



DOCUMENT NO.: J-13	REV. NO. 28	EFFECTIVE DATE: 08/29/24
TITLE: J-13 Flow down of Fluor-BWXT Worker Health and Safety Program	PERIODIC REVIEW DATE: As Needed	
	Approved by: Occupational Safety & Health Manager Radiological Protection Manager Environmental Protection Manager	

USE CATEGORY:	CONTRACTOR INFORMATION USE	Page 1 of 35
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Previous Record of Issue/Revision information is available upon request.

Revision	Record of Issue/Revision	Affected Pages
28	Revisions: Added subsection 5.5 High Hazard Review Board, added FBP-IH-PRO-00028 to subsection 6.6.3, added Appendix #23, <i>Supplemental Asbestos/Suspect Asbestos Information for Planning Work</i> , revised subsection 6.6.12 to address Appendix #23, added additional services provided by medical to section 6.7, added when a fitness for duty medical examination is required and when initial and routine examinations are not required in section 6.7.1, updated section 6.7.2 workplace substance testing expectations, and revised subsection 6.23 to address vaping requirements.	12, 13, 17, 21, 23, 24, 25, 31

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Appendices

All listed appendices shall be used in the development of the Contractor Work documents described throughout J-13 and placed in the field notebook, as applicable, for periodic review.

Appendix 1	Training Catalog
Appendix 2	You Have a Right to a Safe and Healthful Workplace
Appendix 3	Job Safety and Health
Appendix 4	Environmental Health and Safety Policy
Appendix 5	Environmental Policy
Appendix 6	Job Content Worksheet & Instructions
Appendix 7	OSHA Competent Person Designation
Appendix 8	Pre-Job Briefing Checklist
Appendix 9	Post- Job Review Checklist
Appendix 10	Pre-Job Briefing and Post-Job Review Attendance Form
Appendix 11	Safety Task Assignment (STA)
Appendix 12	Physiological Monitoring for Heat Stress
Appendix 13	Weekly Hour Usage Report
Appendix 14	Project – Training Matrix A or B
Appendix 15	Excavation Trench Inspection Form
Appendix 16	Inbound Equipment Inspection Form
Appendix 17	Outbound Equipment Inspection Form
Appendix 18	Daily Equipment Inspections
Appendix 19	Incident Investigation
Appendix 20	Hazard Reference List (HRL)
Appendix 21	Industrial Hygiene Representative Submittal Checklist
Appendix 22	Signs and Barricades
Appendix 23	Asbestos Supplemental Information for Planning Work

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1.0 PURPOSE [10 CFR 851]

Fluor-BWXT Portsmouth LLC (FBP) (hereinafter referred to as “Company”) performs Decontamination & Decommissioning (D&D) and Environmental Remediation (ER) work at the U.S. Department of Energy (DOE) Portsmouth Gaseous Diffusion Plant (PORTS), according to the terms and conditions of prime contract DE-AC30-10CC40017. FBP is responsible for ensuring compliance with all applicable laws, regulations, regulatory agreements, and requirements, as defined in the prime contract.

The Company’s policy is to provide a safe and healthy workplace for all employees. Safety is the Company’s number one core value and shall take precedence over cost and schedule. The Company is dedicated to the belief that all injuries, accidents, and incidents are preventable and is committed to integrating safety into all aspects of work planning and execution, as described in the Integrated Safety Management System (ISMS).

Implementation of this contract requirement ensures safety and health requirements are flowed down to the lowest task level and demonstrates compliance with 10 Code of Federal Regulation (CFR) 851, Worker Safety and Health Program, and other applicable requirements.

2.0 SCOPE AND APPLICABILITY [10 CFR 851.11]

All work performed by this contract shall be in accordance with

- U.S. Department of Energy Acquisition Regulation (Integrated Safety Management DEAR 970.5223-1 clause);
- 10 CFR 851, Worker Safety and Health Program and standards incorporated by reference in 10 CFR 851.23 and 10 CFR 851.27;
- 10 CFR 835, Occupational Radiation Protection; and
- Additional site requirements described in section 6 of this document.

FBP maintains a DOE-approved Worker Safety and Health Program (WSHP) documenting compliance with 10 CFR 851.

The safety and health requirements described in this document are applicable to all activities. All persons, including visitors, entering the FBP D&D and ER Project sites are subject to the requirements of this document and will be held responsible for adhering to the requirements as specified herein.

Furthermore, each individual is responsible for bringing to the attention of management any unsafe or unhealthy conditions that he/she observes. Unsafe or unhealthy conditions are addressed upon discovery.

2.1 Project Safety and Health Program

Contractors shall develop and submit a Project Safety and Health Program for review and approval by the Company, which shall meet the applicable requirements contained herein and 10 CFR 851. The Contractor shall comply with such portions of this program, which flows the Company’s DOE approved WSHP requirements for subcontracted work, as are applicable to the contracted work identified in the Statement of Work, specifications, or any other part of their contract. The

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Contractor’s detailed Project Safety and Health Program shall identify the method(s) [i.e. equivalent or duplicate] of compliance with the applicable sections of this document which provides the basis for the Contractor’s (and Subcontractor’s) Work Plans.

Equivalencies: If it is determined (i.e. by FBP SMEs) that the Contractor’s planned controls effectively address the hazards present, approval of such alternative controls takes place through the normal contract submittal and review process. Equivalency is predicated upon the following.

- The control is not prohibited under the governing regulations.
- The control provides for an adequate and robust level of protection.

Exceptions: If the alternative control does not meet the criteria for an equivalency, FBP may seek approval from DOE to accept the alternative controls.

Contractors that are performing limited scope and limited “hands-on” work or strictly performing observation/consultation, that do not meet the 10 CFR 851 exclusions discussed later, may accept and follow the FBP WSHP and applicable procedures and training under the appropriate Program Functional Areas as identified in Section 6. The Contractor shall submit their WSHP determination for review and approval by the Company.

The approved Project Safety and Health Program shall be maintained on the worksite or designated area and shall be made available upon request to the construction manager, project manager, worksite employees, employee representatives, and Company/DOE personnel with assigned oversight responsibilities. This plan shall be updated, as required, based on lessons-learned or change in scope and conditions. Each subcontractor shall be provided a copy of the safety and health program by the Contractor and be required to comply with it.

The Company will provide site specific training. All other training must be provided by the Contractor and be included on the submitted Training Matrix (Appendix 14).

The Contractor Construction Manager and/or Contractor OS&H Representative are responsible for ensuring implementation of contractually required safety and health program documents. Contractor and Subcontractor personnel are required to be qualified commensurate with their duties and responsibilities for the preparation of these documents, as well as for conducting work.

The Company and Government entities will conduct safety and technical oversight of all work as they determine appropriate and necessary. The Contractor shall ensure unrestricted access is provided (i.e. compliant with safety and work control requirements) to all onsite work areas and activities.

The Contractor shall maintain an up-to-date worksite notebook indexed for all relevant OS&H information [JHAs, Training Matrix, competent person’s designation, initial and daily inspections, equipment inspections, safety data sheet (SDS) information, personnel qualifications and applicable certifications, etc.].

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Any subcontracts issued by the Contractor in support of this contract shall require all lower-tier Subcontractors to comply with the approved Project Safety and Health Program.

2.2 Sub-Contractor Vendors/Delivery Personnel

The Contractor or Subcontractor remains fully responsible for the safety and health of all vendors and suppliers providing on- site services and supplies.

Vendors, delivery persons and others who do not have service contracts with DOE, or who are not subcontractors to such contractors are excluded from requirements of 10 CFR 851. Work that is excluded from 10 CFR 851, since employee Health & Safety is governed by the employer’s OSHA-based program, includes:

Vendors, delivery persons, and others who generally do not have PORTS mission related service contracts with DOE. Including (but not limited to):

- Portable Restrooms and Hand Washing Stations
- Ice Vendor
- Fuel Delivery
- Chemical Delivery
- Equipment Delivery (e.g. Compressed Gas Cylinders)
- Delivery Personnel such as UPS or office supplies delivery
- Suppliers that engage in no more than tangential work at PORTS
- Off-site utility providers
- Off-site emergency services
- Contractor/Subcontractors that provide only “Commercial services or items” whose employees are covered by OSHA

Contractors or Subcontractors who choose to have vendors provide the above, mentioned services shall maintain documentation that the vendor(s) have been briefed to the relevant portion of the Contractor’s approved Job Hazard Analysis and performed a Safety Task Assignment briefing.

3.0 RESPONSIBILITIES

Contractor Project Management Team

3.1 Contractor Project Manager

The Contractor Project Manager (CPM) ensures that all personnel under his/her supervision, directly or indirectly, clearly understand their role, responsibilities, authorities, and accountabilities within assigned projects and activities. The CPM will maintain current knowledge of all safety policies and procedures, take responsibility for their own safety and the safety of managed personnel ensuring compliance with all applicable safety policies & procedures, and practice safe work habits. The CPM will provide identification of work activity types and the portions of the safety program applicable to the contracted work scope. The CPM will hold managerial responsibility for implementation of the agreed portion of the applicable WSHP as specified herein.

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3.2 Contractor Supervisor

The contractor supervisor ensures that all work on the project is performed safely and that activities are planned and performed in compliance with the PORTS Integrated Safety Management System principles and core functions. Remains knowledgeable of safety policies and procedures as well as performing assigned duties in a safe manner and, while supervising others, has the responsibility for their safety and ensures that they comply with established safety policies and procedures and practice safe work habits. The contractor supervisor will serve as the field oversight point of contact for the contractor work force.

3.3 Contractor OS&H

NOTE
The Company reserves the right to disqualify Contractor OS&H personnel based on unsatisfactory field results or poor performance during field activities.

Contractor shall provide one or more full-time onsite (PORTS Reservation) qualified OS&H Representatives when field work is in progress. The OS&H Representative(s) must possess and demonstrate their Industrial/Occupational Safety knowledge, skills and ability in all areas of the contractor work scope. The OS&H Representative(s) must be approved by the Company and poses, at a minimum, 30hr OSHA training in Construction and 2yrs. of verifiable field OS&H oversight. Equivalent training/experience shall be determined by FBP OS&H.

When Contractor's on-site employee total is less than thirty individuals, the OS&H Representative may have other management responsibilities.

Additional qualified OS&H personnel may be required due to geographic location, specific hazards, Company requirements, or local regulatory requirements. This shall be determine based on the Contractor's work plan and /or changes in work scope.

Contractor's OS&H Representative shall be responsible to oversee line management's implementation of the Contractor's Safety and Health Program.

3.4 Contractor Industrial Hygiene

NOTE
The Company reserves the right to disqualify Contractor Industrial Hygiene personnel based on unsatisfactory field results or poor performance during field activities.

The Contractor's Industrial Hygiene representative must possess verifiable field experience in the comprehensive practice of industrial hygiene:

- Three (3) years experience (>35% of time); or
- One (1) year full time; or
- An independent third party Industrial Hygiene consultant.

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This person can be the Contractor’s OS&H Representative.

The qualifications of the person(s) developing, approving and performing any industrial hygiene monitoring/sampling shall be submitted to the Company for approval prior to the person(s) performing any industrial hygiene monitoring/sampling using Appendix 21 along with a current resume.

This qualified person may train other personnel to perform monitoring as long as they ensure monitoring/sampling is done accurately when the task is performed. Training must be documented, submitted along with Appendix 21, and approved by the Company.

Experience in the field of industrial hygiene shall include more than 1 year of dedicated asbestos work, if applicable to the work scope.

A Certified Industrial Hygienist (CIH) certification by the American Board of Industrial Hygiene (ABIH) is preferred, but not required.

4.0 TRAINING AND RECORDS [10 CFR 851.20 and 10 CFR 851.25]

4.1 Training

Required training, site specific and specialty training, is identified in Appendix 1. In accordance with the contract submittal register, the Contractor shall submit Personnel Training Matrix (Appendix 14) prior to mobilization and maintain it as current and up to date. By providing this submittal, the Contractor certifies that the contractor required training has been completed in compliance with the WHSP and applicable state and federal requirements. Contractor agrees that as personnel are added during the performance of the contract, the Personnel Training Matrix (Appendix 14) will be updated and resubmitted. Any required training records/matrix changes will be provided to FBP Project Manager prior to such personnel beginning field work at the PORTS facility.

Any additional training required to perform the contracted task not identified in Appendix 1 shall be added to the contractor’s training matrix for review and approval. Additional training received by employees shall also be maintained as part of the training records described below.

Foremen shall be trained to the level of supervisors for the work scope for which they are responsible.

The Contractor shall maintain auditable training records and/or certifications for each employee that will perform work at the Portsmouth Gaseous Diffusion Plant (PORTS). Employee training records shall be available and provided to the Company, upon request. Employee training records shall adequately document that each employee is properly trained (e.g. Appendix 1 and applicable state and federal required training) to safely and effectively perform work tasks to which they are specifically assigned.

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The Contractor shall identify the necessary OSHA Competent Person(s) and submit a Competent Person Designation form (Appendix 7) along with the individual’s qualifications in accordance with OSHA regulations for approval by the Company.

The Company may require the Contractor to participate in periodic group safety meetings to discuss issues / lessons learned affecting the Contractor’s work and its employees.

4.2 Records Generated [10 CFR 851.20]

NOTE
Occupational Medical Records are retained confidentially by the contracted Medical Provider.

In performance of work, the Contractor is expected to generate DOE records. The Contractor will retain such records on the job site and ultimately turn them over to the Company upon completion of work activities. Examples of such records include but are not limited to the following.

- Safety inspections
- Completion of training
- Instrumentation and Calibration Logs
- Industrial Hygiene (IH) monitoring results
- Accident/Incident Investigation Reports
- Completed Permits
- Job Hazard Analyses (JHAs)
- Occupational Safety and Health Administration (OSHA) 300 Forms
- OSHA 300-A Logs and Experience Modification Rate

In addition to the initial submission of the most current completed year and 2 previous years data; the Contractor shall submit annual updates to its OSHA 300-A Logs and Experience Modification Rate from their workers’ compensation insurance carrier to the Company Purchasing Representative for review; this is due no later than February 1 of the New Year.

At the direction of the Company, Contractor may be required to submit a process improvement plan for approval by the Company Safety and Health, if it’s Experience Modification Rate is above 1.0 and /or its OSHA Total Recordable Case rate is above 1.0.

The Contractor is to track the total hours worked on a weekly basis and submit them utilizing the Weekly Hour Usage Report (Appendix 13).

5.0 PROGRAM DESCRIPTION

5.1 Integration with ISMS [10 CFR 851.10, 10 CFR 851.11 and 10 CFR 851.13]

The Company is committed to maintaining an Integrated Safety Management System (ISMS) that promotes the Company’s core values of providing a safe and healthy workplace for all Employees.

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The contractor shall incorporate the core functions and guiding principles of U.S. Department of Energy Acquisition Regulation (Integrated Safety Management DEAR 970.5223-1 clause).

5.2 Stop Work Authority [10 CFR 851.10, 10 CFR 851.20 and 10 CFR 851.21]

Any worker has the authority and obligation to stop work or decline to perform an assigned (i.e., planned or in-progress) task because of a reasonable belief that the task poses an imminent risk of:

- Death, serious physical harm, or other serious hazard to workers; OR
- Significant adverse effect to the safe operation of or damage to a facility; OR
- Significant insult(s) to work or activity quality; OR
- Release(s) of hazardous, radiological, or chemical items/effluents to the environment; AND
- In circumstances where the worker(s) reasonably believes there is insufficient time to promptly resolve the concern utilizing normal hazard/quality reporting and abatement procedures.

These concerns are brought to the attention of Contractor supervision and OS&H personnel and the CTR who will then assess the circumstances surrounding the perceived threat and take appropriate actions to resolve the reported concerns.

A formal Work Stop requires documentation. A formal Work Stop must also be formally released.

5.3 Hazard Identification and Control [10 CFR 851.21 and 10 CFR 851.22]

A Hazard Reference List (HRL), (Appendix 20) is a reference tool to help aid in the identification of hazards applicable to the work scope. The Contractor shall perform a Job Hazard Analysis prior to work being performed evaluating the associated hazards including environmental hazards.

Supplemental site information (safety data sheets, materials of construction, drawings and work documents, site characterization data, as-built drawings, etc.) should be reviewed as part of the hazard analysis process.

The Company has developed General Work and Site Safety Orientation (SSO) JHAs that encompass common hazardous activities performed by workers (General Work FBP-JHA-13-1647 and SSO FBP-JHA-13-1450). These JHAs are a part of the contractors required read catalog found in the STA.

Contractors shall follow the controls in the Company’s General Work and SSO JHAs as applicable to the job being performed.

The Contractor’s Job Specific JHA shall identify those hazards outside of those found in the company’s General Work and SSO JHAs. Hazards which are identified in the JHAs, but which require additional or different controls will be included in the Contractors job specific JHA.

The Contractor’s Line Management shall ensure that a hierarchy of controls is used for controlling task hazards in order of preference:

- Elimination or substitution of the hazards where feasible and appropriate;
- Engineering controls where feasible and appropriate;
- Safe work procedures and administrative controls that are understood, followed, and reinforced where feasible and appropriate; and
- Use of personal protective equipment (PPE).

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NOTE

In the event the Contractor/Subcontractor workers are not employed at the time of work planning and JHA development, a documented review of the JHA (i.e. sign in sheet) and feedback activity is required by a field worker before work execution.

The Contractor’s JHA shall be prepared utilizing a job walkdown, where feasible, and involve members of the workforce who will be engaged in the work or their representatives.

Any identified protective measures that are required to be prepared by a Professional Engineer or other qualified professional shall be accompanied by drawings or other appropriate documentation. It is expected that JHAs will be reviewed when the job scope or hazards change and revised as needed to reflect changes.

The Contractor’s JHA shall be submitted for review and approval by the Company prior to mobilization. All changes made to the JHA shall be re-submitted and approved by the Company. In-field “red-line” changes may be made to working JHAs while being used in the field. All redline changes are to be electronically updated and re- submitted within 5 work days. Affected workers are to be briefed prior to re-engaging in work activities associated with the redline changes.

Supervisory responsibilities shall include analyzing the work to identify hazards and implementing appropriate controls and assuring workers are qualified to perform their assigned tasks and follow the applicable work plan.

5.4 Permits

The Company WSHP provides for written, properly authorized, permits (e.g., electrical, hot work, confined space, chemical, lockout/tag out, environmental, radiological work, etc.), when required, before associated work begins. The Company shall provide these permits (refer to Section C Statement of Work) and Contractor equivalent substitutions will not normally be approved. Permits provide details on the type of activity to be performed and specific safety requirements necessary to perform the job. Permits shall be reviewed with applicable workers who have received necessary training on the associated program(s) and to assure understanding of the hazards and mitigations, readily available in a designated area of the workplace and the instructions must be followed without exception.

5.5 High Hazard Review Board (HHRB)

The Contractor’s work plans will be reviewed by the HHRB as part of the submittal review process. The Contractor should be prepared to address their approach to safety management for high hazard work. Required attendees include the Contractor’s OS&H Representative and Field Supervisor. The below criteria determines the need for HHRB review:

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REQUIRED FOR HHRB/DDR B	EXCLUSIONS
Electrical work requiring an EEWP over 50 volts	None
Permit required excavations and penetrations	Permitted excavations less than 5 feet deep with no known live utilities within the excavation zone other than the system/utility being worked on provided the system/utility is isolated by a LOTO.
Elevated Work – Over 6’ from the adjacent working surface that requires Personal Fall Arrest System (PFAS) as defined in FBP-OS-PRO-00020, <i>Fall Prevention and Protection</i>	<ul style="list-style-type: none"> • Ingress and Egress from vehicles, mobile equipment, or construction equipment using the installed equipment features • Use of Scissor Lift • Use of JLG • Use of Bucket Truck • Crane PMs/Corrective Maintenance (CM)s that will use only engineered tie-off locations • Any work that can utilize permanent/manufactured engineered tie off points and has a current Engineering Evaluation for the adequacy of the tie off location. <p>NOTE: Mobile carts or crew installed anchor points must be reviewed by HHRB.</p>
Radiological work requiring an As Low As Reasonably Achievable (ALARA) review	None
Critical lifts requiring development of a lift plan	None
Class I, II, III, and IV Asbestos Work	Class IV Asbestos Work (typically not high hazardous) with Director level approval and 29 CFR 1910.1001 (F)(3), <i>Specific Compliance and Work Practices for Brake and Clutch Repair</i>
Pneumatic testing performed in the field for post maintenance testing and/or acceptance testing purposes	Pneumatic testing performed under an approved technical procedure or related to a routine maintenance task

5.6 Job Start-up Briefing and Post-Job Reviews

5.6.1 Initial Site Briefing

<p>NOTE</p> <p>Pre-mobilization equipment delivery and staging work is permitted following approval of the associated work plans and JHAs.</p>

All Contractor field personnel shall attend an initial Job Start-up briefing conducted by the Contractor in coordination with the Company Contract Technical Representative or his/her designee prior to conducting any field activities (Appendix 8, Pre-Job Briefing Checklist, Appendix 10 Pre-Job Briefing and Post-Job Review Attendance Form).

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These briefings may be provided on an individual basis, tailored to the specific scope of work the individual(s) will be performing, as well as the associated hazards and necessary interfaces with other site activities. At a minimum, the following shall be included in the Job Start-up Briefing.

- Contractor expectations for safety performance
- General project scope and schedule
- Project boundaries and requirements for entry
- Emergency response and assembly areas
- Job Hazard Analysis (JHA)
- Safety Task Assignment (STA), Appendix 11
- Security requirements
- Stop Work Authority

5.6.2 Safety Task Assignment (STA)/Daily Briefing

The STA (Appendix 11) shall be utilized by individual work crews and individual tasks/jobs as a tool to identify hazards and controls associated with the work to be performed by the crew. The STA is performed daily, prior to beginning work, when changing to a new work activity, when job conditions change (e.g. weather, surrounding activities, and unexpected conditions), or new personnel are assigned during the day.

5.6.3 Post Job Reviews and Feedback

As defined in the WSHP, workers shall have the opportunity to provide feedback on an ongoing basis during work and record it in the work documents. An informal or formal post-job evaluation may be conducted as required (Appendix 9 Post Job Checklist and Post-Job Review Attendance Form Appendix 10).

5.6.4 Site Visitors

Site visitors must review the STA. Visitors unfamiliar with the area must be escorted while within the construction/work area boundaries.

5.7 Personal Protective Equipment [10 CFR 851.22]

PPE and fieldwork apparel are considered on a task-specific basis and identified in the Job Hazard Analysis for any fieldwork performed on Company-managed sites. The Contractor shall be responsible for providing all required standard industrial PPE to the workers.

5.7.1 General PPE

Adequate dress for personnel on a jobsite shall consist of the following.

- Shirts that cover the shoulders, with sleeves at least T-shirt length.
- Full-length trousers, slacks, jeans, etc. in good condition.

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5.7.2 Safety shoes

Where safety shoes are required, they shall meet the following minimum specifications.

- ASTM-2413 (labels listing ANSI Z41 are also acceptable). The ASTM or ANSI tag shall be visible under the tongue.
- Construction: Work boot style, sportswear type safety shoes are not acceptable
- Height: Minimum height of 5".
- Soles: Good characteristics for oil, chemical and heat resistance, traction, abrasion, non-slip sole (moderate tread) and electrical hazard protection. No exposed nails in the sole or heel.
- Uppers: Leather
- Toe Cap: Steel or composite

5.7.3 Radiological PPE

Radiological PPE (anti-c's) required by a Radiological Work Permit (RWP) shall be worn with at least modesty clothing (e.g., undershirts, scrubs, shorts, leggings) underneath.

Do not use disposable gloves with colors exclusively designated for radiological work (i.e., black, yellow, and orange) outside of areas controlled for removable contamination.

Radiological PPE will be provided by the Company.

5.8 Feedback/Continuous Improvement [10 CFR 851.20 and 10 CFR 851.21]

Workers are encouraged to provide feedback and suggestions for improvement to enhance safety and efficiency. Worker involvement, feedback, and suggestions will be sought through participation during official time through such mechanisms as follows.

- Job Planning walk-downs
- Pre-Job Brief/Post-Job Review
- Development and review of JHAs
- Development and review of work documents
- Accident/Incident Investigations
- Employee/Supervisor Interactions

Contractor supervision shall ensure contractor workers have the right, without reprisal, to the following.

- Accompany DOE during workplace inspections.
- Participate in activities provided for herein on official time.
- Express concerns related to OS&H.
- Have access to Freedom of Information Act requirements and restrictions.
- Have access to limited (i.e. non-Personally Identification Information) information on any recordkeeping log (OSHA Form 300).
- Have access to DOE worker protection publications, DOE prescribed standards, FBP standards and procedures, and DOE Form 5484.3 (the DOE equivalent to the OSHA Form 301 that contains the employee's name as the injured or ill worker).
- Observe monitoring and measuring of hazardous agents and have access to the results of exposure monitoring.

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- Receive results of inspections and accident investigations performed by the Contractor/Subcontractor upon request.

Prior to the start of work, all Contractor and lower-tier Subcontractor personnel shall be notified of and encouraged to read the attached Worker Protection Posters; Worker Safety and Health Posters; and Fluor- BWXT Portsmouth LLC Environmental Health and Safety Policy; and Environmental Policy (Appendices 2, 3, 4 and 5) which outline worker rights, information on how to submit concerns or inquiries, and the Company’s commitment to worker health and safety. The posters shall be placed in an easily accessible location within the Contractor’s work area for workers viewing, typically in the Contractor’s worksite notebook.

5.9 Inspections and Hazard Abatement [10 CFR 851.21 and 10 CFR 851.22]

During periods of active construction and project field work, Contractor OS&H representatives and supervisors will be on site. These individuals will conduct documented periodic inspections of the worksite to identify and correct hazards and instances of noncompliance with project safety and health requirements. If immediate corrective action is not possible or the hazards fall outside the project scope and hazard analysis, the Contractor OS&H representative and/or supervisor will suspend work, notify affected employees, secure the area, and notify the Company responsible manager.

The Contractor shall take immediate corrective action to eliminate or control all identified hazards. Newly identified hazards shall be appropriately addressed in revised JHAs. In cases where immediate corrective action is not possible or responsibility for abatement falls outside the scope of the project, the Contractor shall take the following actions.

- Immediately ensure all affected employees are aware of the hazard and its location and are removed from harm’s way. This may require partial or complete suspension of construction operations.
- Immediately post warning signs at the location of the hazard describing the nature of the hazard.
- Verbally notify Company responsible management immediately of the location and description of the hazard. This notification shall be followed up in writing.
- Implement further interim control measures, as needed, to protect employees from the identified hazards and secure Company responsible management approval for continued use of the employed measures.
- Where responsibility for abatement falls outside the project scope, the Contractor shall also immediately notify the Company CTR, of the area(s) affected.

All identified hazards and their respective corrective actions shall be documented in project inspection reports. The responsibility and timetable for abating hazards that were not immediately corrected shall also be similarly documented. Follow-up inspections to ensure subsequent abatement of such hazards shall be likewise documented.

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5.10 Emergency Management [10 CFR 851.24]

NOTE

During severe/special conditions PORTS may implement Limited Operations up to and including site closure and Contractor shall establish processes to ensure their personnel are made aware of and abide by such restrictions.

The Emergency Management Program ensures that emergency events are responded to in a manner that protects the health and safety of employees, the public, and the environment.

FBP has a comprehensive all-hazard Emergency Management Program. The full-time emergency management staff prepares, plans, and trains the Emergency Response Organization (ERO) for any emergencies, disasters, threats, and/or problems that could occur at PORTS. The Field ERO is composed of the responder including but not limited to, the Incident Commander, Fire Services, Protective Force, and Radiation Protection. The Field ERO is supported by the Emergency Operations Center (EOC) and Joint Public Information Center (JPIC), as needed.

The Contractor shall participate and comply with PORTS site response measures and actions necessary for emergency management events, including drills and exercises (i.e. severe weather, evacuations, hazardous materials, fire, criticality and other simulated emergency event exercises/drills). The Company Emergency Management Process is described in FBP-EM-PDD-00002, *Emergency Management Program*.

Due to the nature and scope of work being conducted at PORTS, personnel outdoors may be potentially exposed to adverse weather conditions. A severe weather policy has been developed to provide guidance to personnel performing work outdoors when severe weather is approaching the site. FBP-EM-PRO-00026, *Employee Response to Severe Weather*, provides response guidance for thunderstorms, tornados, and earthquakes. For adverse weather conditions not specifically addressed in the severe weather policy, personnel response guidance may be provided by supervision or the Plant Shift Superintendent (PSS).

6.0 PROGRAM FUNCTIONAL AREAS [10 CFR 851.24]

6.1 Construction Environmental Health Safety and Quality [10 CFR 851.24]

Contractors shall evaluate each definable construction activity, develop required environmental, safety and health program documents, and submit for review and approval by the Company to meet the requirements of 10 CFR 851.

Construction projects are required by the Company to prepare a JHA. An example of a general JHA is provided to the project. The project is required to submit their own JHA and have it approved by the Company prior to the commencement of work. These analyses are conducted by qualified personnel.

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The Contractor Construction Manager and/or Contractor OS&H Representative are responsible for ensuring implementation of contractually-required safety and health program documents. They are required to be trained and qualified commensurate with their duties and responsibilities for the preparation of these documents, as well as for conducting work.

6.2 Work with Limited Scope, Limited Hands-on Work, No Hands-on Work – Observation/Consultation, etc.

NOTE

Contractors have the option to choose to develop and submit their own Safety and Health Program for review and approval by the Company, which shall meet the applicable requirements contained herein and 10 CFR 851.

Contractors that are performing limited scope and limited “hands-on” work or strictly performing observation/consultation, that do not meet the 10 CFR 851 exclusions discussed in section 2.0, may accept and follow the FBP WSHP and applicable procedures and training under the appropriate Program Functional Areas as identified in this section. The Contractor shall submit their WSHP determination for review and approval by the Company.

6.3 Fire Protection Program [10 CFR 851.24]

The FBP Fire Protection Program provides an acceptable level of safety from fire and related hazards. This is accomplished with the use of facility and site wide fire protection, fire alarm notification with appropriate egress capabilities, and access to an appropriately trained and equipped fire department. The primary drivers for the program are the applicable National Fire Protection Association (NFPA) Codes and Standards; DOE Order 420.1C, *Facility Safety*; FBP-FP-PDD-00001, *Fire Protection Program Description*; and FBP-FP- PRO-00004, *Fire Protection Program*.

Contractors shall comply with all aspects of the Company fire protection program as applicable to the scope of the work being performed.

Procedures have been developed to ensure all parts of the Company Fire Protection Program are effectively and consistently implemented. This includes control of combustible and flammable liquids, as required by NFPA 30, *Flammable and Combustible Liquids Code*; as well as performance of hot work activities according to ANSI Z49.1, *Safety in Welding, Cutting, and Allied Processes*, which includes the use of fire watches, as required by NFPA 51B, *Standard for Fire Protection During Welding, Cutting, and Other Hot Work*. The process for following these requirements, when applicable, is contained in FBP-FP-PRO-00072, *Welding, Burning and Hot Work*, and FBP-FP-PRO-00005, *Combustible Control Program*.

Use of Intermediate Bulk Containers (IBC) greater than 660 gallons and less than 793 gallons for fuel storage and dispensing are subject to the following additional requirements.

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- When IBCs are stationary and used for dispensing, they will be protected with barriers (i.e., Jersey Barriers) when exposed to vehicular impact.
- When IBCs are transported for remote fueling activities they will not be required to have barriers, as long as the operation is temporary and the task is constantly attended.
- Fire extinguishers will be provided at the IBC location and on any equipment used to transport.
- Other applicable requirements of NFPA 30, Ch 22 include:
 - Must be 15ft or more from any property lines;
 - Must be 5ft or more from any public roads;
 - Must be 5ft or more from any building;
 - Place in an area where any spills will drain away from the tank and vehicles;
 - Ensure all piping and connections (hoses, fuel dispenser, etc.) are NRTL approved (UL, FM, etc.); and
 - Keep any/all vents free from blockage.

6.4 Explosives Safety [10 CFR 851.24]

The use, storage, and transportation of explosive material requires coordination with Company Protective Services and affected safeguards and security organizations in compliance with the applicable requirements of DOE- STD-1212-2012, *Explosives Safety*.

Contractors using powder-actuated tools shall be trained/qualified, identified on the Training Matrix (Appendix 14), and have on their person a card indicating such. The loads for powder-actuated tools will be kept in a designated container labeled "EXPLOSIVES," which is kept in a locked area with restricted access and shall be approved by the Company prior to use.

6.5 Firearms Safety [10 CFR 851.24]

All personnel are prohibited from bringing firearms onto the Site. This includes dangerous weapons, ammunition, incendiary devices, or similar devices which could cause damage or personal injury.

6.6 Industrial Hygiene [10 CFR 851.24]

The goal of the Company Industrial Hygiene program is to control and/or eliminate occupational health hazards that arise as a result of or during work. The program is devoted to the anticipation, recognition, evaluation, and control of those environmental factors or stresses arising in or from the workplace, which may cause sickness, impaired health and well-being, or significant discomfort among workers.

The Contractor's objective shall be to ensure personnel exposures to chemical and/or physical agents are restricted to levels below regulated exposure limits and As Low As Reasonably Achievable (ALARA) driven by DOE Orders.

6.6.1 IH Surveys & Assessments [10 CFR 851.20, 10 CFR 851.21]

An initial baseline survey of all work areas shall be conducted whenever the Contractor introduces a potential health hazard and is identified as a result of:

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- Review of Scope of Work and Work Plan;
- Inspection of areas or walk downs;
- Review of procedures or operations;
- Investigation of complaints of illness or injury; and/or
- Employee reports of potential health hazards.

The initial survey consists of the gathering of information such as processes involved, chemical/material information, Safety Data Sheets (SDS), health hazards and controls, exposure routes, and exposure groups.

The process shall ensure the application of the most conservative exposure limit identified by either the American Conference of Governmental Industrial Hygienists (ACGIH), *Threshold Limit Values for Chemical Substances and Physical Agents and Biological Exposure Indices* (2016), or the OSHA Permissible Exposure Limits listed in 29 CFR 1910 and 29 CFR 1926, as applicable.

The initial survey results may be incorporated into the associated JHA, procedure, or other Industrial Hygiene Assessment document. Based on the initial survey, a health hazard assessment is performed to evaluate and document employee exposures to chemical, physical and biological agents and ergonomic stressors.

When performing IH sampling, IH samples shall be analyzed by a national Voluntary Laboratory Accreditation Program (NVLAP) or American Industrial Hygiene Association (AIHA) accredited lab utilizing a recognized exposure assessment and testing methodologies (i.e. NIOSH, OSHA, etc.).

Personal exposure monitoring based on the applicable exposure limits shall be performed and documented using approved methods (i.e. NIOSH, OSHA, etc.). A copy of the monitoring results and survey report shall be submitted to the Company (via. the J-8) once completed. Area sampling shall be conducted as necessary and shall be documented. Area sampling results and survey reports shall also be submitted to the company once completed.

All employees monitored for exposure levels shall be informed of the monitoring results and their legal rights to their exposure records per 29 CFR 1910.1020.

Follow-up monitoring/resurveys shall be performed:

- To assess conditions after modifications which may increase the potential for employee exposure or the implementation of hazard control measures are completed; or
- At intervals specified in substance specific standards identified in 29 CFR 1910 and 1926.

6.6.2 IH Training [10 CFR 851.25]

Personnel shall be trained to recognize potential health hazards and the means to protect themselves from such hazards per their Training Matrix (Appendix 14).

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6.6.3 Respiratory Protection [10 CFR 851.22 and 10 CFR 851.24]

Only respirators approved by NIOSH are used. All respiratory protection equipment is provided by the Company. The Contractor shall comply with the company *Respiratory Protection Program*, FBP-IH-PRO-00028, which meets all regulatory requirements.

6.6.4 Chemical Safety Management [10 CFR 851.23]

The Contractor and any lower-tier Subcontractor must request advance Company approval of any new chemicals prior to bringing on site. Chemicals in excess of project estimated requirements shall not be brought onto the site.

The Contractor shall provide and update their chemical inventory per the J-8.

The Contractor shall remove surplus chemicals from the site at project completion and submit written notification to the Company that all chemicals have been removed.

6.6.5 Noise [10 CFR 851.22]

The operation of equipment at PORTS can create areas where noise levels equal or exceed 85 decibels on the “A” weighted scale (dBA). Exposure to excessive noise levels may lead to temporary or permanent hearing loss. In the event that a new noise hazard, such as a new piece of equipment, is brought onsite, the Contractor shall have the sound levels of the equipment monitored. Hearing protection is worn by personnel when noise levels equal or exceed an 8-hour time-weighted average of 85 dBA. Areas and equipment with excessive noise levels shall be posted with “CAUTION” signs or labels to require hearing protection.

6.6.6 Immediate Evacuation Zones (IEZs)

If performing work in an IEZ which requires hearing protection, an alternate means of communication of a nuclear criticality incident may be needed. The Nuclear Facility Manager of the facility associated with the IEZ must be contacted before starting any work in the IEZ. The Nuclear Facility Manager will help workers determine if the work needs an alternate means of notification of a criticality and handle any notifications to the Plant Shift Superintendent. Failure to follow this process can result in a violation of the Technical Safety Requirements.

6.6.7 Temperature Extremes (Heat & Cold Stresses) [10 CFR 851.22, 10 CFR 851.23]

The Contractor shall observe the requirements of the Company’s Temperature Extremes Program. FBP-IH-PRO-00069, *Temperature Extremes*, provides requirements to site personnel working in extreme temperatures. See also Appendix 12, *Physiological Monitoring for Heat Stress*, which identifies requirements for heat stress monitoring.

6.6.8 Confined Space Entry [10 CFR 851.22, 10 CFR 851.23]

If entry into a permit-required confined space is necessary, then requirements of FBP-IH-PRO-00049, *Confined Space Program*, are followed at all times.

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6.6.9 Dust Control [10 CFR 851.22, 10 CFR 851.23]

During activities requiring dust control, the Contractor shall utilize water spraying or other authorized methods to suppress dust emissions to the lowest practicable level. Depending on specific work area conditions and restrictions, various types of equipment may be used for dust suppression efforts as approved by the Company. Excessive runoff due to dust control operations will not be permitted. Excessive visible emissions of particulate will not be permitted. If planned activities involve disturbing known or suspected contaminated soils, the Company OS&H and Environmental Protection Representatives will be consulted concerning dust suppression in these areas.

6.6.10 Ergonomics [10 CFR 851.23]

The Contractor shall evaluate the interaction of personnel with their working environment that may present potential musculoskeletal hazards such as incorrect lifting of heavy loads, equipment vibrations, improper body positioning, negotiation of physical obstacles, office computer workstations, etc. Hazards and controls shall be identified in the Contractor JHA approved by the Company.

Personnel shall not lift more than 1/3 of their body weight or 50 pounds (whichever is less) without assistance.

Personnel shall contact their Supervisor for walk-down of any activity that requires a team lift or mechanical lifting assistance.

6.6.11 Indoor Air Quality [10 CFR 851.23]

Various factors, such as chemical contaminants, carbon dioxide levels, humidity, and microbiological organisms influence the quality of breathing air. In the event and upon notification of Indoor Air Quality issues or concerns the Contractor shall perform an indoor air quality investigation. Additional air quality investigations shall be performed to ensure the indoor air quality is free of biological organisms such as molds, mildew, and other fungi, and spores that thrive in moist and stagnant environments when directed by the Company due to impact caused by the work being performed. Documentation of any such evaluation shall be available upon request by the Company or workers.

6.6.12 Asbestos and Other Fibrous Materials [10 CFR 851.22, 10 CFR 851.23]

Based on the widespread use of asbestos in insulation and other building materials, Asbestos-Containing Material (ACM) may frequently be encountered during work activities. ACM that is maintained in good condition in buildings does not pose a threat to humans as long as the material is not deemed “friable” and is in an “undisturbed” condition.

Due to the age of the facilities at the PORTS site, the possibility of disturbing ACM should be considered when planning work activities. Inspections and bulk sampling by qualified individuals should be performed if the presence of ACM is in question.

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ACM or Presumed ACM (PACM) to be abated by or that will affect the Contractor is addressed in the Section “C” Statement of Work. See also Appendix #23, Asbestos Supplemental Information for Planning Work.

6.6.13 Reproductive Hazards [10 CFR 851.20, 10 CFR 851.22]

Company makes every reasonable effort to protect both male and female workers from excessive exposure to reproductive hazards. Due to the sensitivity of the human reproductive system to the effects of chemical, biological, and physical agents, special precautions, such as engineering controls, product substitution, PPE, and administrative controls, may be necessary to reduce employee exposure. The Contractor shall follow the requirements covered in FBP-IH-PDD-00003, *Reproductive Health Program Description*.

6.6.14 Biological Monitoring for Industrial Chemicals [10 CFR 851.20, 10 CFR 851.24]

Biological monitoring provides a tool for assessing a worker’s potential exposure to chemical substances and for determining the effectiveness of PPE and controls. Early integration of exposure assessment with work planning activities will identify potential exposures associated with specific chemical substances and biological monitoring. The contractor shall ensure, through the hazard analysis process, appropriate controls and protective measures are specified in the JHA, Project Safety and Health Plan, Work Plan, or other work control documentation developed for this activity, as applicable.

6.6.15 Inorganic Arsenic & Lead [10 CFR 851.23]

Inorganic arsenic and lead are primarily found in painted items and in trace amounts on uranium hexafluoride (UF6) cylinders; however, any painted surface (unless painted after 2002) should be suspected of containing inorganic arsenic and lead. Also, inorganic arsenic may be present at the PORTS site in limited areas as it arrived as an impurity in the feed material during operations.

6.6.16 Bloodborne Pathogens [10 CFR 851.23]

The Contractor shall protect personnel who have the potential for occupational exposure to bloodborne pathogens. Any individual, who comes in contact with blood or other potentially infectious material, either accidentally or as a result of their occupation, has the potential for exposure to bloodborne pathogens. Individuals who come in contact with blood or other potentially infectious material should report the incident to the Contractor’s OS&H Representative and Contractor Supervisor and then to the Company’s occupational medicine provider for evaluation and appropriate medical treatment.

6.6.17 Beryllium [10 CFR 851.21, 10 CFR 851.23]

Beryllium has been identified as being responsible for the development of sensitization and chronic beryllium disease. All work activities involving beryllium shall be performed in compliance with 10 CFR Part 850, *Chronic Beryllium Disease Prevention Program; Final Rule*, and FBP-IH-PDD-00005, *Chronic Beryllium Disease Prevention Program*. It is important to note that Section III of 10 CFR 850, entitled Overview of the Final Rule, states that the concentration specified in the beryllium definition is consistent with the criterion that OSHA Hazard Communication Standard uses for a carcinogenic mixture concentration of 0.1 percent (or 1,000 ppm) or greater, by weight or volume.

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At PORTS facilities, trace levels of beryllium are sometimes found as mixtures in waste streams, including oils, solids, liquids, and other waste stream components. Also, beryllium surface contamination has been detected on legacy equipment in controlled areas where machining of beryllium containing equipment was once performed.

6.7 Occupational Medical Program [10 CFR 851.23, 10 CFR 851.24, 10 CFR 851. 26]

FBP has an Occupational Medical services contract to provide medical services and substance testing. Scheduling of pre-employment and routine testing and examinations shall be coordinated through the FBP CTR.

6.7.1 Fitness for Duty

Personnel working on site shall receive a fitness for duty medical examination to determine if they can perform their duties without causing undo hazards to themselves or others prior to or at the time of initial assignment to the project (i.e. at the beginning of the shift on their first day). Occupational Medicine may assign medical restrictions to personnel and workers and their management shall ensure that these medical restrictions are followed.

Prior to the performance of the medical evaluation, contractors shall provide a summary of potential exposures to hazardous substances or physical tasks using Appendix 6, *Job Content Worksheet*.

Personnel shall also have medical examinations before they perform physical work if they have been absent from site due to an injury or illness for three days or more, were hospitalized, or are taking medications which may affect safe work performance.

Initial and routine examinations are not required for Contractor employees who:

- Work at one of the covered workplaces/activities for less than 30 days in a 12-month period but is subject to be required at the discretion of Company’s OS&H based upon the work activities of the Contractor/Subcontractor (i.e. labor-intensive work); and
- Are not required to be enrolled in a medical exposure monitoring program for potential exposure.

This requirement does not apply to companies and agencies providing supply services, such as:

- Vending machines suppliers;
- Copy machine maintenance; or
- Delivery personnel such as UPS or office supplies delivery.

Confidentiality of medical records is maintained, but disclosure of personalized data will be made upon that individual worker’s request or according to legal requirements. Upon request by a worker to the medical director, a copy of that worker’s medical records will be provided to that worker or the worker’s private physician, if so requested.

6.7.2 Substance Abuse Program

On-site contractor personnel (including lower tier subcontractors) are subject to and shall participate in FBP’s Workplace Substance Abuse Program. This testing shall be performed prior to or

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at the time of initial assignment to the project (i.e. at the beginning of the shift on their first day). Workers shall be required to submit samples to determine the presence of illegal drugs. Personnel shall also submit to breath tests to determine the amount of alcohol consumed. These test results shall be released to FBP for the purpose of administration and enforcement of FBP’s Workplace Substance Abuse Program.

The drug testing will be performed prior to working at PORTS, after a significant incident has occurred on site, and for certain positions which are subject to random screening.

If an employee receives a positive test result on a drug screening, or a positive alcohol screening, or is convicted of any drug related offense, or the person refuses to consent to the testing, then the subcontractor must promptly remove their employee from the PORTS site. Subsequent actions will be addressed between the Contractor and FBP in accordance with FBP policies. Receipt of initial non-negative drug sample results may result in removal of the subcontractor employee from the project until confirmatory results are received.

6.8 Injury/Illness/Incident Reporting and Response [10 CFR 851.20, 26]

All workplace injuries and illnesses are to be immediately reported to Contractor supervision, the Company Contract Technical Representative and the Plant Shift Superintendent. Emergency Medical Services are provided by the PORTS on-site Fire Department and shall be utilized for response and treatment. All non-emergency injuries or illnesses will be treated by the Company’s contracted Medical Provider. All Contractor/Subcontractor employees receiving treatment on or off site for any work-related injury or illness, shall be accompanied by their supervisor or designee.

In accordance with Section H Contract Clauses (Safety and Health Laws and Regulations) all occupational injuries/illnesses of Contractor employees, off-normal occurrences including property/equipment damage, and injuries or near miss-type incidents shall be reported immediately to the Company.

In the event of a serious incident, the Contractor shall immediately stop work, protect and secure the equipment and/or work site involved in an accident, event, or near miss until the Company grants permission to return to work. The Contractor shall cooperate fully with the Company and DOE personnel in any investigation of an accident, illness, or injury.

The Contractor will investigate incident/injury/illnesses and submit a written report of the investigation to the Company within 24 hours of the event occurrence. Appendix 19 shall be used for incidents involving a work-related injury or illness.

6.9 Motor Vehicle Safety [10 CFR 851.24]

The Contractor Motor Vehicle Safety Program goal shall be to protect the safety and health of all drivers and passengers in Government-owned or leased motor vehicles, Contractor-owned or leased motor vehicles and powered industrial equipment (i.e. fork trucks, tractors, platform lift trucks, and other similar specialized equipment powered by an electric motor or an internal combustion engine). Contractors shall ensure vehicle operators comply with the following Company program requirements.

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- Only licensed and authorized drivers are permitted to operate motor vehicles and powered industrial equipment.
- Seat belts are required when operating vehicles, construction equipment, and powered industrial equipment where installed.
- Vehicle operators will comply with the traffic laws of the state and the DOE installation requirements including posted speed limits and other traffic signs, and will yield to pedestrians at all times.
- Cell phone use is limited to hands-free only when driving.
- No cell phone use when refueling.
- Vehicle operators shall perform a 360° walk around prior to moving vehicle and sound horn two (2) times prior to backing up vehicle (if not equipped with backup alarm).
- When vision is obstructed, utilize a spotter.
- Motor vehicle accidents will be promptly reported to Contractor supervision who will in turn report to the Company Project Supervisor who will contact the PSS and the responsible Company OS&H Representative. Motor vehicle accidents occurring off-site will be reported to the appropriate law enforcement agency.
- Those involved in motor vehicle accidents including operators and spotters are subject to the testing requirements of the company workplace substance abuse program.
- The Contractor shall ensure training is completed and shall maintain auditable training records and/or certifications for each employee that operates specialty vehicles (as applicable) as well as applicable testing requirements and medical qualifications for the specific specialty vehicle as required.

Inspections

- Inbound and Outbound inspections are required for Powered Industrial Trucks (PITs) Appendices 16 & 17.
- Documented pre-use inspections are required for PITs.
- Documented annual inspections are required for PITs.
- Contractor shall perform weekly vehicle inspections (including carts).

6.10 Traffic Control [10 CFR 851.24]

Contractors are responsible for the orderly traffic control on their projects. All traffic control measures on site roadways are according to applicable Company standards; and local, state, and Department of Transportation regulations. Traffic signs and/or signalmen will be utilized, as necessary, to protect personnel and/or the general public.

Speed limits will be imposed, as conditions dictate. Speed limits, traffic laws and traffic safety rules may be enforced through the removal of individual's project driving privileges.

6.11 Equipment and Vehicles [10 CFR 851]

The Contractor shall ensure that vehicles, equipment, and materials comply with and meet the manufacturer's safety and operating requirements of the State of Ohio Department of Transportation, and DOE requirements, as applicable.

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Any equipment modifications must be approved in writing by the manufacturer and documentation (i.e., variances) must be maintained with the equipment and provided to the company upon request. Any variations or stipulation items provided by the manufacturer must be complied with at all times.

Inspection and maintenance for all leased and Contractor-provided construction equipment shall comply with the following:

- Inbound and Outbound inspections (unless specifically exempted) are required. Appendices 16 & 17.
- Documented pre-use inspections are required for construction work using Appendix 18
- Verified annual inspections as required.
- Certification of non-counterfeit parts is required and a letter of conformance may be required for specialty equipment.

The Contractor shall make vehicles, equipment, and materials available to the Company for an initial radiological inspection prior to commencement of work. All equipment that has been utilized on site may be required to have a radiological inspection/survey prior to leaving site.

This will be determined by the company Radiation Protection Supervisor.

6.12 Electrical Safety [10 CFR 851.22, 10 CFR 851.23, 10 CFR 851.24]

Electrical hazards that may be present on site may include but are not limited to undetected live wires, deteriorating wiring insulation, buried power lines, overhead power lines, transformers, electrical generators, and lighting. All electrical installations shall be performed by qualified, trained, personnel as described in FBP-OS-PRD-00001, *Electrical Safety*; FBP-OS-PRD-00003, *Electrical Utility Safety Program*; and applicable requirements of other electrical standards: National Fire Protection Association (NFPA) 70, *National Electrical Code – 2017 Edition*; and NFPA 70E – 2018 Edition, *Standard for Electrical Safety in the Workplace*.

All electrical work performed by Contractors involving arc flash hazards shall be evaluated through the Company’s engineering department using the Incident Energy Analysis method. Contractors shall request a current arc flash analysis from Company engineering prior to performing maintenance on, or energizing any electrical equipment.

“Conex-type” containers & trailers brought on site must be compliant with NEC and provide a certificate of conformance. New electrical installations will be inspected by the Company’s electrical inspector before being placed into service.

6.13 Overhead Power and Communication Lines [10 CFR 851.23]

PORTS has overhead power lines that could pose a hazard during the operation of heavy equipment, such as cranes, forklifts, dump trucks (with bed raised), and aerial work platforms, where the possibility of inadvertent contact may exist. Where work is required in proximity to electrical power lines, personnel shall comply with Company requirements, as applicable.

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6.14 Lockout/Tagout of Hazardous Energy Sources [10 CFR 851.22, 10 CFR 851.23 and 10 CFR 851.24]

All energy isolations shall be done in accordance with the Company’s Lockout/Tagout (LOTO) Program, FBP-OS-PRO-00068, *Instructions for Lockout/Tagout*.

The Contractor shall complete LOTO Authorized Person training provided by the Company prior to initiating LOTO request.

6.15 Hoisting and Rigging Operations [10 CFR 851.23]

The operation and maintenance of hoisting and rigging equipment (i.e., overhead and gantry cranes, mobile cranes, derricks, hoists, rigging devices, and forklift trucks, and devices such as wire rope, chain, metal mesh slings, synthetic-web slings, and special below-the-hook attachments and fixtures) are governed by DOE-STD- 1090-2011, *Hoisting and Rigging Standard (formerly DOE Hoisting and Rigging Manual)*.

The Contractor may choose to accept the FBP Hoisting and Rigging program or submit their own program for review and acceptance by the FBP Hoisting and Rigging Manager or designee.

The FBP Hoisting and Rigging Manager or designee will perform a lift classification for all work.

A lift plan shall be submitted by the Contractor for Company approval.

The Contractor shall submit manufacturer’s recommended lift points for the piece of equipment or the product with equipment or product submittals.

6.16 Elevated Work/Fall Protection [10 CFR 851.23]

All personnel who perform work that requires the use of fall protection devices or use fall prevention practices will meet the requirements of the following additional site-based requirements.

- A Safety Monitor shall be used during installation of warning line and/or guardrail systems.
- All fall protection equipment and devices shall be inspected annually by a Fall Protection Qualified Inspector. This shall be a documented inspection.
- All fall protection equipment shall be inspected and used in accordance with manufacturer’s requirements.
- A personal fall arrest/restraint system shall be used when utilizing aerial lifts. A Self-Retracting Lifeline (SRL) shall be used when operating an aerial lift and shall be approved for use in the horizontal configuration per the SRL manufacturer.
- A personal fall arrest/restraint system shall be used when operating a scissor lift if an approved anchor point is available and it is required by the manufacturer. When this system is required an SRL shall be used and shall be approved for use in the horizontal configuration per the SRL manufacturer.

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6.17 Portable Ladders and Scaffolds [10 CFR 851.23]

The following additional Company requirements for ladders shall be followed.

- Ladders must be rated as ANSI Type 1-A or greater.
- Ladders shall be constructed of fiberglass, unless approved for a specific use by FBP OS&H.
- Portable metal ladders and other portable conductive ladders may not be used near exposed electrical lines or equipment. However, in specialized high-voltage work, conductive ladders shall be used when the employer demonstrates that non-conductive ladders would present a greater hazard to employees than conductive ladders.
- Three-section ladders and other specialty ladders must be authorized by FBP OS&H before use.
- Trestle and tripod ladders are not permitted for use.
- Inspection on new ladders is required before initial use.

If documented inspections are required/desired by the Contractor, the Contractor may choose to utilize the Company form or an equivalent approved by Company OS&H.

The following additional Company requirements for Scaffolds shall be followed:

- Installation of inspection tags is required on scaffolds.
- Completion of a pre-use inspection by the Competent Person daily if used.
- Company Engineering must design/evaluate tube and coupler and fabricated frame scaffolds over 50' in height, pole scaffolds over 30' in height, and outrigger beam scaffolds.

6.18 Excavation, Trenching and Penetrations [10 CFR 851.23]

Operations involving excavation or penetration into the earth's surface, concrete or pavement, and interior penetrations into building walls, floors, and ceilings are subject to various potential hazards (e.g., contact with hazardous or radioactive materials, electrical lines, cave-ins, etc.). These operations require that an excavation/penetration permit be obtained before the work is initiated. Excavations and penetration activities are performed according to FBP-OS-PRO-00022, *Excavation/Penetration*. An excavation inspection form, Appendix 15, is required to be used.

6.19 Slip, Trip and Fall Hazards [10 CFR 851.23]

NOTE

Contractor shall comply with PORTS critical walk-way designations when snow/ice conditions warrant. Contractors may submit additional work area clearance and upkeep plans for approval by FBP OS&H.

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Roadways, access ways, aisles, stairways, scaffolds, and ladders are to the extent possible kept clean and clear of hoses, extension cords, welding leads, and other obstructions that may cause tripping or other accident hazards.

6.20 Working on or Near Water [10 CFR 851.23]

Any time personnel are within 6 feet of a body of water such as ponds, lakes, rivers, near or above liquid containing tanks, and water or sewage treatment holding ponds, the Contractor will evaluate to determine if a drowning hazard "reasonably" exists and shall implement appropriate protective measures through the JHA.

6.21 Environmental Hazards [10 CFR 851.21]

It is the policy of the Company to conduct the PORTS D&D Project in a safe, compliant, and cost-effective manner that protects human health and the environment. The Company will achieve this by integrating environmental requirements and best management practices for waste minimization and pollution prevention into its work planning and execution, taking actions to minimize the environmental impacts of its activities. The Company establishes and communicates environmental responsibilities, provides environmental training to its workforce, and implements controls to mitigate environmental hazards.

The Contractor shall comply with all applicable environmental protection laws, executive orders, ordinances, DOE, other Federal Regulation, Directives, and support the Company's Environmental Management System (DOE 436.1).

Prior to the start of work, all Contractor and lower-tier Subcontractor personnel shall be notified of and encouraged to read the attached Environmental Policy Statement Poster, Appendix 5. The poster shall be placed in an easily accessible location within the Contractor's work area for workers' viewing.

The Contractor shall submit their Environmental Plan to the Company for review and approval covering the following elements as applicable.

- The environmental hazards that may be encountered and how those hazards will be mitigated.
- The principles of sustainability will be evaluated and implemented during the performance of work.
- Recycling opportunities.
- Pollution prevention and waste minimization practices.
- The purchase of sustainable products.
- Energy and water efficiency practices.
- Opportunities for the use of renewable energy.
- How wetlands and streams will be protected.
- How wastewater will be managed.
- Methods employed for storm water pollution prevention.
- How the chemicals will be managed and controlled.

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- How chemicals contain hazardous substances, including any less hazardous alternatives evaluated and/or proposed.
- Spill prevention control and countermeasures.
- How fugitive dust will be controlled.

In addition, some work at PORTS requires working outdoors, maintaining the grounds, excavating, sampling outfalls, cleaning roof drains, etc. Anyone working outdoors might come in contact with stinging and biting insects (wasps, bees, and mosquitoes), bird droppings, poisonous plants (poison ivy, poison oak), venomous snakes, and spiders. Identification of these hazards and avoidance whenever possible will be employed by Contractor/Subcontractor personnel.

Many project activities will be performed outdoors and employees will be exposed to the harmful effects of ultraviolet radiation (sunburn). JHAs and worker safety and health briefings will be utilized to communicate these hazards and the associated mitigation to the employees.

6.22 Tagging of Defective Tools, Materials or Equipment [10 CFR 851.23 and 10 CFR 851.24]

The Contractor shall follow the Company’s defective tagging procedure, FBP-OS-PRO-00014, *Accident Prevention/Equipment Control Tags*, to ensure defective tools, materials, and equipment are not used and shall take defective tools, materials, and/or equipment out of service immediately.

6.23 Housekeeping & Sanitation [10 CFR 851.23]

The Contractor shall implement good housekeeping practices. All material, scrap, tools and toolboxes, and other equipment shall be stored in a neat and orderly fashion. Trash and scrap are to be removed from the work area on a regular basis (e.g., at least daily, before the end of each work shift, etc.) and are never allowed to accumulate, especially in walkways, under stairs, at the bases and landings of stairs and ladders, and near flammable substances. Walkways and aisles are kept clear at all times, and laydown areas are maintained neat and orderly. Materials are stored on level ground, and the boundaries of laydown areas are identified. Good housekeeping is implemented as an attribute through the management walk-down process.

The Contractor shall perform project walk-downs to assure good housekeeping practices are maintained.

Smoking/vaping is not permitted indoors or in government-owned/leased vehicles. Smoking/vaping will be permitted only in designated areas of the work site. The consumption of food, liquid, chewing gum, smoking/vaping, or use of tobacco products is not allowed in areas with potential for exposure to hazardous substances (Radiological, asbestos, hazardous waste, etc.). However, radiological procedures do permit designated drinking areas be established in radiological areas under special circumstances when specific controls are in place.

6.24 Drinking Water (Field Work Site) [10 CFR 851.23]

Potable drinking water and toilet facilities shall be provided in all active work areas as applicable.

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Drinking water in radiological areas shall be established and controlled by the Company.

6.25 Illumination [10 CFR 851.23]

Illumination of work areas and access areas must follow NFPA 101, *Life Safety Code*.

6.26 Tools [10 CFR 851.23 and 10 CFR 851.24]

All tools are used and maintained according to the manufacturer’s instruction. Manufacturer recommendations for inspection criteria (frequency, substance, documentation) are considered guidance and are not mandatory. Steps are to be taken to ensure the following.

6.26.1 General Requirements

- All tools are maintained in good condition and properly stored when not in use. Hand tools with cracked, splintered, or taped wooden handles are not to be used.
- All tools are inspected by the user before each use.
- Impact tools are free of mushroomed heads and cracks.
- Tools shall not be altered in any way and tool guards shall not be removed from tools.
- All bench-mounted and floor-mounted tools are secured against movement or displacement.

6.26.2 Power Tools

- All electric power tools will be double-insulated or equipped with appropriate grounding.
- Ground-Fault Circuit-Interrupters (GFCIs) are used where required by applicable standards.
- GFCIs are required when employees are outdoors and using cord-and- plug-connected equipment supplied by 125-volt; 15, 20, or 30 ampere circuits.
- Power tools shall be equipped with constant pressure switches that will shut the tool off when the switch is released. These tools may also be equipped with a lock-on control provided that turnoff can be accomplished by a single motion of the same finger (i.e. pressing and releasing the pressure/power switch).
- Power tools shall be evaluated to have a dual push safety switch function with a starting action to require operator to do a dual switch/trigger press action to activate the blade/wheel. If the tool does not contain this safety function, the Contractor/subcontractor shall make every effort to procure the tool with a dual push safety switch. In the event this is not a manufactured option, a JHA shall provide alternative safety steps to support a specific tool use with the approval of the Company ESH&Q Field Manager.

6.26.3 Bladed Tool Use

- Use only self-retracting blade utility knives.
- Spare blades are not to be carried in coverall pockets.
- A sharps container must be provided for blade disposal.
- Personal or unauthorized knives are not to be used at the PORTS site.

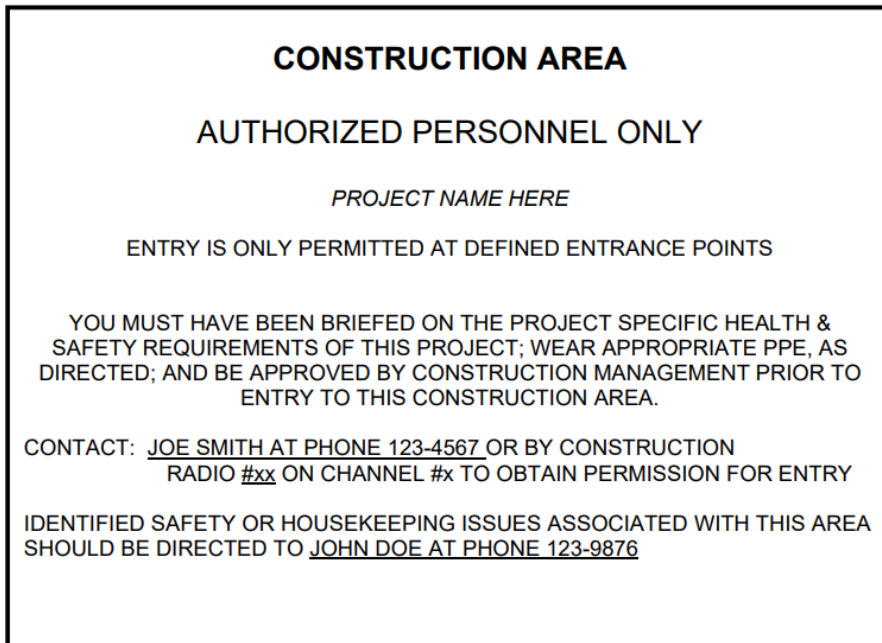
6.27 Signs and Barricades [10 CFR 851.23]

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6.27.1 General Requirements

- The types of barricades and signage on projects shall comply with site-based requirements which are provided in Appendix 22.
- Construction area barricade signs must be used and include specific information such as the example below.

SAMPLE CONSTRUCTION AREA BARRICADE SIGN



The above sign, or similar, is required at all construction entry points (gates) and may be used along the construction perimeter fence line as necessary.

- Gates or access points must be installed in the barricade design.
- Do not duck under, climb over, or bypass a barricade.
- Fire Services must approve barricades that block fire safety systems, emergency access/egress, or site roadways.

6.27.2 Radiological Boundaries

Radiological Boundaries will be established by the Company. The boundaries will consist of yellow and magenta or yellow and black rope, with signs of the same color. In some instances fencing will serve as the boundary with radiological signs posted at the entrance gates. The signs will include the area designation (i.e. Controlled Area, Contamination Area, Radiation Area etc.) and the requirements for entry will be specified with a Radiological Work Permit (RWP) for radiological areas. Boundaries can only be crossed at designated entry points, called Control Points. The worker must meet the requirements listed in the RWP in order to enter the area.

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6.28 Ionizing Radiation [10 CFR 851.21, 10 CFR 851.23]

10 CFR 835 provides requirements for radiation protection. Subcontractors will comply with FBP-RP-PL-00002, *Radiation Protection Program Portsmouth Gaseous Diffusion Plant, Piketon, Ohio* as well as lower tier implementing documents. Procedures flow down the requirements, such as for documentation of Radiological Work Permits (RWP), pre-job briefings, ALARA reviews, radiation, contamination, and airborne surveys, etc.

The subcontractor will comply with Radiation Protection direction related to the following programs.

- 1) Control of Radioactive Sources, FBP-RP-PRO-00028
 - Ensures Radiation Protection is informed prior to bringing any new radioactive source on site.
 - Ensures Radiation Protection is informed of all radioactive source relocations on site.
 - Ensures any radioactive source being removed from plant site is processed in accordance with FBP-RP-PRO-00004.

- 2) Control of Radiation Generating Devices (RGD), FBP-RP-PRO-00040
 - Ensures Radiation Protection is informed prior to bringing any RGD on site.
 - Ensures Radiation Protection is informed of all RGD relocations on site.
 - Ensures all RGD equipment being removed from plant site is processed in accordance with FBP-RP-PRO-00004.

- 3) Control of all Materials and Equipment (M&E) needing to be released from DOE control, FBP-RP-PRO-00004.
 - Communicates to the Contract Technical Representative or other cognizant requestor when M&E needs to leave the boundaries of the PORTS reservation for whatever reason.
 - Maintains or assists in maintaining positive control of M&E in the process of being released from DOE control, ensuring that M&E does not leave the designated staging area and that the M&E is protected from becoming radiologically contaminated until final approval is obtained for release of the M&E.

6.29 Laser Safety [10 CFR 851.23]

The Contractor shall ensure the manufacturer has classified and labeled all lasers and laser equipment.

Laser pointers and engineering alignment lasers should not exceed Class 3R and are typically and ideally Class 1 or Class 2 lasers.

The Contractor shall ensure that each laser/laser system is classified and classification records are maintained and available upon request.

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Class 3B and 4 lasers

- Use of Class 3B and 4 lasers outdoors is strictly prohibited.
- The Contractor shall register all Class 3B and 4 lasers with the Company Occupational Safety and Health.
- The Contractor shall maintain current records of Class 3B and 4 lasers which include. Classification; Maximum Power Output; Manufacturer; Model Number; Serial Number; Purpose/Use; Location; Responsible Manager; Output Parameters.
- The Contractor using Class 3B or Class 4 lasers/laser systems shall provide for a qualified laser safety officer (LSO) to provide oversight of the work utilizing these laser/laser systems.
- The LSO shall receive detailed training, including laser fundamentals, laser bio-effects, exposure limits, classifications, Nominal Hazard Zone (NHZ) computations, control measures (including area controls, eye wear, barriers, etc.), applicable standards and medical surveillance requirements.
- Users of Class 3B and 4 lasers/laser systems shall have initial laser safety training and receive refresher training every two years. Use will be indicated on the appropriate Job Content Worksheet, Appendix 6.
- Maintenance and service personnel repairing Class 1 and Class 2 lasers are not typically required to have Laser Safety Training unless Class 3B or Class 4 levels are generated during maintenance or service.