

# **GENERAL SPECIFICATION S-12**

**REVISION 25  
Dated 03/11**

**ENVIRONMENT, SAFETY AND HEALTH REQUIREMENTS  
FOR SUBCONTRACTOR WORK  
AT BECHTEL MARINE PROPULSION CORPORATION  
KNOLLS AND KESSELRING SITES**

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## PART I: GENERAL REQUIREMENTS

### A. SCOPE

- A.1. This specification establishes the Environment, Safety, and Health (ESH) requirements for work to be performed by the Seller on Buyer's Sites. All Seller personnel are responsible for compliance with the standards, practices, procedures, and documents contained or referenced in this specification. Any actions identified in this specification as requiring Buyer approval shall be coordinated with the Buyer's Representative.
- A.2. The Department of Energy (DOE), through the Atomic Energy Act of 1954, is authorized to prescribe such regulations and standards as it deems necessary to protect health and minimize danger to life or property on DOE facilities. The Occupational Safety and Health Act of 1970 does not directly apply to working conditions of employees where DOE has exercised its statutory authority to prescribe and enforce safety and health regulations. All documents and standards referenced in this Specification, including Part IV and EXHIBITS, are part of these requirements.
- A.3. Any reference in this specification to Federal, State or municipal laws, codes or regulations is to the current version of the law, code or regulation even if it has been revised after the date of contract award, and shall apply with the same force and effect as if set forth herein in full.
- A.4. Definitions:
- A.4.1 Buyer: The Buyer is Bechtel Marine Propulsion Corporation (BMPC), Government Prime Contractor awarding the purchase order or subcontract, and it applies to all work to be performed at the Knolls Site, Niskayuna, New York; and Kesselring Site, West Milton, New York.
- A.4.2 Seller: The Seller is the person, firm or corporation with whom the purchase order or subcontract is written. The Seller has direct responsibility for ensuring all lower-tier subcontractors follow the requirements of this specification. Any requirements of the Seller in this specification also apply to the Seller's lower-tier subcontractors.
- A.4.3 Buyer's Representative: An employee of the Buyer who oversees the project and coordinates Buyer needs and Seller services. This includes obtaining necessary approvals from Buyer Site organizations for various work permits, or exceptions to this document.
- A.4.4 Work Authorization/Work Release: A process whereby, after agreement by the Buyer's Representative with the Seller's scope of work and work controls for the day's activities, the Seller will be authorized by the Buyer's Representative to perform work. This process is expected to result in alignment on the work to be performed and not adversely impact the Seller.
- A.4.5 On Site Safety Representative (OSSR): An employee of the Seller who shall be designated as the full-time point of contact with the Buyer for all ESH concerns. See Part II, Section J.1 for further details on OSSR.
- A.4.6 *Construction Safety Coordinator (CSC)/On Site Safety Compliance Officer (OSSCO): A person who is designated by the Seller to act as the Seller's safety representative and that meets the required training and experience requirements as specified in Part II, Section J.2. This person may be designated as the competent person or qualified person for construction activities, if they meet the education and experience requirements.*

## **PART I: GENERAL REQUIREMENTS**

- A.4.7 Unplanned Event: Is defined as an ESH occurrence that results in, or has the potential to result in (“a near miss”), personal injury, property damage, environmental release or process loss. All ESH occurrences that are experienced by the Seller shall be immediately reported to the Buyer and they shall be investigated by the Seller.

### **B. WORKER COMPREHENSION OF REQUIREMENTS**

- B.1 The Seller shall be held responsible by the Buyer for the safety of the Seller’s employees (and those of lower tier Subcontractors), and for taking corrective action on occupational safety, health and environmental deficiencies resulting from Seller operations.
- B.2 In the event that any Seller personnel are not able to read or comprehend English, the Buyer’s Representative shall be notified in writing prior to such personnel starting work on site. The Seller shall assign a specific individual (a bilingual individual, if necessary) to direct all on site workers, including those employees not able to read or comprehend English. Signs, tags and barricades shall be posted by the Seller not only in English, but in an appropriate language for the personnel not able to read or comprehend English.
- B.3 As a prerequisite for performing work, Seller personnel (including sub-tiers) shall be trained in the proper use of equipment to be used on site as well as trained/qualified for the particular operation/work to be performed under the contract, in accordance with all training requirements contained in all applicable mandatory standards (S-12 Part IV). The Seller shall maintain documentation of this training/qualification and make it available for review by the Buyer as part of any permit application, written procedure, or upon request (within 24 hours).
- B.4 If Seller personnel demonstrate a lack of requisite ESH knowledge, understanding, or skill, as determined by the Buyer, those personnel shall be retrained by the Seller. The Seller shall provide written documentation of the retraining. The Seller shall receive approval from the Buyer prior to allowing the affected personnel to perform any further work associated with the area of deficiency at the Buyer’s Sites.
- B.5 The Seller shall preclude any further work at BMPC Facilities by any employee not demonstrating the proper safety posture, at the Buyer’s discretion.

### **C. BUYER’S SITE INDOCTRINATION AND WORKER HAZARD AWARENESS TRAINING**

- C.1 All Seller personnel performing work on Buyer’s Sites are required to attend an indoctrination session lasting approximately 60 minutes. This session consists of a presentation to familiarize personnel with Buyer emergency procedures, basic radiological control, security information, safety compliance requirements and substance abuse policy. Seller personnel shall sign an attendance log. The indoctrination shall be valid for a period of one year.
- C.2 The Seller is responsible for ensuring their workers, sub-tiers, and suppliers are informed of the foreseeable hazards and protective measures associated with the work on site. All Seller personnel performing work on the Buyer’s Site are required to be knowledgeable of ESH requirements associated with their work. Excluded from the term “work” are drivers making deliveries or picking up material and escorted Seller personnel providing training classes, attending meetings, or providing consulting/engineering services.
- C.3 The Seller shall ensure workers are knowledgeable of the requirements governing on site work, contained in the following references, prior to performing work on the Buyer’s Sites..

## **PART I: GENERAL REQUIREMENTS**

The Buyer reserves the right to administer individual written examinations subsequent to Seller personnel completion of training:

- Buyer approved Seller Contract-Specific Safety Plan (CSSP – Part II, Section A).
- General Specification S-12 (This document).
- Other specialty training as required (e.g., elevated work, lock-out / tag-out, electrical safety).

C.4 All Seller's performing on site work shall instruct their workers to: (a) observe the applicable occupational safety, health and environmental standards prescribed herein; (b) report promptly to the Seller's OSSR/CSC/OSSCO and supervisory personnel any condition which might lead to a violation of these standards; and (c) respond to warning signals which might be activated in the event of fire, radiation, or other emergencies.

### **D. OCCUPATIONAL INJURIES AND OTHER EMERGENCIES**

D.1 The Seller shall comply with the Site emergency notification procedures. During an actual emergency or drill, the Seller shall comply with the instructions of the Public Address System or Buyer's Representative. This may necessitate leaving the job site until termination of the emergency condition or drill.

D.2 All occupational injuries occurring on Buyer's property shall be reported immediately to the Buyer. To the extent feasible, the Buyer will assist with first aid and ambulance service, for Seller's personnel engaged in on site work.

### **E. HIGH RISK WORK**

E.1 High Risk Work (HRW) is defined as that work which presents a significant risk of causing serious personal injury or a fatality, if performed improperly. The increased risk can also be based upon characteristics inherent in the work task, location, and/or materials, or proximity to other hazardous operations. To provide the appropriate level of assurance that this work will be conducted in a reliable and safe manner, higher management attention and more rigorous hazard control mechanisms and work processes are employed.

## PART I: GENERAL REQUIREMENTS

### Examples of High Risk Work Include:

- Energized Electrical Work  $\geq 50$  volts
- Elevated Work  $\geq 6'$  (Where a fall hazard exists)
- Excavations (digging w/ power equipment  $\leq 3'$  of underground utilities w/ hazardous energy or personnel entry into a  $\geq 5'$  deep excavation)
- Entry into a Permit Required Confined Space
- Diving Operations
- Blasting
- Building Demolition & Renovation
- Applicable Welding/Burning Operations
- Use of Lasers
- Complex Lifting and Handling Operations
- Work on Stored High-Energy Systems
- Use of Temporary Building Support System(s)
- Entry into potentially immediately dangerous to life or health atmospheres (IDLH)
- Other work deemed by the Buyer to require High Risk Work authorization

A list of HRW evolutions, as determined by the Buyer, is provided in the box on the left and some of their associated control mechanisms are provided in EXHIBIT 6.

E.2 It is the Buyer's policy that performance of HRW will be controlled to mitigate the risk as much as practical. To that end, the Seller shall scrub the work process, where feasible, to eliminate or reduce the hazard, or apply engineered and/or administrative controls to minimize the risk, and/or to use Personnel Protective Equipment (PPE) to minimize the risk. To this end, the Seller shall obtain Buyer authorization to begin the planning for Seller intended HRW by completing Parts I & II of EXHIBIT 6A (HRW Authorization Form).

### E.3 Hazard Analysis Plans

A Seller prepared written project specific Hazard Analysis Plan (HAP) shall be submitted to the Buyer for approval prior to the start of work on site. The project specific HAP is a high-tier, generic hazard analysis covering the hazards specific to each project. For example: The hazard analysis for a major construction project might be split up into five phases: (1) mobilization and site clearing, (2) site civil work, (3) steel erection, (4) building enclosure, and (5) building interior work. Major tasks associated with each phase (e.g., installation of siding, roofing work, etc.) shall be identified along with all foreseeable hazards and any planned protective measures (engineering controls, administrative controls, and PPE) to mitigate those hazards. The project specific HAP shall identify each work evolution for the entire job, all foreseeable hazards and any planned protective measures to mitigate those hazards. The project specific HAP is a dynamic document and shall be updated by the Seller as changes to the plan are identified and/or change orders are received from the Buyer. Update to the project specific HAP does not require re-review and approval by the Buyer, but shall be made available to the Buyer upon request. An example of a project specific HAP is provided in EXHIBIT 18.

For operations involving HRW or unusual hazards, in addition to the control plans listed in EXHIBIT 6, a Seller prepared written task specific HAP shall be submitted to the Buyer for approval at least ten (10) days <sup>(1)</sup> before the start of the HRW. The task specific HAP is a subset of the "project specific HAP", but is a more detailed plan. This task specific HAP shall identify each work evolution associated with the HRW task, all foreseeable hazards (not only HRW operations) and any planned protective measures (i.e., engineering controls, administrative controls, and PPE) to mitigate those hazards.

Notes: (1) Unless otherwise specified, the standard cycle time for the review and approval of S-12 submittals is (10) working days.



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The Seller's OSSR/CSC/OSSCO shall prepare the HAPs and shall sign the plans as having reviewed them prior to commencement of the affected work. HAPs shall be used as a tool for discussion of various work evolutions, any foreseeable hazards, and planned protective measures associated with the job/task at all pre-work briefings.

- E.4 The Seller's workers shall also acknowledge in writing at the briefing that they have reviewed the scope of work to be performed and conclude that there is no acceptable alternate lower risk method to perform the work. The acknowledgement and participation in a pre-job briefing shall be documented (EXHIBIT 6B High Risk Pre Job Briefing Form). The Seller's OSSR/CSC/OSSCO shall be present at the work site and shall provide full-time overview of all HRW evolutions.

### **F. INSPECTION ASSISTANCE**

Seller shall provide such assistance and information as may be required by the Buyer to aid in the performance of periodic ESH inspections of Seller work operations, facilities and equipment.

### **G. UNPLANNED EVENTS**

A formal inquiry process known as a "Critique" will be conducted by the Buyer or by the Seller's CSC/OSSCO, if invoked, to determine facts and identify corrective actions associated with an occurrence resulting from a Seller operation. An "Occurrence" is defined as an unexpected or unplanned event which, in the Buyer's opinion, will have a negative impact on Buyer or Seller operations. Upon notification that a Critique is to be conducted, Seller personnel, as requested by the Buyer, shall attend the critique so that all pertinent facts associated with the occurrence can be obtained for formal documentation.

- G.1 The Seller's Contract Specific Safety Plan (CSSP- Refer to Part II, Section A) shall describe how the Seller will investigate and report (Critique) EH&S unexpected "Occurrences" and include minimum requirements as specified. The investigative and reporting process shall investigate "near miss" situations in order to institute corrective actions that are intended to prevent future occurrences of the event, and also have a preventative effect on more serious situations.
- G.2 The Buyer shall be afforded the opportunity to evaluate the effectiveness of the Seller's investigation, and direct additional Seller actions based on the circumstances surrounding the occurrence. Upon notification that an investigation is to be conducted, Seller personnel shall participate in the investigation so that all pertinent facts associated with the occurrence can be obtained for formal documentation.
- G.3 Seller personnel shall be instructed to preserve any accident scene until the investigation has been completed. The operation and equipment used which caused the occurrence may be suspended, and the scene shall be preserved until released by the Buyer. The investigation shall be held as soon as practicable (with-in 1 working day) following the occurrence, as determined by the Seller with Buyer concurrence.
- G.4 A list of BMPC's Safety and Environmental Incident Reporting Criteria is included as EXHIBIT 6C.

### **H. WEEKLY INSPECTIONS**

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Unless otherwise stated in the subcontract, the Seller shall perform weekly inspections of their work operations, facilities and equipment to assure compliance with the requirements of this specification and all applicable Federal, State and local regulations. Documentation shall be maintained for all inspections/findings. The Seller shall provide inspection/finding records to the Buyer for review, upon request. This requirement is not applicable to Service Work unless otherwise stated in the Contract.

### **I. PERSONAL PROTECTIVE EQUIPMENT (PPE)**

I.1 Head and eye protection, and substantial footwear shall be worn at all times in posted construction areas, unless otherwise approved by the Buyer.

I.1.1 Head protection shall meet the requirements of ANSI 89.1

I.1.2 Eye and face protection shall meet the requirements of ANSI Z87.1 or CSA Z94.3.

I.2 All personnel performing lifting and handling operations with crane equipment (including chain hoists and come-a-longs) shall wear hard hats, safety glasses, and safety-toed foot wear. In addition, gloves made of appropriate material and function shall be worn by personnel performing lifting and handling operations with crane equipment except when operating crane controls.

I.3 Other PPE requirements are based upon the Buyer approved Seller prepared HAP.

I.4 PPE requirements shall be posted on all sides of construction boundaries.

### **J. SELLER'S INDUSTRIAL HYGIENE PROGRAM - EXPOSURE STANDARDS AND EVALUATIONS**

The Seller is responsible to conduct an assessment of worker exposure to reduce the risk of work-related disease or illness. The assessment of worker exposure to chemical, physical, or ergonomic hazards is through appropriate (acceptable to the Buyer) workplace monitoring (based on personal, area, swipe, and bulk sampling); and observation. Monitoring results shall be documented which shall include; task description; monitoring location; description of sampling methods and durations; control measures in place during monitoring (including the use of personnel protective equipment), and any other factors which may have affected the sampling results. The Seller shall determine the precautionary measures that need to be taken to protect workers during the workplace's normal operating condition and in foreseeable hazards (i.e., identification of inherent chemical, physical, or ergonomic hazards in the workplace and the established corresponding control measures) through the HAP (EXHIBIT 18).

J.1 The Seller's personnel exposure to toxic substances or harmful physical agents shall not exceed: (1) the limits specified by the Occupational Safety and Health Administration (29 CFR 1910 and 29 CFR 1926), or (2) the current threshold limit values of the American Conference of Governmental Industrial Hygienists (ACGIH), whichever is lower. The Seller shall comply with all limitations through modifications of work practices and/or engineering controls whenever feasible. In the event such controls cannot be instituted, or when otherwise required by applicable standards, the Seller shall provide and require the use of PPE (e.g., respiratory protection equipment) which is approved or recommended by one of the following agencies:

- National Institute of Occupational Safety and Health (NIOSH).
- Mine Safety and Health Administration (MSHA).

## **PART I: GENERAL REQUIREMENTS**

- J.2 The Seller is responsible for performing all evaluations, analysis and workplace monitoring to ensure compliance with exposure limits. All monitoring documentation shall be provided to the Buyer, for information. Equipment and methods used to determine an occupational exposure shall be performed by knowledgeable personnel and conform to current accepted analytical methods and practices. Air monitoring shall be performed following NIOSH/OSHA methods or alternative methods approved by Buyer. Analytical labs shall be AIHA (American Industrial Hygiene Association) accredited.
- J.3 In addition to monitoring required to be performed by the Seller, Seller personnel may be required to wear Buyer provided or mandated personal monitoring equipment for industrial hygiene measurements (e.g., noise dosimeters, air samplers for measuring dust, asbestos fibers, and hazardous chemicals). Furthermore, the Buyer may perform similar monitoring in the vicinity of the Seller's work area or require the Seller to perform such monitoring using the Buyer's equipment and at the Buyer's expense.
- J.4 Established operational procedures (e.g., use of a definitive manufacturer's operational procedure and specified PPE), or subsequent use of Seller procedure for which monitoring substantiated a negative exposure assessment (NEA) may be used without specific monitoring, when approved by the Buyer.

### **K. HAZARD COMMUNICATION**

The Buyer will coordinate training and education of all affected Seller personnel to achieve compliance with all parts of 29 CFR 1910.1200 (Hazard Communication) for situations involving actual or potential exposure to Buyer-owned toxic chemicals and harmful agents for which the Seller was not contracted to be exposed. The Buyer will provide the Material Safety Data Sheets (MSDS's) and the Buyer will provide training and education to Seller personnel.

### **L. MATERIALS ON SITE**

- L.1 The on site storage of environmentally harmful materials (such as chemicals, oils, hazardous or non-hazardous wastes) shall be controlled to prevent leakage or spillage.
- L.2 The Seller shall take steps to minimize the amount of material brought on site, storage time of the material and the waste resulting from use of the material.

### **M. RELOCATABLE STRUCTURES, TRAILERS AND LAYDOWN AREAS**

The Seller shall identify, for Buyer approval, their space to work, accumulate materials, or locate relocatable structures on site.

- M.1 The Seller shall notify Buyer's Representative of the need to bring a relocatable structure on site, ten (10) days in advance of their needs. The Seller shall identify the size and type of structure (e.g., trailer, storage container, etc.), and the project for which it is being requested. The Buyer's Representative will respond with a controlling document, "Relocatable Structures Construction Work Procedure." The Seller shall complete the requested information for Buyer's review and approval. The Buyer will review and approve within ten (10) days for the relocatable structure to be brought on site.

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- M.2 Any relocatable structures, including construction trailers, used on site by the Seller, shall be in compliance with the applicable building and fire codes and the DOE Standard on Fire Protection for Relocatable Structures, DOE-STD-1088-95. For the purposes of interpreting DOE Standard 1088-95, all statements contained in the standard involving the word “should” will be interpreted as “Shall”.

### N. WASTE DISPOSAL

The Seller shall not dispose of any materials on site (i.e., pouring onto the ground, dumping in a ditch/storm drain, throwing into a dumpster, venting or degassing) without prior approval of the Buyer. Waste generated as a result of activities under the contract shall be disposed of as specified in the contract technical specification (see Materials Characterization and Disposition List). If the waste is generated by a Seller working outside the contract technical specifications, or using materials or methods not approved by the Buyer on the Seller Waste Process Evaluation List (EXHIBIT 11), the Seller shall turn such waste over to the Buyer for disposal, however, the Buyer will bill the Seller for the full cost of disposal of such waste, as determined by the Buyer. Waste shall be placed in areas designated by the Buyer, as follows:

- N.1 Solid Waste – Ordinary garbage, such as paper bags, food scraps, yard/vegetation waste, and cigarette butts, may be disposed of in the appropriate dumpsters or trash cans around the site.
- N.2 Scrap Metal – Scrap metal shall be placed in Buyer provided scrap metal dumpsters, unless otherwise directed by the Buyer in the contract technical specification. Drums and aerosol cans are not acceptable as scrap metal. Materials attached to scrap metal (such as chair cushions) or scrap metal items containing light bulbs or batteries are also not permitted. The attached item shall be removed prior to placing the scrap metal portion in a dumpster. Scrap metal for recycling shall not be placed in any construction and demolition dumpster. Material is to be placed in dumpsters only upon approval of the Buyer.
- N.3 Clean Soil - The Seller shall place clean soil from excavation activities on site in an area designated by the Buyer. Clean soil shall not contain oil, chemicals, radioactivity, containers, or construction and demolition (C&D) debris. To the extent possible, visible pieces of non-soil material shall be removed before and/or after delivery to the designated area. Incidental pieces of concrete, asphalt, wood, brick, or non-hazardous metal less than six (6) inches in diameter may be contained in the clean soil.
- N.4 Construction and Demolition Debris – Unless otherwise specified in the contract technical specification, the Seller shall remove from site and dispose of all non-hazardous waste from C&D activities at a disposal facility acceptable to the Buyer (See EXHIBIT 28). The Seller shall ensure any C&D waste disposal is in accordance with local regulations. The Seller shall provide copies of relevant permits (e.g., the transporter’s permit and the local disposal facility permit) and any written agreements with ultimate disposal facilities to the Buyer, for information, prior to removal of C&D waste from site. The Seller shall report monthly (within 5 work days from the end of the month) to the Buyer the number of cubic yards and tonnage of C&D debris removed from the site.
- N.5 Other Controlled Waste - The Buyer may choose to control the disposal of certain waste streams which are not controlled at the State or Federal level. Such items will be specified in the contract technical specification and/or the Buyer approved Seller prepared Waste Process Evaluation List (EXHIBIT 11).

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- N.6 Recyclable Materials - Recyclable material such as glass, plastic, paper, cardboard, tin cans, and empty aerosol cans shall be placed in the appropriate collection containers (i.e. recycling, single stream, co-mingle) located around the Site. Compliance with the Buyer's recycling program is mandatory. Aerosol cans (only empty cans, no gas/liquid) marked empty shall be put in a recycle container.
- N.7 Non-hazardous Chemical and Hazardous Chemical Waste
- N.7.1 The Seller shall turn over to the Buyer for disposal all chemical waste (e.g., spent chemicals or strippers, chemically-contaminated rags or debris, asbestos, PCB waste, partially full non-functioning aerosol cans, etc.), hazardous and non-hazardous, generated as a result of work under the contract.
- N.7.2 Chemical waste shall be packaged and stored in containers compatible with the waste which have been appropriately labeled. The Buyer will provide the containers and labeling for Seller's use. The Seller shall provide the manpower to package and label the waste, and to place the waste in areas designated by the Buyer. Hazardous and non-hazardous waste storage areas shall be pre-approved by the Buyer.
- N.7.3 For waste packaged by the Seller, the Seller shall inspect waste container contents and certify that the "Waste Inventory List" is accurate, prior to acceptance by the Buyer. The Seller signature requirements will be annotated on the Waste Inventory List, available from the Buyer's Representative.
- N.8 Characterization - Where a question arises regarding whether an individual waste generated as a result of activities conducted under the contract is hazardous or non-hazardous; the Seller shall provide conclusive evidence (e.g., MSDS's, Lab results) prior to turnover to the Buyer. The Buyer may choose to perform independent analysis.
- N.9 Recyclable Material – The Seller shall report monthly (within 5 workdays of the end of the month) to the Buyer, for information, the number of cubic yards and tonnage of recyclable material removed from the site.
- N.10 Ionization Type Smoke Detectors
- N.10.1 At the Knolls Site, an ionization smoke detector that is to be removed from service for storage or disposal shall be turned over, immediately upon removal, to the Buyer's Representative to be properly controlled. The Buyer shall be responsible for the proper control and disposal of the detector.
- N.10.2 At the Kesselring Site, ionization type smoke detectors are required to be labeled with the radioactive tri-foil symbol and a black on white sticker stating that the contained material is not associated with the Naval Nuclear Power Program. Prior to removal from service, a determination of the applicability of requirements by the Buyer will be made. Ionization detectors may only be removed from service by the Site's licensed fire alarm system contractor, unless otherwise approved by Site Radiological Controls personnel and controlled as radioactive material until such time that the Site's fire alarm system contractor can take possession of the detector(s). Ionization detectors removed from service by the Site's licensed fire alarm system contractor, or turned

## PART I: GENERAL REQUIREMENTS

over to them by Site Radiological Controls, shall be removed from the site the same day, and be handled and disposed of in accordance with regulatory requirements for ionization type smoke detectors.

- N.11 Leather Products – Due to their chromium content, leather products shall be managed as hazardous waste (when determined to be waste), unless the Seller provides vendor certification that leather is not processed with chromium.

### O. TEMPORARY CONNECTIONS

- O.1 Temporary connections to existing Buyer services (such as water, electrical power, sewers, ventilation ducts, gas lines, etc.), shall be authorized by the contract technical specification.
- O.2 The Seller's request shall specify the purpose, duration and any controls on the connection for approval at least ten (10) days prior to the planned connection.
- O.3 Unless approved by the Buyer, all temporary connections shall be de-energized or de-pressurized at the end of each working day. All lines or hoses are to be disconnected from their source(s) and stowed properly.
- O.4 In situations where the Seller may create a cross-connection between the Site's potable water system and a non-potable fluid, an acceptable form of backflow or back-siphon protection is required. It is the Seller's responsibility to schedule, obtain from the Buyer, and install a suitable backflow prevention device (e.g., double check valve assembly, reduced pressure zone valve assembly, etc.) appropriate to the degree of hazard present for any temporary connection to the Site's service water or fire main system. The Buyer will provide personnel to test the device, when required, following the installation of the device(s).

### P. SITE DRAINAGE SYSTEM

- P.1 The Seller shall prevent the discharge of water associated with Seller operations into any site drainage system or adjacent waterways.
- P.2 In the event that standing water becomes collected as a result of Seller's operations (such as in a revetment or excavation) the Seller shall sample the water for Buyer analysis, unless otherwise approved by the Buyer. Excavation dewatering may require filtering for solids removal prior to discharge. Upon receipt of the sample results, the Buyer will direct the Seller to pump the water into containers for treatment or disposal, or into the site discharge system, based on the analytical results.
- P.3 The Seller shall wash equipment used for concrete work only in areas designated by the Buyer.
- P.4 Drains to be blocked shall be designated by the Buyer.
- P.5 The Seller shall comply with the Site's Storm Water Permit for Municipal Separate Storm Sewer Systems (MS4). The Seller shall implement the necessary control measures established in the contract technical specification or as directed by the Buyer to prevent unapproved discharges, appropriately manage the construction/post-construction site, and maintain good housekeeping and pollution prevention controls.

## PART I: GENERAL REQUIREMENTS

- P.6 For construction sites that disturb greater than one (1) acre of soil, the Seller shall comply with the Buyer approved site specific Storm Water Pollution Prevention Plan (SWPPP) and with the State Pollutant Discharge Elimination System (SPDES)/National Pollutant Discharge Elimination System (NPDES) General Permit for Storm Water Discharges from Construction Activities.

### Q. SPILLS/RELEASES

- Q.1 The Seller shall immediately (**within five (5) minutes**) notify the Buyer verbally or by telephone extension 116, or by dialing 395-4899 (Knolls), or 884-1219 (Kesselring) in the event of any environmental concerns including leaks, or spills of environmentally harmful material (i.e., chemicals/oils/gas).
- Q.2 The Seller shall control or contain the spilled material and limit access to the area. Cleanup actions shall be the responsibility of the Seller and shall be initiated as soon as possible under the direction of the Buyer's Representative. The Seller shall provide waste generated from the cleanup actions to the Buyer for disposal. The Buyer retains the right to bill the Seller for the full cost of disposal of such waste, as determined by the Buyer.
- Q.3 Notifications to the appropriate regulatory agencies will be made by the Buyer. If appropriate, the Seller will be reported as the responsible party.

### R. AIR EMISSIONS

- R.1 The Seller shall not construct or operate temporary air exhaust systems or tie into any existing Buyer air exhaust systems without the prior approval of the Buyer.
- R.2 Whenever possible, air exhaust systems (for example welding exhaust) will be of the re-circulating type and return the exhausted air into the room. All such systems will require the prior approval of the Buyer.
- R.3 Venting (bleeding) hazardous or ozone depleting substances (such as Freon, or Halon) to the atmosphere is prohibited. Operations of this type will require use of a device which allows material to be collected and reused in the system or recycled upon completion of the work. Venting of any material is generally prohibited. On certain occasions it may be permitted but will require the prior approval of the Buyer.
- R.4 The Seller shall provide a copy of the license for any and all personnel that service the Buyer's equipment containing refrigerants, in accordance with 40 CFR 82 Subpart F. The license shall be provided at least ten (10) days prior to start of work.
- R.5 Any paints, coatings or other materials meeting the definition of Architectural Coatings under NYSDEC Regulation 6 NYCRR Part 205, will be required to meet the volatile organic carbon (VOC) limitations as defined in the regulation.

### S. BERYLLIUM CONTROL (Knolls Site Only)

- S.1 The Seller shall not bring onto Buyer Sites any objects made of materials that contain 0.1% or greater beryllium that may be released as airborne particles.

## **PART I: GENERAL REQUIREMENTS**

- S.2 Medical surveillance for beryllium-related disease and information regarding the disease and the Buyer's Chronic Beryllium Disease Prevention Program shall be provided by the Buyer to all on site Seller personnel who have ever been exposed to airborne beryllium at a Buyer's Site or at any other DOE Site. Compliance with Federal rule 10 CFR Part 850 requires that the Seller identify each such person who will perform work at a Buyer's Site, even if that work will not involve exposure to airborne beryllium. To assist in identifying those personnel, the questionnaire of EXHIBIT 13 is attached for the Seller to provide to all Seller personnel who are expected to work at Buyer Sites on five (5) or more days under the contract. Seller personnel who report a history of beryllium exposure at a Buyer's Sites or another DOE Site shall be identified to the Buyer's Representative prior to performing work at a Buyer's Site, or within ten (10) days of having worked at the applicable Buyer's Site for five (5) or more days under this contract, using the report of EXHIBIT 13. This will enable the Buyer to provide beryllium medical surveillance (which the employee may decline) and information regarding beryllium disease and the Buyer's

Chronic Beryllium Disease Prevention Program (the Seller's personnel shall participate in this information session). Submittal of Attachments 1 and 2 of EXHIBIT 13 by the Seller is required if any Seller employees are identified that believe they were, or believe they may have been, exposed to airborne beryllium at a Buyer's Site or another DOE Site. It is not required for either Attachment 1 or Attachment 2 to be submitted to the Buyer if the Seller identifies that no Seller personnel have such a beryllium exposure history.

- S.3 BMPC Specific Requirements – See EXHIBIT 26

### **T. PETROLEUM TRANSFER OPERATIONS**

- T.1 The Seller shall submit procedures for fuel transfer operations to the Buyer, for approval, at least ten (10) days prior to their intended use.
- T.2 All Seller petroleum transfer operations shall have appropriate secondary containment.
- T.3 The Seller shall provide appropriate spill control equipment (i.e., absorbents, containers, etc.) where there is a potential for a spill.
- T.4 All Seller vehicles equipped with hydraulic components shall carry a bag of speedy-dry, or equivalent.

### **U. PESTICIDES**

- U.1 Any application of pesticides or herbicides on site requires prior Buyer approval, at least ten (10) days prior to the start of work.
- U.2 If the Seller is required to apply pesticides or herbicides on site, then the Seller shall submit proof of New York State Certified Pesticide Applicator or Technician certification.

### **V. WETLANDS/NEPA/STREAM PROTECTION**

- V.1 Any work to be done within or adjacent to a known or suspected wetland environments shall be reviewed with the Buyer prior to any degree of disturbance to the area.

**END OF PART I**



## **PART II: PRE-WORK REQUIREMENTS**

### **A. SELLER SAFETY PROGRAM**

For all subcontracts, UNLESS OTHERWISE NOTED in the bid requirements, the Seller shall develop and submit a Contract-Specific Safety Plan (CSSP). The CSSP shall state the nature of the work, potential hazards anticipated, how the hazards will be mitigated, or how workers will be protected from the hazards. The CSSP shall be submitted in two separate sections (A.1 & A.2 below):

- A.1 Corporate Section: Include the Seller's corporate safety program that addresses the OSHA requirements and standard industry hazards applicable to the subcontract scope of work. This safety program shall include, but is not limited to, the following elements: safety policies, safety training (e.g., elevated work, confined space entry, lockout/tagout), worksite inspection and monitoring programs, safety and industrial hygiene communication, management and employee responsibilities, hazard communication program, injury/illness record keeping programs, and PPE program.
- A.2 BMPC-specific Section: Address the BMPC-specific requirements identified in the Contract Technical Specification Scope of Work, existing BMPC workplace hazards identified in the Seller's project specific HAP (EXHIBIT 18), and task specific HAP for HRW, as defined in this document.
- A.3 The Seller shall flow down requirements identified in this specification to subcontracts for all Sub-tiers. The Seller is responsible to perform training as necessary to ensure sub-tiers are knowledgeable of the Buyer's requirements. The Buyer has the right to validate that the work is being performed in accordance with a documented safety plan, and to stop work and resolve any noncompliance with applicable EHS requirements for this contract and subcontracts for all tiers associated with this subcontract.
- A.4 If a conflict exists between the provisions of the Seller's safety program and this specification, the provisions/requirements providing the greater protection shall be complied with.
- A.5 The Seller's CSSP; shall describe how the Seller will investigate and report ESH "Unplanned Events" defined in Part I, Section G and include the following minimum requirements.
- A.5.1 Report all occurrences (e.g., near miss, first aids, recordable injuries and illnesses, days away cases, and environmental releases) to the Buyer immediately.
- A.5.2 The Seller shall conduct an investigation of all occurrences. Investigations shall include
- Identification of all occurrence causal factors (root and contributing causes) using pre-approved investigative means.
  - Identification and documentation of all corrective actions.
  - Documentation of closure of all identified corrective actions.

### **B. COORDINATION WITH BUYER'S REPRESENTATIVE**

The Subcontract Technical Representative (STR) or Service Contract Work Administrator (SCWA) is the Buyer's Representative responsible for day-to-day oversight and coordination of Seller operations. As such, the Seller shall inform the STR or SCWA when Seller personnel are on site. The Seller and Buyer shall have a shared understanding of the scope of work to be accomplished during that day's work prior to the Buyer giving the Seller a "Work Authorization/Work Release" (refer to definition in Part I, Section A).

## PART II: PRE-WORK REQUIREMENTS

### C. USE OF MAJOR EQUIPMENT

Ten (10) days prior to use of any major equipment on site, the appropriate Seller representative shall sign and submit the Major Equipment Declaration form as shown in EXHIBIT 17, for all Seller and lower tier contractor major equipment. This requirement applies to rented or leased as well as owned or operated major equipment. Vehicles contracted under Part 364, Waste Transportation Permit, follow separate inspection criteria and are exempt from this requirement.

### D. PERMITS & PLANS REQUIRED

D.1 For a variety of on site work tasks, the Seller shall obtain authorization to proceed via the Buyer's permitting and plan system. The Seller shall identify the scope of work and process the requested Permits and Plans from the Buyer **at least ten (10) days** before any of the following operations are performed. The Seller shall return the completed documents to the Buyer upon completion of work.

D.2 The following operations require the use of a Buyer approved Work Permit:

- Use of flame, hot work (welding, torch cutting and soldering). See EXHIBIT 20
- Use of respirator See EXHIBIT 21
- Entry into a permit-required / non permit confined space See EXHIBIT 22A&B
- Excavation Permit See EXHIBIT 23
- Penetration Permit See EXHIBIT 24
- Asbestos removal/disposal/handling See EXHIBIT 25
- Work in beryllium restricted-access areas See EXHIBIT 26

D.3 Under certain circumstances additional documentation in the form of a specific work plan or procedure is required. The work may be HRW and Buyer authorization (EXHIBIT 6A) is required prior to beginning to plan the execution (see Part I, Section E). These Plans are:

- Energized Electrical Work (greater than 50 volts) See EXHIBIT 14
- Elevated Work (6 feet or more) See EXHIBIT 15
- Excavation (5 feet or more) See EXHIBIT 16

### E. WRITTEN WORK PROCEDURES

E.1 Work with potentially hazardous materials or physical agents may require actions by the Seller to ensure that safe working conditions are maintained and that OSHA Permissible Exposure Limits (PEL's) or American Conference of Governmental Industrial Hygienist (ACGIH) Threshold Limit Values (TLV's) are not exceeded. If those actions include:

- implementation of engineering controls (e.g., exhaust ventilation or local containment enclosures), or
- use of respiratory protective equipment, or
- performance of workplace exposure measurements (e.g., air sampling or noise level measurements).

then the Seller shall provide a detailed written work procedure to the Buyer for approval. The procedure(s) shall describe as a minimum the sequence of events, exposure controls, past experience with procedures (if any), training, respiratory protective measures and workplace measurements which will be performed.

E.2 The Seller is responsible for ensuring that employees are qualified to work with the designs, methods, materials and procedures that have been prepared.

## **PART II: PRE-WORK REQUIREMENTS**

- E.3 The procedure(s) shall be submitted to the Buyer for approval at least ten (10) workdays before the evolution is to begin. See EXHIBIT 27 for a procedure template.

### **F. MATERIAL SAFETY DATA SHEETS**

- F.1. All materials brought on site for use shall be accompanied by the relevant MSDS. For any material not on the BMPC List of Exempt Products (LEP) <sup>(1)</sup> the Seller shall submit for approval an EXHIBIT 5 <sup>(2)</sup> for each liquid (cutting oils, fluids, acids, bases, cleaning solvents and solutions, coatings, thinners, etc.), gas, aerosol, and easily divisible solid chemical which will be used on site by the Seller in performance of this contract. In addition, the Seller shall submit for approval an EXHIBIT 5 for all metal products used on site in performance of this contract when its physical form has the potential to be significantly altered by work evolutions (cutting, grinding, abrading, burning, drilling, welding, etc.) potentially resulting in exposure above the occupational exposure limit.

Each EXHIBIT 5 shall contain a description of what the product is, the intended use of the product, the maximum amount of product that will be on site on any given day, the estimated total amount of each product that will be consumed, the container size of each product, the location of product use; indoors (building number, room, etc.) or outdoors (general location) and the expected waste to be produced and their respective disposal path(s). A current MSDS appropriate to the material being used (i.e., manufacturer, formulation, and date of manufacture) shall be attached to an EXHIBIT 5 for Buyer's approval for each product listed on the EXHIBIT 5. For some products (paints and coatings, pesticides, etc) Product Data Sheets will need to be provided in addition to the MSDS.

All EXHIBITS shall be submitted to the Buyer for approval at least ten (10) days prior to bringing these materials on site. Any changes to the materials listed on the EXHIBIT 5 (i.e., chemical substitution) will require filing another EXHIBIT 5 for that material.

- F.2 The Seller shall be responsible for the requirements detailed in 29 CFR 1910.1200 or 29 CFR 1926.59, Hazard Communication, including training of Seller personnel on how to properly use chemicals and materials by following MSDS's. MSDS's for any product should be made available to the requestor upon request.
- F.3 Any materials brought on site by the Seller, but not used on site (i.e., materials normally kept in the Seller's vehicle) do not require an EXHIBIT 5. The Seller shall notify and obtain approval from the Buyer prior to bringing such material on site. Additionally, a current MSDS shall be immediately available for each such material.

### **G. STATE OR FEDERAL PERMIT REQUIREMENTS**

- G.1 The Seller is responsible for complying with all Federal and State environmental regulations.
- G.2 The Seller shall allow for the time it takes for the Buyer to make an application or modification to an existing permit and its receipt from the regulatory agency. Some examples of Seller operations that could be held up by the need for a State or Federal permit are:

Notes:

(1) A copy of the BMPC List of Exempt Products (LEP) can be obtained from the Buyer's Representative upon request.

(2) Exempted materials does not relieve the Seller from having to provide information on the additional quantities of material to be brought on site and its intended use.

## **PART II: PRE-WORK REQUIREMENTS**

G.2.1 Installation of a spray booth where a paint spray gun is to be used by the Seller.

G.2.2 Seller shall provide the horsepower rating and operating duration for all generators to be brought on site for the work evolution. This includes operation of temporary internal combustion power generating equipment on site for more than thirty days; or the operation of emergency diesel powered generators rated at 400 brake horsepower or greater for 500 hours or more per twelve month period; or the operation of gasoline powered non-emergency generators rated at 50 brake horsepower or greater regardless of the length of running time.

### **H. REGULATORY NOTIFICATIONS**

The Buyer will coordinate any regulatory notifications required as a result of work under the contract. Where emergent issues create the need for a regulatory notification, the Seller shall notify Buyer immediately upon identification of the issue. The Seller shall provide any information requested by Buyer to support regulatory notification.

### **I. EMPLOYEE SAFETY OR HEALTH CONCERNS**

I.1 To comply with DOE requirements, all Sellers shall inform their employees and lower tier Subcontractors that a formal system exists for Occupational Safety and Health Protection at DOE facilities. A poster (EXHIBIT 4) which details the system is prominently posted in various locations at each site.

I.2 DOE Occupational Safety and Health Protection Policy requires that Sellers furnish Seller employees employment and a place of employment which is free from occupational hazards. As a minimum, Sellers shall inform their employees and lower tiers that they:

I.2.1 Are encouraged to report to the Seller either orally, or using Seller provided forms, any Seller conditions or practices which they consider detrimental to their safety or health or which they suspect are in violation of the prescribed Buyer's safety and health standards. The Seller shall inform the employee promptly of the disposition of the employee concern, document the concern and its resolution, and make these documents readily available to the Buyer upon request.

I.2.2 Are permitted to file a concern directly with Buyer or the Site DOE Field Office using the format outlined in (EXHIBIT 4), by sending a letter or by oral means. Although, Sellers are encouraged to report employee concerns to the Buyer's Representative first.

I.3 A DOE procedure has been developed for use by any employee who wishes to report a safety or health related concern. Each Site's Safety Office also has an internal procedure for processing employee health and safety concerns. Sellers are to notify their employees that in the event a concern form is filed, the DOE will exercise its investigative authority and will inspect the on site work area to validate the basis for the concern.

I.4 All Sellers shall instruct their employees initially and periodically during performance of on site work (at least every year if contract exceeds one (1) year) of these requirements.

## PART II: PRE-WORK REQUIREMENTS

### J. SELLER'S DESIGNATED SAFETY REPRESENTATIVE

#### J.1 On Site Safety Representative (OSSR)

##### J.1.1 An OSSR is required for:

- All Construction subcontracts
- Service subcontracts where the scope of work is construction-like or where the non-construction-like work to be performed includes on site Seller supervision. Construction-like work is defined as work which includes the erection/demolition of or alternation/repair (including painting and decorating) of buildings or structures, routing of cables or pipelines, the excavation or boring of soils, the lifting and handling of substantial materials.
- Any subcontract as determined by the Buyer on a case basis. Typically, the OSSR determination will be made at the time of subcontract preparation prior to starting work on site. The Buyer retains sole authority to make this determination.

**Exception:** An OSSR is not required for subcontracts when the scope of work will result in only a single employee of the Seller being present on site to perform work.

J.1.2 The Seller should consider an individual with knowledge of EHS regulatory requirements and ESH Management Systems when designating the OSSR. This individual should also possess leadership, guidance, and authority skills.

J.1.3 The OSSR's responsibilities, as a minimum, include:

- Be the Buyer's point of contact for ESH related items for the project.
- Have authority to stop work if work is in a non-compliant condition.
- Be familiar with the task specific HRW, and HAP(s).
- Be available to participate in Buyer safety inspections.
- Brief all subcontractor employees, including sub-tier subcontractors to the project ESH issues/concerns/requirements.
- Ensure all ESH requirements/regulations are being met.
- Implement proactive work practices/processes that effectively minimize the risk of occupational injury.

J.1.4 The Seller is required to designate at least one OSSR who shall be interviewed and approved by the Buyer's Safety Manager or his designee prior to on site work. The length of this approval is for the length of the contract, or for five years, whichever is greater.

J.1.5 The OSSR shall be on site whenever any work is being performed.

#### J.2 Construction Safety Coordinator (CSC)/On Site Safety Compliance Officer (OSSCO)

A CSC/OSSCO is required for all major construction projects and/or construction projects with complex work evolutions. Typically, the determination of the name of the CSC/OSSCO, need for a CSC/OSSCO will be made at the time of subcontract preparation prior to starting work on site. The Buyer retains sole authority to make this determination.

The Seller shall submit the resume of the CSC/OSSCO candidate to the Buyer, who shall be interviewed and approved by the Buyer's Safety Manager or his designate prior to the start of work on site. The training and

## PART II: PRE-WORK REQUIREMENTS

experience of the CSC/OSSCO shall be commensurate with the complexity of the work. The requisite training and experience requirements for the CSC/OSSCO are as follows:

- J.2.1 The CSC/OSSCO shall be an individual with no production responsibilities. Shall demonstrate safety competency (both training and experience) for the type of work being performed, and shall have full authority and will be expected to stop work to effect resolution of an unsafe condition or act. This individual shall be subject to acceptance by the Buyer. This acceptance shall be determined via an oral interview based on the scope of work, anticipated hazards, and training and experience. An CSC/OSSCO (or assistant CSC/OSSCO) shall be present on site any time work is performed, including work by sub-tiers.
- J.2.2 Prior to performing work at a BMPC Site, the CSC/OSSCO shall meet minimum Occupational Health and Safety educational and experience requirements, as follows:
- J.2.2.1 Professional certification as a Board of Certified Safety Professionals (BCSP) - Certified Safety Professional (CSP) or an American Board of Industrial Hygiene (ABIH) - Certified Industrial Hygienist (CIH) or a BCSP/ABIH (Council on Certification of Health and Environmental and Safety Technologist - CHEST) - Occupational Health and Safety Technologist (OHST) - Certified Health & Safety Technologist (CHST), or other Buyer accepted certification programs.
- J.2.2.2 Documented experience in safety inspection and coordination demonstrating knowledge in areas listed below. The CSC/OSSCO shall be knowledgeable of the following at a minimum:
- Principles & practices of industry and construction safety.
  - Occupational safety and health regulations.
  - Methods of assessing safety hazards and the effectiveness of controls.
  - Hazardous material storage and transfer procedures.
  - Specific health & safety technical areas, such as confined space entry, excavation work and lockout/tagout.
  - Hazard recognition, mitigation, and control.
  - Industrial Hygiene Program Requirements.
  - Emergency preparedness activities.
  - The provisions of BMPC Specification S-12.
  - Program / Process Self Assessment principles.
- J.2.3 The CSC/OSSCO's roles and responsibilities shall, as a minimum, include:
- Be the Buyer's point of contact for ESH related items for the project.
  - Certify the adequacy of the Seller's safety training and records.
  - Establish and implement a confined space program for confined spaces within the project footprint that are created in the execution of the contract.
  - Work scope planning activities (e.g., the CSC/OSSCO will approve all Seller Safety Plans, permits, work procedures, prior to submittal to the Buyer).
  - Coordinate the Seller's Job Site Hazard Analyses program.
  - Participate in work specific briefings.
  - Observe work in progress (e.g., monitor all HRW). (The Seller shall provide inspection/finding records to the Buyer for review, upon request.).
  - Coach workers in safe activities.
  - Coordinate and perform Worker Hazard Awareness Training.

## PART II: PRE-WORK REQUIREMENTS

- Ensure unsafe conditions and practices are evaluated, corrected, reported to the Buyer, and documented.
- Coordinate full-time supervision of all HRW evolutions. (Supervision as coordinated with the Assistant CSC/OSSCO or competent person if not one in the same person.)
- Coordinate execution of the Seller's Industrial Hygiene Program, including respiratory protection.
- Coordinate conduct of contract self-assessment (SA), with formal reporting to the Buyer monthly. This SA is based on CSC/OSSCO review of inspection reports, lessons learned, and injury/illness reports to identify areas that require improvement. It will include a review safety performance strengths and weaknesses and include information-flow-down to sub-tier workers.

### J.3 Assistant CSC/OSSCO

- J.3.1 The Assistant CSC/OSSCO shall be approved by the Buyer.
- J.3.2 Acceptable for periods when the primary CSC/OSSCO is not available (this should be for short periods required to cover illness, vacations & other unavoidable absences), or to augment monitoring of work in the field.
- J.3.3. An Assistant CSC/OSSCO shall be an individual with knowledge of Environmental, Safety and Health (ESH) regulatory requirements and ESH Management Systems. This individual should also possess leadership, guidance, and authority skills.
- J.3.4 HRW (refer to EXHIBIT 6) shall not be performed until the designated CSC/OSSCO is present.

## K. ELECTRICAL SAFETY

- K.1 The Seller shall ensure that all Seller personnel understand that it is the Buyer's policy **NOT** to perform work on, or work near (defined in K.2 below), energized electrical equipment or systems. In unusual circumstances, conditions may be such that there is no alternative but to work on, or work near, energized electrical equipment or systems. In these cases, this work is defined as HRW (See Part I, Section E) and Buyer authorization is required prior to beginning to plan the work (EXHIBIT 6A). Additionally, the Seller shall submit to the Buyer, for approval, an Energized Electrical Work Plan (EXHIBIT 14).
- K.2 Work on, or work near, hazardous conductors is defined as breaking the plane of a panel that contains exposed energized conductors equal to or greater than 50 volts, or working within the restricted approach boundary as defined by NFPA 70E Article 130 – whichever is more restrictive. Verifying circuits de-energized is considered energized electrical work but does not require a written Energized Electrical Work Plan. Checking / verifying circuits de-energized requires the Seller personnel to invoke NFPA 70E Article 130 requirements for shock and arc flash hazards.
- K.3 Seller personnel performing work on or near power transmission/distribution equipment or lines shall receive additional training as specified in 29 CFR 1910.269.
- K.4 Exterior overhead lines shall be treated as un-insulated lines, whether insulated or bare, until they have been assessed by an electrically qualified person and determined to be insulated adequately. Otherwise, the overhead line shall be protected by line hose or other voltage-rated supplementary barriers.

## PART II: PRE-WORK REQUIREMENTS

- K.5 Prior to using any insulated aerial lift for electrical work, the Seller shall demonstrate to the Buyer that the equipment meets the requirements of ANSI A92.2 (such as providing a copy of the ANSI certificate), and that electrical testing requirements have been completed, and that the electrical rating is clearly marked on the equipment.

### L. LIFTING & HANDLING

- L.1 The Seller shall notify the Buyer ten (10) days prior to bringing mechanized equipment that will be used for making lifts on site (e.g., mobile cranes, fork trucks, pole trucks, drill rigs, earth moving equipment, etc.). A lift is defined as the movement of a load or equipment attached using slings, chain, hooks, forks, etc.

For example, using a track-hoe bucket to lift dirt is not a lift, but attaching a chain sling to the bucket to remove a pipe from a hole or using rigging to move a trench box is a lift.

- L.2 All mechanized equipment and associated rigging components that will be used for making lifts shall be inspected daily by the Seller, shall meet the applicable OSHA, ASME, or other applicable regulatory requirements, and shall be maintained in accordance with the manufacturer's recommendations. Equipment that appears to the Buyer to be deficient will not be allowed to be used on site until the deficiency is corrected. A pre-lift checklist shall be completed for all lifts. Pre-lift checklist is provided in EXHIBIT 12.

- L.3 Mobile cranes shall have protection against two-blocking.

- L.4 All safety devices (e.g., limit switches, interlocks, bells, horns, warning lights, emergency stops, bumpers, etc.) shall be operable and safe for use. Safety devices shall not be bypassed, repositioned, overridden, or rendered inoperative.

- L.5 In order to preclude overloading of equipment used for making lifts a method of load indication shall be used for applications where overloading is possible, (i.e., where loads are not fully free to move, are not of known weight, or where a binding condition is possible).

- L.6 All hooks shall be moused or safety latched if required by design unless otherwise approved by the Buyer.

- L.7 A tag or restraint line(s) shall be used to control swing and/or rotation of the load.

- L.8 Unless otherwise approved by the Buyer, the Seller shall complete a Pre-lift Checklist (EXHIBIT 12) prior to each lift. Upon completion of the lift (or the end of the workday), the form(s) shall be turned over to the Buyer.

- L.9 Complex Lifts are defined as HRW that requires Buyer authorization (EXHIBIT 6A) prior to beginning to plan the work. In addition this work requires rigging sketches. (Refer to EXHIBIT 29 for Typical Elements Required for a Rigging Sketch.) These lifts include:

- Hazardous materials (e.g., explosives, highly volatile substances, etc.) This does not include materials such as oxygen, acetylene, propane, or gasoline in bottles, cans, or tanks that are properly secured in racks or stands designed for lifting and transporting by cranes.
- Large and complex geometric shapes (in general, these are items that do not have pre-engineered lifting attachment points or an easily defined center of gravity)



## PART II: PRE-WORK REQUIREMENTS

- Lifts exceeding 80 percent of the certified capacity of the crane's hoist (e.g., main hoist, whip hoist) planned for use.
- Multiple crane lifts (applies to cranes of all type), excluding lifts using multiple non powered lifting devices (e.g., chain hoists), and;
- Multiple hook lifts on the same crane (applies to cranes of any type), excluding bridge or gantry cranes with hooks coupled together and specifically designed for simultaneous lifting.
- Other lifts involving non-routine operations, difficult operations, sensitive equipment, or unusual safety risks (e.g., in the vicinity of overhead transmission lines, rotating loads from horizontal to vertical, etc.).

L.10 The use of rigging attachments from forks is considered a modification and addition that affects capacity and safe operation, and as such, cannot be performed without the manufacturers prior written approval.

### M. EXCAVATIONS

M.1 An excavation is any man-made cut, cavity, trench, or depression in an earth surface, formed by earth removal. Excavation is work that includes penetration, digging, or material removal to a depth of greater than 12" in earth. For excavations 12 inches or less, the need for a permit shall be determined by the Buyer's Representative.

Note: Breaking and removal of walking and driving surface covers is not excavation.

Any excavation that is more than twelve (12) inches in depth from the surface of the ground shall require a permit. Excavation work that includes digging with power equipment within 3 feet of underground utilities containing potential hazardous energy, or when a person must enter an excavation 5 feet or more in depth, are defined as HRW and requires Buyer authorization (EXHIBIT 6A). Additionally, an Excavation Plan (EXHIBIT 16) is also required to accompany the Excavation Permit (EXHIBIT 23) whenever a person must enter an excavation greater than 5 feet deep. In addition to meeting OSHA requirements, the excavation plan shall identify the Seller's competent person and any shoring system used which also requires certification by a registered professional engineer (PE) or competent person.

M.2 Sloping greater than 1:1-1/2 (V:H) requires a request from the Seller, signed by a Professional Engineering or by the Seller's competent person. The Seller shall allow ten (10) days for Buyer approval.

M.3 If the excavation requires dewatering, a dewatering procedure for treatment of the water prior to discharge shall be provided to the Buyer for approval prior to use. The Buyer's Representative will coordinate Buyer approval. Dewatering shall be conducted in full compliance with all applicable Federal and State environmental regulations. Dewatering operations shall be inspected daily by the Seller to ensure proper operation. Conduits and protective covers shall be installed to protect dewatering lines from disconnection by motor vehicles passing over where such disconnections could result in muddy water entering storm drains. When changing dewatering system filters, covers shall be placed on all storm drains in the vicinity. Supply, operation, and maintenance of the dewatering equipment are the responsibility of the Seller.

M.4 An engulfment hazard may exist when working in excavations 4 ft or more in depth, on pressurized (i.e., site service water, processed cooling water, pumped sanitary systems) or

## PART II: PRE-WORK REQUIREMENTS

non-pressurized (i.e., storm sewer, gravity drained sanitary line) liquid systems with piping 1 inch or more in diameter. The Seller shall include engulfment as a hazard in their task specific HAP(s) (see Part I, Paragraph E.3). The following controls shall be utilized:

### M.4.1 Pressurized Liquid Systems:

M.4.1.1 Work-On, or Suspected Break in the System – The system will be de-energized (and drained, if possible) and locked/tagged out (LOTO) by the Buyer's Representative. Once the Seller's competent person identifies the excavation is acceptable for entry, the Seller shall control personnel entry into the excavation. All personnel entering the excavation, whether working on the system or not, shall apply their personal safety lock(s) and danger tag(s) to the system.

M.4.1.2 Subsequent to Repair – After a pressurized liquid system has been repaired a pressure/leak test will be performed. No personnel shall be allowed in the excavation during the test and visual inspections shall be conducted from outside the excavation. Once the testing has been successfully completed the controls of paragraph M.4.1.1 are no longer necessary. If leakage is detected during the test, then a hazard assessment shall be performed and LOTO may be required during repairs based on the hazards identified.

M.4.1.3 Hot Tap Operations – Hot tap operations are exempt from LOTO if the specific criteria in 29 CFR 1910.147(a)(2)(iii)(B) are fully met. Some hot tap operations may require a pressurized system in order to maintain cleanliness, however, if the system can be secured at the source, then it shall be LOTO to the extent practicable.

### M.4.2 Non-Pressurized Liquid Systems:

M.4.2.1 Work-On, or Suspected Break in the System:

M.4.2.2 Make all reasonable attempts to prohibit or limit the introduction of any sources of liquid into the system (i.e., be aware of the potential for rain, notify site personnel to prohibit discharges, block upstream inlets, etc.).

M.4.2.3 Perform a hazard analysis as required per paragraph M.4. Based on the hazard analysis, LOTO may not be required.

### M.5 Fall Hazard Mitigation Around Excavations

M.5.1 Wells, pits, shafts, catch basins, manholes and similar openings 6 feet or more in depth and greater than 12 inches in the least horizontal dimension, shall be protected from falling by guardrail systems, fences, barricades, or covers. If it is impracticable to implement these controls then the fall protection requirements of 29 CFR Part 1926 Subpart M shall be followed. All temporary openings of this type shall be backfilled as soon as possible.

M.5.2 For excavations 6 feet or more in depth sloped or benched appropriately in accordance with 29 CFR Part 1926 Subpart P, fall hazard mitigation for excavation workers is not required.

## PART II: PRE-WORK REQUIREMENTS

- M.5.3 Inspections of excavations by the Competent Person for stability, entering/exiting excavations via a ladder, directing (signal man) equipment operators during digging or lifting and handling operations, and similar visual observation tasks can be conducted without additional fall hazard mitigation provided the excavation remains visible.
- M.5.4 If the sloping and benching is not feasible, then the task specific HAP (see S-12 Part I, Section E.3) for the work shall specify the appropriate control mechanisms to protect the worker from an inadvertent fall into the excavation. These control mechanisms may include the use of rope barriers located a minimum of 6 feet from the excavation edge or guardrails.
- M.5.5 The Seller's work controls shall ensure that only authorized employees, who have specific functional responsibilities, can approach the edge of the excavation at any time. Authorized employees who have specific functional responsibilities shall remain at the excavation edge only for the time necessary to perform their duties. Authorized employees standing at the edge of an excavation shall not lean out or place their center of gravity over the edge of the excavation or step on/stand on the sides of the trench box or shield at any time.
- M.5.6 For work other than that described above (e.g., backfilling, manipulation of sheet piles, manipulation of tag lines, the installation/removal of a ladder, passing tools and equipment into/out of the excavation, monitoring of atmospheric conditions with a meter, etc.) performed at the edge of an excavation 6 feet or more in depth shall require definitive fall hazard mitigation actions as proposed by the Seller in the HAP and approved by the Buyer. Some examples which would meet this requirement are: (1) standing behind a sheet pile or other obstruction of similar height to a guardrail system which will prevent the employee from falling into the excavation; (2) using a short section of a guardrail system at the work location but not necessarily encompassing the entire excavation; or (3) limiting the scope of the work to walking from the rope barrier directly to the edge of the excavation, inserting a ladder and walking directly back.

At no time shall the installation and management of protective systems create a greater hazard to employees.

### N. PENETRATIONS

Any boring, drilling, or alteration of walls, floors or ceiling of structures (i.e. "a penetration") requires a Penetration Permit (EXHIBIT 24) which shall be requested in advance of such operations. For penetrations during new construction and penetrations in existing structures less than two (2) inches in depth, the need for a permit, shall be determined by the Buyer's Representative.

### O. POWDER or BUTANE ACTUATED DEVICES

- O.1 Powder actuated and butane actuated tools are tools that use an explosive charge to drive studs, fasteners, or pins onto or into metal or other material objects. The Seller shall notify the Buyer at least ten (10) days in advance of bringing any powder or butane actuated devices on site. The Seller shall verbally declare to Security that a powder or butane actuated device is being brought on site. The devices and their loads shall be specifically declared on the Buyer's Property Pass when entering and exiting the site. Operators of these devices are required to use them in accordance with the manufacturer's requirements. A copy of the manufacturer's requirements shall be on site whenever the device is on site. These tools shall meet the requirements of ANSI A10.3 and 29 CFR 1910.243 (d).

## PART II: PRE-WORK REQUIREMENTS

O.2 Powder or butane actuated devices and their associated loads shall be controlled by the Seller at all times and shall be locked up when not in use. Powder or butane actuated devices and their loads shall be promptly removed from site when no longer being used by the Seller on the project.

### P. RESTRICTED USE MATERIALS - RUMs (formerly SPECIFIC MATERIAL EXCLUSIONS)

Use of RUMs on site is prohibited unless otherwise approved by the Buyer.

2-Acetylaminofluorine	Ethylene Oxide	Ethers and Peroxides, including:
Acrylonitrile	Formaldehyde	
4-Aminodiphenyl	Freon TF (Freon 113)	- Allyl ether
Arsenic, inorganic	Hexane	- Benzoyl peroxide (exc. Hardeners, putties, etc.)
Asbestos	Hydrazine	- Collodion1,2,diethylene glycol ether
Benzene	Ionization Type Smoke Detector	- Diethyl ether
Benzidine	Lead	- Dimethyl ether
Beryllium	Lead-Based Paints	- Dry gas (ether based)
1,3 - Butadiene	Mercury	- Ethyl ether
Bis-Chloromethyl ether	Methyl chloromethylether	- Isopropyl ether
Bromochlorodifluoromethane	4,4' Methylene bis (2 – chloroaniline)	- Methyl ether
Bromotrifluoromethane	Methylene Chloride	- Methyl ethyl ketone peroxide
1,2 – Dibromo – 3	alpha – Naphthylamine	- Tetrahydrofuran
Chloropropane (DBCP)	beta – Naphthylamine	- Vinyl ether
Cadmium Oxide	4 – Nitrobiphenyl	
Carbon Tetrachloride	N – Nitrozodimethylamine	
Chloroform	Perchloroethylene	
3,3'- Dichlorobenzidine (and related salts)	(Tetrachloroethylene)	
Chlorine gas	beta – Propiolactone	
Chlorotrifluoromethane	Picric/Perchloric Acid & Salts	
Chromic Chloride - powdered	Rapid Tap Cutting Fluid	
Chromium (VI), (i.e. Hexavalent Chromium)	Rodenticides	
Dichlorodifluoromethane	Thoriated tungsten electrodes used for welding	
4 – Dimethylaminoazobenzene	Trichlorofluoromethane	
Ethyleneimine	Trichlorotrifluoroethane	
	Vinyl chloride	

### Q. CONFINED SPACE WORK

Confined Spaces (CS) include areas such as but not limited to tanks, vessels, reactor compartments, double bottom tanks, underground tanks, fresh water drain collecting tanks, sewers, boilers, pits, vents, and drains. The Seller's Confined Space Entry Program shall be in accordance with 29 CFR 1910.146, even though the scope and application of the standard states that it does not apply to construction. The Seller shall obtain a Permit Required CS Entry Permit (EXHIBIT 22A) or a Non-Permit Entry Form (EXHIBIT 22B) from the Buyer prior to entry into any existing space defined as a Permit Required CS or a Non-Permit CS, respectively. The Seller shall use Seller CS permits/forms when performing CS entry into newly established areas under construction. Buyer approval in writing is required to utilize Seller administered CS permits in these areas. The Seller shall evaluate any newly constructed spaces using the form (EXHIBIT 22C). The Seller will maintain an inventory list of newly constructed confined spaces. The list shall indicate if each CS is still in existence. The list shall

## PART II: PRE-WORK REQUIREMENTS

be provided to the Buyer upon request. The permits (both active and terminated) shall be available to the Buyer upon request.

Q.1 Two types of CS entry are recognized at BMPC: Permit and Non-Permit. The Seller is responsible for complying with the Buyer's confined space entry program, and preparing confined space entry permits to be issued with Buyer approval.

Q.2 Posting: In areas that appear to qualify as a confined space, absence of posting shall not be interpreted to mean that the area is not a confined space (e.g., manholes).

Permit Required Confined Space signs state [DANGER – CONFINED SPACE ENTER BY PERMIT ONLY].

Non-Permit Confined Space signs state [CAUTION – NON-PERMIT CONFINED SPACE KEEP OUT UNLESS AUTHORIZED].

Q.3 Permit Required Confined Space Entry shall comply with:

- The HRW requirements of Part I, Section E.
- EXHIBIT 22A (Confined Space Entry Permit).
- A process which “activates the permit” shortly after atmospheric testing. Entry should take place as close as possible to the timeframe atmospheric determinations are performed.
- Notification requirements - Prior to entry, the Seller shall establish positive communication from the jobsite to Buyer Emergency Services (e.g., radio, cell phone). Also, the Seller shall establish a positive means of communication between the Attendant and personnel within the confined space.
- Atmospheric monitoring – If the Seller is intending to work in an existing Buyer Confined Space, the Buyer will perform atmospheric monitoring. Otherwise the Seller is responsible for monitoring. Monitoring will be performed prior to establishment of any engineering controls that could affect air quality, after engineering controls (to demonstrate the effectiveness of the controls), prior entry and periodically thereafter to demonstrate the continued effectiveness of engineering controls.

Q.4 Non-Permit Confined Space (EXHIBIT 22B): Fits the definition of a confined space but lacks any inherent or introduced hazards. Entry shall include:

- Atmospheric Monitoring – If the Seller is intending to work in an existing Buyer Confined Space, the Buyer will perform atmospheric monitoring. Otherwise the Seller is responsible for monitoring. Monitoring will occur prior to entry, and periodically thereafter to demonstrate the work activities have not had a negative effect on air quality.
- If activities performed within and / or in close proximity to the confined space will create additional hazards that will impact safeguards and entry procedures (i.e., idling vehicles nearby), the space shall be treated as a permit required confined space.

Q.5 Open topped spaces of more than four (4) foot in depth, such as pits, sumps, vaults, and vessels, and that have a limited or restricted means of entry or exit (i.e., use of a ladder) shall be considered to be confined spaces.

## R. RESPIRATORY PROTECTION

## PART II: PRE-WORK REQUIREMENTS

- R.1 The Seller shall obtain a respirator permit from the Buyer prior to performing any work requiring use of a respirator.
- R.2 The Buyer will issue a permit after verification of the following documentation to be submitted by the seller:
- R.2.1 Documentation showing formal training within the last 12 calendar months. The documentation shall include:
- the name of the respirator wearer(s),
  - the manufacturer, model and type of respirator trained on,
  - the date the training took place, and
  - the authorized trainer's signature.
- R.2.2 Documentation showing passing of a respirator medical evaluation to include the following:
- the name of the respirator wearer,
  - recommendation on ability to wear respirator,
  - the date of the evaluation, and
  - a signature of a physician or Licensed Health Care Professional (PLHCP)
- R.2.3 Documentation showing passing of a respirator quantitative fit-test within the previous 12 calendar months. The test shall include:
- the fit-test operators signature,
  - the date of the fit-test,
  - the wearer's name
  - the overall fit factor (**passing criteria is 300 for half face, 1500 for full face**), and
  - the manufacturer, model, type, and size of the respirator fitted.
- R.3 The Seller's respiratory protection program shall be in accordance with OSHA 29 CFR 1910.134. A copy of the program shall be submitted to the Buyer for information.
- R.4 The Seller shall provide certification that breathing air systems if used, meet as a minimum, the requirements of the specification for Grade D breathing air as required in ANSI/CGA Spec. G-7.1-1989.
- R.5 If the Seller elects to wear a dust mask, training documentation shall be provided and a Respirator Permit (EXHIBIT 21) shall be obtained from the Buyer before use.

## S. ASBESTOS WORK REQUIREMENTS

If work is performed involving asbestos-containing materials, the requirements of EXHIBIT 10 of this specification shall apply.

## T. CONCRETE DUST or CRYSTALLINE SILICA EXPOSURE CONTROLS

If work is performed involving concrete dust or other crystalline silica containing materials, a Silica Procedure (EXHIBIT 9) shall be submitted to the Buyer for approval at least ten (10) days prior to use.

## **PART II: PRE-WORK REQUIREMENTS**

Examples of this work shall include but are not limited to: Cutting/drilling asphalt, concrete, brick, block and plaster and mixing mortar/concrete/grout.

### **U. LASERS**

All work using devices containing lasers of any class shall comply with ANSI Z136.1, "Safe Use of Lasers". The use of a written procedure (EXHIBIT 27) is required for the use of Class 3B and 4 lasers and will require concurrence from the Buyer. The procedure shall be submitted to the Buyer for approval at least ten (10) days prior to use.

### **V. METALS, AND PAINTS AND COATINGS**

#### **V.1 Metals**

Metals, for example stainless steel, galvanized metals, and various alloys (not all inclusive), may contain toxic constituents such as lead, chromium, nickel, manganese, zinc and others. When work activities are performed on these materials such as hot processes (e.g., welding, burning, torch cutting), mechanical cutting, grinding, scraping, sanding, etc., the potential exists to create a hazardous environment for the worker or other nearby employees. The Seller shall ensure processes are established to maintain employee exposures below applicable exposure limits and to comply with associated regulatory requirements (e.g., the OSHA – 1926.1126 - Chromium VI Standard).

If the Seller determines that there is potential for exposure above an allowable exposure limit such that engineering, administrative, and/or PPE controls are necessary, a written work procedure (EXHIBIT 27) as described by S-12 Part II, Section E shall be required. The Seller is responsible for the rationale applied to make the exposure potential determination, as described in S-12 Part I, Section J.

#### **V.2 Paints and Coatings**

Many paints and coatings contain hazardous constituents such as PCBs, lead, chromium, nickel, cadmium, zinc and others. These materials shall be assumed to be present unless otherwise demonstrated by the Seller (e.g., MSDS's, sampling, etc.). If hazardous constituents are identified that have specific regulatory compliance requirements (e.g. PCB's, the OSHA Lead Standard, etc.) or create the potential for employee exposure above an allowable occupational exposure limit, the Seller shall ensure processes are established to maintain employee, or other nearby personnel exposures below applicable exposure limits and to comply with associated regulatory requirements. If the Seller determines that there is potential for exposure such that engineering, administrative, and/or PPE controls are necessary, a written work procedure (EXHIBIT 27) as described by S-12 Part II, Section E shall be required. The Seller is responsible for the rationale applied to make the exposure potential determination as described in S-12 Part I, Section J.

### **W. FUEL POWERED ENGINES-OPERATION INDOORS OR IN AREAS WITH LIMITED VENTILATION**

Use of fuel-powered engines indoors or in outdoor areas with limited ventilation and/or near building fresh air intakes requires prior review and approval from the Buyer. If the Seller evaluates a specific area for use of fuel-powered equipment and determines it not to pose an exposure risk, then the Seller shall submit a written assessment to the Buyer, for Buyer's concurrence. The Seller shall request approval at least ten (10) days in advance.

## **PART II: PRE-WORK REQUIREMENTS**

### **X. HEPA FILTER SYSTEMS**

Ventilation units and vacuum cleaners containing high-efficiency particulate air (HEPA) filters, if required by the contract, shall be dioctyl phthalate (DOP) tested, or the equivalent, before initial use, each time the HEPA filter is changed, or annually. Documentation of testing shall be provided to the Buyer prior to use of such devices.

### **Y. WASTE GENERATION & MINIMIZATION**

For contracts in which the Seller will be generating waste as part of the scope of subcontract work, (e.g., painting, scraping, etc.) the Seller shall submit a Seller Waste Process Evaluation List (EXHIBIT 11) for Buyer approval ten (10) days prior to start of work which delineates for each waste stream:

- the process generating the waste,
- the substances used in the process,
- the hazardous constituent(s),
- type of waste generated,
- special storage requirements,
- appropriate disposal path, and
- quantity expected to be generated

### **Z. MISCELLANEOUS PRACTICES**

- Z.1 Entry into construction areas and assigned lay down areas shall be restricted by physical barriers and by appropriate signage (per 29 CFR 1910.145) on all sides of the area, or access to the area shall be controlled by a watch stander. Entry requirements (e.g., PPE) shall also be posted.
- Z.2 Any modifications and/or repairs made to equipment involving safety devices or otherwise affecting safe operations shall offer the same protection as original construction, and shall use the manufacturers approved replacement parts. No modifications shall be made to any equipment that would affect the UL, NEMA or other required listing/labeling.
- Z.3 All materials shall be adequately secured, as approved by the Buyer, to prevent materials from blowing about. Particular attention shall be paid to elevated structures.
- Z.4 The Seller shall not perform any elevated work including work involving cranes, susceptible to windy conditions (wind speed or gusts in excess of 25 miles per hour), unless approved by the Buyer.
- Z.5 Seller personnel are required to obtain Buyer approval prior to entering, inspecting or otherwise conducting surveillance and/or work above all ceiling spaces.
- Z.6 The Seller shall not commence with any hydrostatic or pneumatic testing until the Seller and Buyer reviews and signs pre-testing check sheet in accordance with the contract technical specification.

**END OF PART II**



## **PART III: DURING WORK REQUIREMENTS**

### **A. PERIODIC REQUIRED REPORTS**

- A.1 The provisions of this Section are applicable if the Seller and/or Seller sub-tier personnel are working on site for a period in excess of eight (8) hours per contract or purchase order, or has a job related injury/illness or property damage event.
- A.2 The Seller shall perform reporting/record keeping for on site occupational injuries/illness, motor vehicle accidents, or property damage events. All reporting/record keeping forms identified in the following sections will be reviewed for accuracy and completeness by the Buyer. Any discrepancies will be resolved with the Seller.
- A.3 The Buyer shall be notified of any occupational injury, illness, or accident as soon as possible, but no later than one (1) workday after the Seller becomes aware that the accident occurred.
- A.4 Each Seller is required to maintain occupational injury/illness, motor vehicle accidents, or property damage events records at the Site where on site work is performed. The forms to be used for this purpose are available from the Buyer, and are listed below:

#### **A.4.1 OSHA Form 300, Log of Occupational Injuries and Illnesses**

The OSHA Form 300 (EXHIBIT 1) is required to be used at Buyer Sites. The following information shall be written on the top left corner of the Form 300:

- Company name
- Number of man-hours worked for the month on site
- Applicable month/year
- Seller's representative signature

First Aid cases are not recordable and shall not appear on the Form 300. The completed OSHA Form 300 shall be provided to the Buyer by the third (3) workday following the end of a calendar month when on site work is performed. If no occupational illnesses and injuries are reported, the statement "No Recordable Occurrences" shall be written on the form. If no on site work is performed during a particular calendar month, the Form 300 is not required. If contracted work is completed prior to the end of a calendar month, a copy of the completed OSHA Form 300 is required to complete the subcontract work.

#### **A.4.2. Occupational Injury/Illness, Property Damage or Motor Vehicle Accident**

The DOE Form F 5484.3 (EXHIBIT 2) is a multiple use form, used for:

- Occupational Injury/Illness recorded on OSHA Form 300
- Motor vehicle accidents involving government-owned, -rented, or -leased vehicles
- Property damage or occurrence resulting in damage

A completed DOE Form 5484.3 shall be submitted within three (3) workdays of an occupational injury/illness. For reporting property damage or motor vehicle accidents, the form shall be submitted concurrent with the OSHA Form 300.

- A.5 Failure to report under the provisions of this section may result in suspension of work, as determined by the Buyer.

### **PART III: DURING WORK REQUIREMENTS**

#### **B. PHYSICAL CONDITION**

- B.1 The Seller shall ensure that their employees are physically able to safely perform work within any limits caused by a temporary or permanent physical (medical) condition or limitation.
- B.2 The Seller shall have any of their personnel report to the Buyer's Representative prior to undergoing any medical treatment or testing with radioisotopes.

#### **C. SELLER VEHICLES**

- C.1 All Seller's vehicles that are designed and manufactured for over-the-road transportation and are to be used on Buyer's Sites shall be currently registered, licensed, and inspected in the state of origin or any other state, if applicable. This does not apply to heavy equipment (see Part II, Section C).
- C.2 All Seller's vehicles and equipment, and the vehicles of their employees, shall be in good working condition and shall be free of known leaks. The Buyer reserves the right to deny any vehicle access to the Site if the vehicle is in poor condition, as determined by the Buyer.
- C.3 In the event that a Seller vehicle or equipment leaks or spills any type of hazardous material (e.g., hydraulic, lube, or transmission oils; gasoline, diesel fuel, anti-freeze), Buyer Emergency Services (Incident Prevention at Kesselring) shall be notified immediately. The leak and/or spill shall be contained, and the vehicle or equipment shall be removed from Site property and not returned until permanent repairs have been made. All required regulatory notifications will be made by Buyer.
- C.4 All vehicles and equipment shall be parked on a non-permeable surface (i.e., asphalt, concrete, plastic, etc.), unless the work requires such vehicles and equipment to be located otherwise, and only when actually performing the work.
- C.5 A documented inspection of all Seller vehicles and equipment shall be performed each day prior to use to insure there are no fuel, oil, hydraulic fluid or antifreeze leaks; or faulty equipment. The Seller shall provide documentation of such inspections to the Buyer, upon request.
- C.6 If Seller's vehicles or equipment remain on site during non-working hours they shall be located in an area approved by the Buyer's Representative. Additionally, seller vehicles or equipment that is parked within the security fence shall be identified with a visible marking of the company name and be capable of being relocated in an emergency situation.
- C.7 If Seller's vehicles or equipment is located on Buyer's property but outside the security fence they shall be within view of security and be rendered inoperable to unauthorized persons by using one of the following precautions:
  - C.7.1 Doors and ignition shall be locked. Keys shall be tagged with equipment identification data and turned over to the Buyer's Representative for safekeeping.
  - C.7.2 Mechanical equipment that is not key-operated shall be moved inside the security fence. Mechanical equipment that cannot be moved without significant work delay shall be rendered inoperable and may be left in its location provided prior approval is obtained from the Buyer's Representative.

### **PART III: DURING WORK REQUIREMENTS**

- C.8 Per the requirements of 6 NYCRR 217-3, all operators of gasoline or diesel powered vehicles with a gross vehicle weight rating of 8,500 pounds or greater while on Buyer's property shall not allow engines to run idle for more than five minutes. The following conditions are exceptions to this prohibition: when due to traffic conditions (e.g., clearing the Security gates); when running the engine is required to operate vehicle ancillary equipment (e.g., a refrigerated trailer - cab air conditioning); or when diesel fueled trucks must remain motionless for greater than two hours when the ambient temperature is continuously below 25 degrees F.

#### **D. COLOR CODING**

- D.1 The color of yellow either separately or in combination with magenta (purple), is used at Buyer Sites to identify areas, materials, or tools that are controlled for radiological reasons. Marking items by painting a tool yellow, or using materials like yellow colored bags or sheet when not associated with the Radiological Control Program, can result in personnel taking actions to control this material as if it were radioactive. This can cause unnecessary concern among personnel and inefficient use of time and resources.
- D.2 Items or tools that are manufactured with the color yellow are permitted such as rain gear and tarpaulins, but whenever practical, alternate colors should be chosen. Yellow shall continue to be used to designate caution and for marking physical hazards per 29 CFR 1910.144, such as guarding, bollards, guardrails, and other safety equipment.

#### **E. WINTER CONDITIONS**

Snow and ice removal and sanding shall be performed by the Seller for all Seller platforms, scaffolds, and other walking and working surfaces used for access by the Seller. Use of any material besides sand or dirt for "sanding" shall be approved by the Buyer prior to use.

#### **F. LOCKOUT/TAGOUT (LOTO)**

- F.1 The Seller is responsible to comply with all LOTO requirements specified by 29 CFR 1910.147, 145 and 29 CFR 1910 Subpart S during construction, even though the OSHA Standard exempts construction from these requirements.
- F.2 If an energy isolation device is capable of being locked out, the Seller shall use a key operated lockout device. After a lockout is complete, the appropriate tag shall also be placed on the controlling device to identify the need for the lockout. The name of the person attaching the lockout device tag, and the name of the company he/she represents shall be identified on the tag.
- F.3 If an energy isolating device is not capable of being locked out, the Seller shall utilize a tag out system as approved by the Buyer and include additional precautions to provide an equivalent level of safety as available from the use of lockout, and the use of this tag out system shall be considered HRW as described in S-12 Part I, Section E. Tags shall be attached using nylon cable ties, or the equivalent, having minimum release strength of fifty (50) lbs.
- F.4 A red "Danger" tag prohibits operation of equipment until the tag is removed. Specifically, the red "Danger" tag is used when persons are actually working on the equipment or when operation of the equipment will seriously endanger personnel. A red "Danger" tag shall not be used for equipment protection.

### **PART III: DURING WORK REQUIREMENTS**

- F.5 The Yellow/Black “Caution - Do Not Operate” tag or Blue tag used by the Buyer indicates a precautionary condition and is normally used to prevent operation or use of malfunctioning equipment which may create equipment damage and/or a safety hazard if operated or used.
  - F.6 The Seller shall not operate any existing equipment; connect into any piping, electrical service, etc., to which a Buyer red tag and/or lockout device is attached.
  - F.7 The Seller shall not install a LOTO on a Buyer system/equipment until the Buyer has first established control of the system/equipment, except when the system is completely turned over to the Seller and documented by the Buyer’s Representative.
  - F.8 For purposes of electrical LOTO, the Seller may operate circuit breakers, disconnect switches, and other energy isolating devices as authorized by the Buyer’s Representative, but may not install a LOTO until after the Buyer’s Representative has established control of the system.
  - F.9 The Seller shall submit a written energy control procedure, in accordance with 29 CFR 1910.147(a)(4), to the Buyer, for approval, prior to performing any LOTO activities on Seller owned systems/equipment, or on Buyer’s systems/equipment that have been completely turned over to the Seller (see Part III, Section F.7). A sample written energy control procedure format is provided in EXHIBIT 30. For any LOTO activities on existing Buyer owned systems/equipment which have not been turned over to the Seller, the Seller shall request a written energy control procedure from the Buyer, at least two (2) days in advance of the anticipated need.
  - F.10 The Seller shall place his/her own “Danger” tags and/or locks in addition to tags and/or locks placed by the Buyer. Seller personnel are required to use multiple tags and/or locks (i.e., over tag and lock by each employee working on the system/equipment) when more than one person is working on the same system. Selection of tags to be used by the Seller shall conform to OSHA requirements and/or may be provided for use by the Buyer.
  - F.11 When the Seller’s job involves work on a BMPC-Kesselring Site plant-controlled system that requires energy isolation, Plant personnel shall apply necessary tags. Buyer acknowledgement of the equivalent/alternate LOTO process for work involving Kesselring Site plant-controlled systems is addressed via Buyer generated EXHIBIT 19 and involves the CSC/OSSCO/OSSR and the Buyer’s Representative. Ten (10) day advance notification is required.
  - F.12 Seller’s may use a group lock out to perform LOTO of machines and equipment. When doing so, the Seller shall follow a procedure for group LOTO in accordance with 29 CFR 1910.147.
- G. FIRE PROTECTION
- G.1 Flammable and Combustible Liquids and Materials

### **PART III: DURING WORK REQUIREMENTS**

- G.1.1 Flammable and combustible liquids shall be stored in or dispensed from safety cans or containers which are approved by Factory Mutual or Underwriters Laboratory. The container shall have a maximum of five (5) gallons capacity, with a flash-arresting screen at each opening (fill and dispensing), spring-closing lid and spout cover, and be so designed that it will safely relieve internal pressure if subjected to heat. Flammable liquids or combustible liquids which are viscous and extremely hard to pour may be used and handled in original shipping containers as approved by the Buyer. Liquids that are required to be chemically pure may remain stored in the manufacturer's receptacle (normally a one (1) pint glass bottle).
- G.1.2 All flammable or combustible materials shall be stored a minimum of ten feet from all buildings in a neat and orderly manner. Approval of the storage area location will be coordinated by the Buyer's Representative and will be initially indicated on the MSDS approval form (EXHIBIT 5).

#### **G.2 Hot Work Permits**

- G.2.1 The Seller shall use Hot Work Permits (EXHIBIT 20) or equivalent when performing 'Hot Work' in construction sites that are established in support of new building construction. Buyer approval in writing is required to utilize Seller administered Hot Work Permits in these areas. The Seller's Hot Work Permit process should be submitted to the Buyer for information.

For all other work areas, the Seller shall obtain an approved "Hot Work Permit" from the Buyer's Representative prior to use of any open flame, heat or spark producing device.

- G.2.2 The Seller shall provide fire extinguishers of the appropriate class and size for work identified on the Hot Work Permit. Only those persons who are trained on the use of fire extinguishers may use them.
- G.2.3 A fire watch, provided and trained by the Seller, shall have no other duties while on fire watch.
- G.2.4 A separate fire watch shall be provided for each area when grinding, welding, cutting, and open flame operation is occurring. In addition, multiple fire watches for the same operation shall be necessary when barriers may not adequately prevent hot work from affecting a lower level or when one fire watch cannot adequately observe all areas affected by the hot work.
- G.2.5 The time period for maintenance of a fire watch as stated in 29 CFR 1926.352 shall be a period of at least thirty (30) minutes after the work ends unless otherwise indicated and approved on the Hot Work Permit.
- G.2.6 On the first day of the week, Emergency Services/Incident Prevention must review and approve the Hot Work Permit before any hot work begins. After the permit is approved, the Hot Work Permit will be renewed daily during work for the remainder of the week.

## **PART III: DURING WORK REQUIREMENTS**

### **H. COMPRESSED GAS CYLINDERS**

- H.1 The Seller shall ensure cylinders of compressed gases are not stored inside buildings on Buyer's Site overnight without prior Buyer approval.
- H.2 Oxygen and fuel-gas cylinders, whether or not they are secured on a welding cart, shall be considered in storage unless they are used at least once per week. Rigs for which no Hot Work Permit has been issued, or rigs on which the regulators have been removed, shall be considered in storage. For multiple rig usage, each rig shall be identified and specified by the Seller on the Hot Work Permit.
- H.3 Oxygen cylinders in storage shall be separated from fuel-gas cylinders or combustible materials (especially oil or grease) a minimum distance of 20 feet or by a noncombustible barrier, 5 feet high having a fire-resistance rating of at least one-half hour [29 CFR 1926.350(a)(10)].

### **I. ELECTRICAL SAFETY**

- I.1 Seller work shall be performed on electrical equipment and lines only while these equipment and lines are de-energized as defined in Part II, Section K, unless approved by the Buyer in response to a submitted Energized Electrical Work Plan (EXHIBIT 14). In the event that energized equipment previously treated as de-energized is discovered, or unexpected exposed electrical wires are discovered in a Seller work area, the Seller shall immediately stop work and notify the Buyer's Representative.
- I.2 Temporary power will be provided by the Buyer. All connections and service extensions shall be furnished by the Seller. Temporary power shall be de-energized by the Seller at the end of the work shift unless specifically approved by the Buyer's Representative.
- I.3 All portable electrical tools shall be of the grounded or double insulated type and shall be listed or labeled by a nationally recognized independent testing laboratory.
- I.4 Ground fault circuit interrupters (GFCI's) shall be used on all receptacle outlets and temporary lighting circuits in construction areas. GFCI's shall be tested daily prior to use.

### **J. ELEVATED WORK**

- J.1 The Seller shall use a Fall Protection system whenever work is performed at six (6) feet or more above the next lower surface. Whenever a fall protection system is to be used the work is HRW and Buyer authorization (EXHIBIT 6A) is required. Additionally, an Elevated Work Plan (EXHIBIT 15) and sketches, drawings, photos and fall distance calculations shall be submitted by the Seller for Buyer approval before the start of work.
- J.2 A positive means of fall protection is required whenever working within six (6) feet from an unprotected edge where there is a potential fall of six (6) feet or more, or where the potential exists for the worker to be drawn within six (6) feet from an unprotected edge. An unprotected edge is one which does not have a barrier at least 39 inches high and is capable of withstanding a 200 pound force. Personal fall arrest systems, guardrail systems, safety net systems, positioning device systems, restraint systems or a combination of these systems are considered a positive means of fall protection.

### **PART III: DURING WORK REQUIREMENTS**

J.3 For work done more than six (6) feet from an unprotected edge, a warning line system together with a safety monitoring system may be used as fall protection to ensure workers do not go within six (6) feet from an unprotected edge.

J.4 In cases where it is not practicable to perform work in accordance with J.2 or J.3 and

- workers would not be allowed within six (6) feet from an unprotected edge, and
- there is no handling of equipment or operations which could draw a worker within six (6) feet of an unprotected edge, and
- the least roof dimension is less than or equal to 50 feet,

then, a safety monitor alone or a warning line system alone may be used in accordance with 29 CFR 1926 Subpart M, as approved by the Buyer's Safety Office.

J.5 "Controlled Access Zones" are not allowed.

J.6 Body belts are not allowed.

J.7 Climbing on ducts, pipes, structural members, or similar equipment is prohibited, unless otherwise authorized by the Buyer.

J.8 Metal ladders are prohibited.

J.9 Extension ladders shall be tied, blocked, or continuously footed when in use.

J.10 The use of opaque or semi-opaque barriers, such as drop cloth used in painting is prohibited when the barrier is to be suspended between the worker(s) and the surfaces below.

J.11 The Seller shall submit an Elevated Work Plan (EXHIBIT 15) to the Buyer, for approval, for any scaffold erection and disassembly work where there is a potential fall of six (6) feet or more.

### **K. AERIAL LIFTS & ELEVATING PLATFORMS**

K.1 Whenever aerial lifts are to be used in the performance of work, a stand-by person shall be readily available at ground level to assist the lift operator or other means of positive communication shall be available. Any person assigned primary or stand-by responsibility for aerial lift operation shall be qualified to operate the device. Aerial lifts include vehicle mounted elevating and rotating work platforms such as aerial ladders, extensible boom platforms, articulating boom platforms or a combination of any of these devices. Vertical scissor lifts do not require a ground person.

K.2 The Seller shall maintain clearance distances from overhead electrical lines in accordance with EXHIBIT 7.

K.3 A secondary form of fall protection shall always be used when operating aerial lifts. Sellers shall provide appropriate secondary forms of fall protection (self-retracting lifeline/lanyard or restraint device) when using aerial lifts on BMPC Sites. A six foot shock absorbing lanyard may not be used for this purpose at heights of less than 18 ½ feet, unless a qualified person has designed the system or the aerial lift manufacturer specifically calls for that component to be used.

### PART III: DURING WORK REQUIREMENTS

#### L. LIFTING & HANDLING

- L.1 When working in the vicinity of suspended loads, minimize the number of personnel close to the load (i.e., the number of personnel should be limited to those essential to guiding the load into place. Those essential personnel **may** place their hands **on** the load provided (1) there is no risk of being struck by/crushed by (caught between) the load if it were to lower and/or swing unexpectedly, and (2) they will not become off balance while reaching for the load.

Normally, personnel **shall not** reach under or place any portion of the body under an **unblocked** suspended load. If personnel need to reach under a suspended load, **block it** whenever possible. If blocking the load is not possible, personnel may only reach under suspended loads for a short duration (e.g., to install or remove coverings, make attachments, position supports, etc.) provided the load is static and stationary, not over the employee's head, and the only body parts under the load are the arms up to the elbows. In these cases the following also applies:

L.1.1 If the particular task is to be performed on a **predictable and/or regular basis**, the evolution shall be evaluated and shall be authorized in a formal work document or procedure that has been approved via the HRW authorization process.

L.1.2 If the evolution is **in progress** and emergent reaching under the suspended load becomes necessary to establish a safe load condition, the cognizant supervisor shall evaluate the risk and can authorize personnel to reach under the suspended load.

**NOTE: STEEL ERECTION MAY BE EXEMPTED FROM THE ABOVE REQUIREMENTS BY AND IN ACCORDANCE WITH 29 CFR 1926.753(D).**

#### M. WORK AUTHORIZATION/WORK RELEASE

- M.1 All work to be performed by the Seller will be reviewed and released in accordance with the Work Authorization process defined in Part I Section A.4.4. Additionally, all electrical work and all work involving LOTO will require a more specific work review and work authorization prior to performing these work tasks. These specific work reviews, for example, shall require the Seller to demonstrate to Buyer that they have completed a detailed field review of the work site conditions, that they have performed a detailed review of the specifications and drawings which describe/support the work evolution, and that they have a clear understanding of the work to be accomplished and the work controls invoked. The Seller should plan approximately up to one hour for these specific work reviews.
- M.2 Changed Condition/Emergent Work – Work not previously reviewed and released shall be formally documented by the Seller for Buyer approval prior to the work activity taking place.

#### N. TEMPORARY SYSTEMS CHANGE, CONDITION or MODIFICATION

If during the course of work any "Temporary" systems change or modification of existing systems shall be reviewed and approved by the Buyer Representative. Examples include: closing or obstructing doorways and travel paths – including postings to same, connection to existing water supply and drains in support of construction activities, vehicular traffic access, or special use lay down areas.



### **PART III: DURING WORK REQUIREMENTS**

#### **O. IONIZATION TYPE SMOKE DETECTORS & SMOKE ALARMS**

- O.1 Special attention must be paid to the handling of ionization type smoke detectors and smoke alarms containing Americium 241. In the event that the Seller discovers an ionization type smoke detector or smoke alarm that is not identified in the subcontract documents, the Seller shall cease work and immediately (prior to removal) notify the Buyer Representative's.
- O.2 The Seller shall not bring any ionization type smoke detector or smoke alarm onto the Buyer's Site without prior notification of the Buyer's Representative. Ionization detectors not for use at the Buyer's Site shall not be brought on Site.
- O.3 The Buyer's Representative will coordinate proper labeling, handling and inventory tracking of these smoke detectors as they are brought on site.
- O.4 An ionization detector that is removed from service temporarily to be reinstalled may remain in the immediate work area if the detector is constantly controlled by the Seller or a Buyer Representative. Otherwise, the detector shall be turned over to the Buyer Radiological Controls personnel.

**END OF PART III**

## **PART IV: LIST OF APPLICABLE MANDATORY STANDARDS**

All applicable laws and regulations promulgated under these laws shall be complied with. This shall include state laws and regulations, in states with authorized programs.

### **A. Environmental Protection**

- (1) The National Environmental Policy Act (NEPA)
- (2) Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA)
- (3) Emergency Planning and Community Right-to-Know Act of 1986 (EPCRA)
- (4) Pollution Prevention Act of 1990
- (5) Clean Air Act (CAA)
- (6) Resource Conservation and Recovery Act of 1976 (RCRA)
- (7) Federal Water Pollution Control Act, as Amended by the Clean Water Act of 1977
- (8) Oil Pollution Act of 1990 (OPA)
- (9) River and Harbors Act of 1899
- (10) Safe Drinking Water Act
- (11) Endangered Species Act
- (12) Fish and Wildlife Conservation Act of 1980
- (13) Toxic Substances Control Act (TSCA)
- (14) Federal Insecticide, Fungicide and Rodenticide Act (FIFRA)
- (15) Title 49 CFR 170 et. al "Hazardous Materials Regulations" (DOT)
- (16) Clean Water Act (CWA)
- (17) NYSDEC Regulations

In addition, the mandatory standards listed below are a matter of DOE policy for which Construction Safety conformance is also required. Unless otherwise specified, the most current edition of these standards applies.

### **B. Fire Protection**

- (1) "National Fire Codes" (NFPA).
- (2) DOE/EP-0108, "Fire Protection of AEC Electronic Computer Data Processing Systems".
- (3) "Product Directories of Underwriters Laboratories", together with the periodic supplements (UL).
- (4) "Factory Mutual Approval Guide" (FM).
- (5) DOE-STD-1088-95, "Fire Protection for Relocatable Structures".
- (6) New York State Building Code/New York State Fire Code

### **C. Occupational Health Protection – Industrial Hygiene**

- (1) "TLVs & Threshold Limit Values for Chemical Substances and Physical Agents and Biological Exposure Indices (BEIs)
- (2) ANSI Standard Z136.1 "Safe Use of Lasers"
- (3) Title 10 CFR Part 850, "Chronic Beryllium Disease Prevention Program"

### **D. Occupational Safety**

- (1) General Safety
  - (a) ANSI Standards, as applicable.
  - (b) "Forest Service Safety Standards" (USDA).
  - (c) Title 29 CFR 1910, "Occupational Safety and Health Standards (OSHA)
  - (d) Compressed Gas Association (CGA), Pamphlets P-1 and P-12
  - (e) US Army Corps of Engineers Manual, EM 385-1-1

## **PART IV: LIST OF APPLICABLE MANDATORY STANDARDS**

- (2) Construction Safety – Title 29 CFR 1926, “Safety and Health Regulations for Construction”
- (3) Crane Safety
  - (a) ANSI B-30 Series (ANSI), Safety Standard for Cableways, Cranes, Derricks, Hoists, Hooks, Jacks and Slings.
  - (b) Specification No. 70, Crane Manufacturers Association of American (CMAA).
- (4) Electrical Safety
  - (a) 29 CFR 1910
  - (b) NFPA 70E, Standard for Electrical Safety in the Workplace, Arc Flash Hazards, (Sections 110.8 (B) (1) (b), 130.3 and 130.7)
  - (c) NFPA 70, National Electrical Code (NEC).
- (5) Explosive Safety
  - (a) DOE M440.1-1, DOE Explosives Safety Manual (formerly DOE/EV 06194-1).

### **E. Transportation Safety**

- (1) “Motor Carrier Safety Regulations”, Federal Highway Administration (DOT).
- (2) “Manual on Uniform Traffic Control Devices for Streets and Highways”, Bureau of Public Roads (DOT).
- (3) ANSI D7.1, “Inspection Requirements for Motor Vehicles, Trailers and Semi-trailers Operated on Public Highways” (ANSI).
- (4) “Uniform Vehicle Code” (NCUTLO).
- (5) “A Policy on Geometric Design on Rural Highways” (AASHTO).

**END OF PART IV**

**PART V: SUBMITTALS REQUIRED BY S-12**

SUBMITTALS REQUIRED

The purpose of this section is to assist the Seller in planning work evolutions that require submittals. The third column provides a brief description of the type of documentation required. In all cases, the appropriate Specification section, referenced in column 1 should be consulted to ensure a clear understanding of the requirements. All documentation shall be signed and submitted to the Buyer’s Representative unless otherwise indicated.

SECTION	CIRCUMSTANCE	REQUIRED DOCUMENTATION	WHEN REQUIRED
<b>GENERAL</b>			
I.B.2	When the Seller’s or the lower-tier’s work force includes on site employees not able to read or comprehend English.	Written notification to the Buyer’s Representative	Prior to the employees’ start of work on site.
I.B.3	Worker training/qualification (including sub-tiers).	Documentation of worker training/qualification for the particular operation/work to be performed under the contract. Documentation shall be made available for review as a part of any permit application, written procedure, or upon request (within 24 hrs).	Prior to employees performing that particular operation/work.
I.B.4	When a Seller’s employee demonstrates a lack of requisite environmental, safety, or health knowledge, understanding, or skill.	Written notification of retraining.	Prior to allowing the affected employee to perform any further work associated with the area of deficiency.
I.C.3	Site Indoctrination and Worker Hazard Awareness Training	Seller’s process description to provide assurance workers are knowledgeable of requirements governing on site work.	Prior to performing work on site.
I.E.2	High Risk Work	Documentation packages (e.g., Plans, Authorizations, & Work Procedures, Briefing Sheets, Permits - EXHIBITS 6A & 6B)	Prior to performing the work.
I.E.3	Each project	<u>Project specific</u> HAP which identifies each work evolution for the entire job, all foreseeable hazards and any planned protective measures to mitigate those hazards (EXHIBIT 18).	Prior to the start of work on site.
	Seller operations involving HRW (energized electrical work, elevated work, excavations, permit required confined spaces, diving operations, blasting, building demolition, welding/burning operations, use of lasers, crane operations, etc.) or unusual hazards.	<u>Task specific</u> HAP which identifies each work evolution associated with the HRW task, all foreseeable hazards and any planned protective measures to mitigate those hazards (EXHIBIT 18).	Ten (10) days in advance of the expected need.
I.H	Weekly Inspections	Documentation of weekly inspections of the Seller’s work operations, facilities, and equipment to assure compliance with all applicable State, Federal and local regulations.	Documentation records of all inspections shall be maintained and be made available for review, upon Buyer request.
I.J.2	Employee exposure monitoring.	Documentation of monitoring results.	As soon as possible following monitoring event.

**PART V: SUBMITTALS REQUIRED BY S-12**

SECTION	CIRCUMSTANCE	REQUIRED DOCUMENTATION	WHEN REQUIRED
I.M	Seller to require space on site for use as a lay down area, or for location of a portable office trailer or accumulation of material.	Written request for space allocation from the Buyer's Representative.	Ten (10) days in advance of the expected need.
I.N.4	Generation of construction and demolition (C&D) debris during work.	Written letter stating name and address of the disposal location, copy of agreement between disposal location and Seller and copy of the transporter and disposal location's permit. (EXHIBIT 28)	Prior to start of work
I.N.4	Generation of construction and demolition (C&D) debris during work.	Report quantity of C&D debris removed from site each month	Monthly, within five (5) workdays from the end of the calendar month.
I.N.5	Other controlled waste	Waste Process Evaluation List (EXHIBIT 11)	Prior to generation
I.N.9	Generation of recyclable material during work.	Report quantity of recyclable material removed from site each month	Within five (5) workdays from the end of each month.
I.O.2	Temporary connection to BMPC services (water lines, sewers, ventilation ducts etc.).	Written work procedure specifying purpose and duration of connection and any controls on the connection.	Ten (10) workdays prior to establishing the connection.
I.P.6	Construction sites that disturb more than one (1) acre of soil.	Signed copy of Storm Water Pollution Prevention Plan (SWPPP) certification page.	Ten (10) days prior to starting any soil-disturbing activity
I.R.4	Work on refrigerant systems.	Copy of technician's license.	Ten (10) days prior to start of work.
I.S.2	All work at BMPC Sites where Subcontractor employees report they were, or believe they may have been, exposed to airborne beryllium at BMPC or another DOE Site.	Questionnaire About Exposure to Airborne Beryllium at a Department of Energy Site and Summary of Beryllium Exposure History Survey (EXHIBIT 13).	Prior to start of on site work by each employee who is expected to work at Buyer Sites on five (5) or more days under the contract. For other employees, they have up to ten (10) days after having worked the fifth day to submit required documentation. This submittal is not required if all Subcontractor employees report no history of beryllium exposure at a DOE Site.
I.S.3	Work in beryllium restricted-access area with potential for exposure to airborne beryllium.	Procedure describing exposure controls and Beryllium Work Permit (EXHIBIT 26)	Ten (10) days prior to performance of work.
I.T.1	Petroleum Transfer Operation	Submit Petroleum Transfer Operation Procedure, for approval	Ten (10) days prior to performance of the transfer.
I.U.1 & 2	Application of pesticides.	Proof of NY State license.	Prior to application.
<b>PRE-WORK</b>			

**PART V: SUBMITTALS REQUIRED BY S-12**

SECTION	CIRCUMSTANCE	REQUIRED DOCUMENTATION	WHEN REQUIRED
II.A	All construction subcontracts, unless specifically excluded in the bid specification.	Written safety program to Buyer, for information.	At time of proposal
II.C	Use of major equipment.	Major Equipment Declaration form (EXHIBIT 17) for each piece of major equipment.	Ten (10) days before use of equipment
II.D	Any of the permit processes listed below: <ul style="list-style-type: none"> <li>- Hot Work, use of flame, heat producing or spark producing device</li> <li>- Use of respirator</li> <li>- Permit-required Confined Space</li> <li>- Excavation</li> <li>- Penetration</li> <li>- Asbestos removal/disposal/handling</li> <li>- Energized electrical work</li> <li>- Elevated work</li> <li>- Work in beryllium restricted-access areas</li> </ul>	Request & obtain the required internal permit/plan applicable to the specific process.  Prior to the request for an internal permit/plan, meet with the Buyer's Representative to ensure that the latest permit form is used, as well as, to ensure understanding of all of the supporting documentation that is required.	Ten (10) days before start of work evolution.
II.E	Work with hazardous materials or physical agents that requires any of the following: <ul style="list-style-type: none"> <li>- Engineering controls</li> <li>- Respiratory protective equipment</li> <li>- Workplace exposure measurements</li> </ul> Examples include work such as cutting, or grinding operations on concrete, painted surfaces or metal surfaces.	Procedure (EXHIBIT 27) describing: <ul style="list-style-type: none"> <li>- Event sequence</li> <li>- Exposure controls</li> <li>- Past experience with procedures</li> <li>- Training</li> <li>- Respiratory protective measures</li> <li>- Workplace measurements to be performed</li> </ul>	Ten (10) days before start of work evolution.
II.F.1 & 2	Obtain Seller approval prior to bringing II.F.1&2 defined substances on site.	EXHIBIT 5 for materials to be used on site and a Material Safety Data Sheet (MSDS) for all material brought on site.	At least ten (10) days prior to bringing material on site.
II.G.2	Any Seller operation that may require a State or Federal permit.	Information required by to support permit application.	During bid process.
II.J.1.4	Designate an On Site Safety Representative (OSSR).	Proposal/Nomination/list on Seller's company letterhead.	During bid process.
II.J.2 & 3	Designate an Construction Safety Coordinator (CSC)/On Site Safety Compliance Officer (OSSCO) and Assistant CSC/OSSCO.	Submit the resume of the CSC/OSSCO candidates.	During bid process.
II.K.1	Work on energized systems.	Energized Electrical Work Plan (EXHIBIT14)	Ten (10) days prior to the start of work.
II.K.5	Use of an insulated aerial lift (bucket truck) for electrical work.	Demonstrate that the equipment meets the requirements of ANSI A92.2 (i.e., ANSI certificate, electrical testing complete and electrical rating clearly marked on the equipment).	Prior to use.

**PART V: SUBMITTALS REQUIRED BY S-12**

SECTION	CIRCUMSTANCE	REQUIRED DOCUMENTATION	WHEN REQUIRED
II.L.1	Use of equipment for making lifts on site.	Notify the Buyer's Representative.	Ten (10) days before bringing on site.
II.L.8	Use of equipment for making lifts	Complete Pre-lift Checklist – EXHIBIT 12	Prior to each lift
II.L.9	Complex Lifts	Rigging sketch (see EXHIBIT 29)	Ten (10) days before use.
II.M.1	Any excavation >12" in depth.	Plan to address compliance with 29 CFR 1926 Subpart P (Excavation Permit - EXHIBIT 23).	Ten (10) days prior to beginning excavation work.
	Any excavation >5' in depth where personnel must enter.	Excavation Plan (EXHIBIT 16) signed by professional engineer or competent person.	Ten (10) days prior to beginning work in an excavation.
II.M.2	Slope greater than 1:1 ½ for excavation.	Request for a deviation on the Excavation Permit, signed by a "competent person" or Professional Engineer.	Ten (10) days prior to beginning excavation work.
II.M.3	Dewatering an excavation.	Dewatering procedure including method for treatment of water prior to discharge.	Prior to dewatering excavation.
II.N	Penetrations in walls, floors and ceilings.	Notification of the Buyer's Representative and a Penetration Permit (EXHIBIT 24).	Ten (10) days prior to beginning work.
II.O	Use of powder or butane actuated devices.	Notify Buyer's Representative - Operator shall carry card indicating ANSI A10.3 training.	Ten (10) days prior to bringing on site.
II.Q	Confined Space Entry	Confined Space Entry Permit (EXHIBIT 22A) or Non Permit Confined Space Entry Form (EXHIBIT 22B), and Confined Space Evaluation Form (EXHIBIT 22C) for Seller owned confined spaces.	Ten (10) days before planned entry.
II.R.1 -R.3	Use of Respirator	Respirator permit (EXHIBIT 21) - Training records - Fit testing records - Physicians Evaluation - Copy of respiratory protection program	Ten (10) days before start of work.
II.R.4	Use of breathing air or breathing air systems.	Certification that air or air system meets the requirements of ANSI/CGA Spec. G-7.1-1989, or current standard.	Prior to use of breathing air or breathing air system.
II.R.5	Use of a dust mask.	Respirator permit (EXHIBIT 21) - Training records	Ten (10) days before start of work.
II.S	Work involving asbestos containing materials.	Provide asbestos work submittals required by EXHIBIT 10.	Ten (10) days before start of work.
II.T	Dust-generating activities on silica-bearing materials (such as grinding concrete) that requires use of engineering controls, respiratory protective equipment or workplace exposure measurements.	Silica Procedure (EXHIBIT 9)	Ten (10) days before start of work.
II.U	Use of Lasers – Class Class 3B or Class 4	Written procedure (EXHIBIT 27) for Buyer approval (procedure to demonstrate compliance with ANSI Z-136.1).	Ten (10) days before start of work evolution.

**PART V: SUBMITTALS REQUIRED BY S-12**

SECTION	CIRCUMSTANCE	REQUIRED DOCUMENTATION	WHEN REQUIRED
II.W	Use of fuel-powered engines indoors, or in outdoor areas with limited ventilation.	Notification and approval from the Buyer, or Seller's written assessment as to why the use of fuel-powered equipment does not pose an exposure risk, for Buyer's concurrence.	Ten (10) days before start of work.
II.Y	Generation of waste as part of scope of work.	Seller Waste Process Evaluation List which lists, for each waste stream: (EXHIBIT 11) <ul style="list-style-type: none"> <li>- the process generating the waste,</li> <li>- the substances used in the process,</li> <li>- the hazardous constituents,</li> <li>- type of waste generated,</li> <li>- special storage requirements,</li> <li>- Appropriate disposal path, and</li> <li>- Quantity expected to be generated.</li> </ul>	Ten (10) days prior to start of work.
II.Z.6	Hydrostatic or pneumatic testing.	Seller and Buyer signed pre-testing check sheet in accordance with the contract technical specification.	Prior to commencement of hydrostatic or pneumatic testing.
<b>DURING WORK</b>			
III.A.3	Any occupational injury, illness or accident.	Verbal and written notification to the Contract Administrator and the Buyer's Representative.	Immediately but no later than one (1) workday of occurrence.
III.A.4.1	Contract term exceeds eight (8) hours, or any contract involving injury/accident.	OSHA Form 300 (EXHIBIT 1)	Within three (3) workdays of the end of the month
III.A.4.2	Reportable Occupational injury/illness, or  Property Damage or Motor Vehicle Accident	DOE 5484.3 (EXHIBIT 2)	Within three (3) workdays of the injury/illness or end of the month; or concurrent with OSHA Form 300 submittal for property damage or motor vehicle accident.
III.C.5	Use of Seller vehicles and equipment on site.	Documented inspection of Seller vehicles and equipment for Buyer review, upon request.	Each day, prior to use.
III.F.9	Perform lockout/tagout (LOTO)	A written energy control procedure, in accordance with 29 CFR 1910.147(a)(4), for work on Seller owned systems/ equipment or Buyer owned systems/ equipment that have been completely turned over to the Seller; or completion of EXHIBIT 30 for work on Buyer owned systems/equipment which have not been turned over to the Seller.	Two (2) days in advance of anticipated need.
III.F.11	Work on Kesselring Site plant-controlled systems requiring energy isolation.	Notification of Buyer's Representative and completion of Buyer generated EXHIBIT 19.	Ten (10) days before start of work.
III.G.2.1	Use of any open flame, heat or spark producing device.	Notify Buyer's Representative and obtain a Hot Work Permit (EXHIBIT 20).	Prior to use.



**PART V: SUBMITTALS REQUIRED BY S-12**

SECTION	CIRCUMSTANCE	REQUIRED DOCUMENTATION	WHEN REQUIRED
III.H.1	Storage of compressed gas cylinders inside of buildings overnight.	Notify Buyer's Representative and obtain Buyer's approval.	Prior to storage inside buildings overnight.
III.J.1	Elevated work performed six (6) feet or more above ground, water or next lower surface, whenever fall protection system is used.	Elevated Work Plan (EXHIBIT 15).	Ten (10) days before start of work.
III.J.11	Scaffold erection and disassembly	Elevated Work Plan (EXHIBIT 15).	Ten (10) days before start of work.
III.M.2	Changed Condition/Emergent Work	Work not previously reviewed and released shall be formally document by the Seller for Buyer approval.	Prior to work activity taking place.
III.N	Temporary systems change, condition or modification of existing systems.	Notify Buyer's Representative for review and approval.	Prior to causing change, condition or modification of existing systems.

Notes: (1) Unless otherwise specified, the standard cycle time for the review and approval of S-12 submittals is ten (10) working days.

**END OF PART V**

## **PART VI: EXHIBITS REQUIRED BY S-12**

### **BMPC EXHIBITS LISTING**

- 1 OSHA Form 300 & Instruction
- 2 US DOE Form 5484.3
- 3 RESERVED
- 4 Poster of Worker Protection for DOE Contractor Employees Management System Reporting Form
- 5 Materials to be used on Site; Usage, Handling & Disposal Approval
- 5I Materials to be used on Site; Instructions
- 6 Evaluation of High Risk Work and the need for a Hazard Analysis
- 6A High Risk Work Authorization Form
- 6B High Risk Work Acknowledgement and Briefing Sheet
- 6C Safety Incident and Environmental Investigation and Formal Reporting Criteria
- 7 Clearances from Overhead Power Lines for Cranes, Backhoes, Un-Insulated Aerial Lifts Used by Qualified or Unqualified Operators, Scaffolds, & Similar Equipment
- 8 Distances for Excavations on or Near Utilities
- 9 Silica Procedure
- 10 Asbestos Control Requirements
- 11 Seller Waste Process Evaluation List
- 12 Pre-lift Checklist
- 13 Identification of Current Subcontractor Employees with Beryllium-Exposure History
- 14 Energized Electrical Work Plan
- 15 Elevated Work Plan
- 16 Excavation Plan
- 17 Major Equipment Declaration
- 18 Hazard Analysis Plan
- 19 Kesselring Site Prototype Plant and OSHA Tag-out Systems Equivalency
- 20 Hot Work Permit
- 21 Respirator Permit
- 22A Confined Space Entry Permit
- 22B Non Permit Confined Space Entry Form
- 22C Confined Space Evaluation
- 23 BMPC Excavation Permit
- 24 BMPC Penetration Permit
- 25 Asbestos Work Permit
- 26 BMPC Beryllium Work Permit
- 27 Procedure Template
- 28 Disposal/Recycling Facility Acceptance Form
- 29 Typical Elements Required for a Rigging Sketch
- 30 Lockout Tagout Procedure