099724	8 hours	Once	Company
Lockout/Tag-out Training Refresher (when working under Company's Program) – Q50172006	2 hours	Every year	Company

## SUPPLEMENTAL CONDITIONS Construction (CON 04/12)

MODULE TITLE	DURATION	FREQUENCY	PROVIDED BY
Fall Protection Safety Training – Q50025963	2 hours	Once	Company
Fire Watch Training – Q50025387	3 hours	Every year	Company
Issuing Authority/Service Supervisor (IA/SS) for Welding & Burning (required for Hot Work Permits) – Q50025836	2 hours	Once	Company
Scaffold & Ladder User Training – Q50030231	3 hours	Once	Company
Electrical Safety Program			Seller
<b>MOBILE EQUIPMENT / HOISTING AND RIGGING</b>			
Crane Operator Certification			Seller
Competent Person Rigger	2 day	Annual	Company
Aerial Lift Safety Initial/Re-qualification – Q50027139	4 hours	Every 3 years	Company
<b>RAD WORKER</b>			
RAD Worker II Initial – Q50072886	16 hours	Once	Company or Equivalent Accepted Training
RAD Worker II Requalification – Q50097802	1 hour	Every 2 years	Company
RAD Worker II Practical Dress-Out – Q50023961	1 hour	Every 2 years	Company
Personal Radiation Dosimeter Instrument (PRDI) Training (Dosimeter) – Q50353095	1 hour	Once	Company
<b>RESPIRATORY PROTECTION (PPE)</b>			
Basic Respirator Training (when wearing Company-furnished Respirator) – Q50023533	2-1/2 hour Class 2-hour Fit Test	Every year	Company
Respirator Fit-Test Requalification	1 hour	Every year	Company
Supplied Air Respirator Training – Q50028859	3 hours	Once	Company
<b>SECURITY</b>			
Comprehensive Security Briefing (only required for L or Q cleared)- Q50024760	1 hour	Once	Company
Initial Security Briefing Q50396256	.75 hour	Once	Company
Annual Security Refresher Briefing – Q50193407	½ hour	Every year	Company
Unclassified Controlled Information (UCI) – Q50030261	1-1/2 hour	Once	Company
Construction/Yankee Team Escort Training C– Q50258443	.5 hour	Once	Company
Limited Area Escorting - Q50568066	1 hour	Once	Company
Exit Briefing (Not recorded in SAP) L and Q cleared upon termination	.25 hours	Once	Company

## SUPPLEMENTAL CONDITIONS Construction (CON 04/12)

MODULE TITLE	DURATION	FREQUENCY	PROVIDED BY
<b>CONDUCT OF OPERATIONS (CONOPS)</b>			
Facility Specific CONOPS Training (if applicable to specific task)	4 hours	Once	Company
Safety Basis 202 (work inside Protected Area) – Q50325482	2 hours	Every Two Years	Company
<b>TRANSPORTATION SAFETY</b>			
Federal Motor Carrier Safety Regulations			Seller
FMCSR Refresher			Seller
DOT Regulations for Material of Trade			Seller
Secure Load and Tie Down			Seller
<b>MEDICAL ENROLLMENTS</b>			
Confined Space			Seller
Asbestos			Seller
Hearing Conservation			Seller
Mobile Equipment Operator			Seller
Respirator Wearer			Seller
Thermal Stress			Seller
Crane Operator (Company Procedure Y17-64-316, Appendix E)			Seller
Beryllium			Seller
DOT			Seller
HAZWOPER			Seller
<b>SELLER-SPECIFIC TRAININGS ON SELLER PREPARED PLANS AND PROGRAMS</b>			
Environmental, Safety and Health (ES&H) Program			Seller
ES&H Plan			Seller
Quality Assurance Plan			Seller
Work Plan and other Plans			Seller
Activity Hazards Analysis (AHA)			Seller
Workplace Substance Abuse Program			Seller

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## APPENDIX E 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 (6 CFM minimum)	25
PAPR with half-face mask (4 CFM minimum)	50
PAPR – Hood or helmet (6 CFM minimum)	25 / 1,000**
Continuous flow atmosphere supplying airline Hood or helmet (including abrasive blasting helmets)	25 / 1,000**
PAPR with tight-fitting full-face mask (4 CFM Minimum)	1000
Airline, tight-fitting half-face mask, continuous flow	50
Airline, tight-fitting half-face mask, pressure demand	50
Airline, tight-fitting full-face mask, continuous flow	1,000
Airline, tight-fitting full-face mask, pressure demand	1,000***
Air line with loose fitting hood continuous flow	25
Self-contained breathing apparatus, pressure demand	10,000***

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

\*PAPR - Powered air-purifying respirator.

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

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

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## APPENDIX F CONTROLLED/PROHIBITED ARTICLES IN PROPERTY PROTECTION AREA (PPA), LIMITED AREA (LA), EXCLUSION AREA (EA), AND PROTECTED AREA (PA)

ARTICLE DESCRIPTION(a)	PPA(b)	LA	EA / PA
Items prohibited by local, state, or federal law Controlled substances—illegal drugs and associated paraphernalia Explosives Handguns or rifles of any sort, including air-powered and knives with blades greater than 4 in. long Incendiary devices, with the exception of five or fewer road flares Privately owned ammunitions Alcoholic beverages Privately owned two-way radios Pets			
Privately owned one-way and one-and-one-half-way pagers			
Privately owned binoculars/optical enhancing devices			
Chemical irritants—specifically mace or pepper spray			
Privately owned cameras, including video cameras	May not be used.		
Privately owned cellular phones (includes smart phones)	Use of camera or video capability is not acceptable.	Allowed only with written authorization.	
Personal electronic devices (personal data assistants, eBook readers, iPod/MP3, laptops, tablets, etc.) and two-way pagers		Allowed only with written authorization.	
Privately owned voice recorders	Recording is not acceptable.		
Privately-owned computers associated media	May not be connected to Y-12 computers or used to store Y-12 data.		

<sup>(a)</sup>Y15-404, Acceptable Use of Information Technology Equipment, provides instructions on acceptable use of electronic devices and provides information on Y-12-issued devices.

<sup>(b)</sup>Property Protection Area includes parking lots inside the 229 boundary (blue line).

Key:

not allowed
  allowed, but must be secured in privately owned vehicle
  allowed

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**APPENDIX G  
MATERIAL DISPOSITION**

WASTE MATERIAL	CONTAINER BY:	TRANSPORTATION BY:	DISPOSAL LOCATION
<b>NON-RADIOACTIVE CONTAMINATION (GREEN RADCON TAG REQUIRED)</b>			
Aerosol can–empty	Seller	Seller	Industrial Landfill V
Aerosol cans – product remaining	Seller	Seller	Seller Supplied Facility (Facility must be approved by the Company if recycled or disposed.)
Asbestos-Containing Material (ACM) Friable	Seller	Seller	Industrial Landfill V
Non-friable construction debris	Seller	Seller	Construction Landfill VII
Construction/Demolition debris – wood, sheet rock, roofing, metals	Seller	Seller	Construction Landfill VII
Earthen materials (Spoils) – soil, brick, concrete, masonry materials, rock, asphalt	Seller	Seller	Construction/Demolition Landfill VII
Fluorescent bulbs	Company	Seller	Bldg. 9720-58 Recycle Center
Fluorescent light ballasts:			
Non-PCB (Leaking)	Company	Company	Bldg. 9720-58 Recycle Center
Non-PCB (Non-Leaking) (Recycle)	Company	Company	Bldg. 9720-58 Recycle Center
PCB	Company	Company	Waste Accumulation Area or 9720-58 Recycle Center
Batteries			
Lead Acid/NiCad	Seller	Company	Bldg. 9720-58 Recycle Center
Mercury/Lithium/Silver	Seller	Company	Center
Alkaline	Seller	Seller	Bldg. 9720-58 Recycle Center
			Construction Landfill VII
Glass	Seller	Seller	Industrial Landfill V
Gray water (i.e., shower and wash water)	Seller	Seller	Sanitary Sewer w/ Environmental Compliance Department approval
Incandescent bulbs	Company	Seller	Bldg. 9720-58 Recycle

## SUPPLEMENTAL CONDITIONS Construction (CON 04/12)

WASTE MATERIAL	CONTAINER BY:	TRANSPORTATION BY:	DISPOSAL LOCATION
			Center
Mercury (Switches & Batteries)	Company	Company	Waste Operations 90-Day Yard or 9720-58 Recycle Center
PCB-contamination bulk product: PCB level <2 PPM	Seller	Seller	Same as non-PCB (Must be approved by the Company)
PCB level ≤ 2 and < 50 PPM	Seller	Seller	Industrial Landfill V w/ special waste approval
PCB level ≥ 50 PPM	Company	Company	Industrial Landfill V w/special waste approval
PCB level ≥ 50 PPM (not suitable for landfill disposal)	Seller Seller	Seller Seller	Waste Operations 90-Day Yard
Metals w/ PCB Paint < 50 PPM	Seller	Seller	Company Approved Recycle Facility
Metals w/ PCB Paint ≥ 50 PPM			Industrial Landfill V w/ special waste approval
Metals w/ PCB Oil contamination ≥ 550PPM or 10ug/100cm			Decontamination per 40 CFR 761 & disposed at Industrial Landfill V w/ special waste approval or recycle w/ Environmental Compliance Department approval. For PCB removal activities other than stripping paint for welding, contact STR for Company determination if Environmental Protection Agency (EPA) involvement is required.
PCB Oily Rags and Wipes			
Chemicals	Company	Company	Offsite Facility (Must be approved by the Company)
Sanitary Waste			
Plastic, Paper, Food waste	Company	Company	Industrial Landfill V
Portable Toilets and Holding Tanks	Seller	Seller	Commercial offsite disposal
Scrap metal, including lead	Company	Company	New Salvage Yard metal recycle area
Used oil: No Rad Added Certification	Company	Company	Waste Operations 90-Day

## SUPPLEMENTAL CONDITIONS Construction (CON 04/12)

WASTE MATERIAL	CONTAINER BY:	TRANSPORTATION BY:	DISPOSAL LOCATION
PCB Oil	Company	Company	Yard
Detectable uranium (below yellow tag)	Company	Company	Waste Operations 90-Day Yard Company Storage
Wiring (non-PCB, non ACM)	Company	Company	Salvage Yard
Wood (unpainted, untreated, trees & vegetation)	Seller	Seller	Natural Resources Recovery at Solway
<b>RADIOACTIVE-CONTAMINATED MATERIALS (YELLOW RADCON TAG)</b>			
ACM Material	The Seller shall package radioactive contaminated wastes in Company-furnished DOT containers for transportation. The Company will transport radioactive contaminated waste.		
PCB Material			
Construction Debris			
Roofing			
Scrap Metal			
Wood			
Aerosol cans			
Light bulbs			