# SECTION C

## Performance Work Statement

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### C.0 CONTRACT BACKGROUND, PURPOSE, AND OVERVIEW

### Contract Background

The West Valley Demonstration Project (WVDP) is located on the Western New York Nuclear Service Center (WNYNSC) that comprises 3,300 acres of land used for the commercial reprocessing of spent nuclear fuel. The WNYNSC is owned by the New York State Energy Research and Development Authority (NYSERDA). Between 1966 and 1972, commercial nuclear fuel reprocessing was conducted within the Main Plant Process Building (MPPB). In 1972, commercial nuclear fuel reprocessing activities ceased and were never resumed.

On October 1, 1980, the West Valley Demonstration Project Act (WVDP Act) was signed. The WVDP Act authorized the Department of Energy (DOE) to demonstrate solidification of 600,000 gallons of High-Level Waste (HLW) left behind at the site by the reprocessing operations. The DOE was given temporary possession of approximately 152 acres referred to as the "Project Premises" to complete DOE's responsibilities under the WVDP Act. Upon completion of DOE's responsibilities under the Act, DOE will return possession of the Project Premises to NYSERDA. The WVDP Act states that the Secretary of Energy shall carry out the following activities:

(1) Solidify, in a form suitable for transportation and disposal, the high level radioactive waste at WNYNSC (hereinafter referred to as the Center) by vitrification or by such other technology which the Secretary determines to be most effective for solidification (Completed);

(2) Develop containers suitable for the permanent disposal of the high level waste solidified at the Center (Completed);

(3) As soon as feasible, transport, in accordance with applicable provisions of law, the waste solidified at the Center (278 high-level waste canisters) to an appropriate Federal repository for permanent disposal;

(4) In accordance with applicable licensing requirements, dispose of low level radioactive waste and transuranic waste produced by the solidification of the HLW under the project; and

(5) Decontaminate and decommission, in accordance with Nuclear Regulatory Commission (NRC) requirements, the tanks and other facilities in which HLW was stored, the facilities used in the solidification of the waste, and any material and hardware used in connection with the project.

WVDP Act Requirements 1 and 2 above are complete. Requirements 4 and 5 are partially complete.

DOE recently issued a Final Environmental Impact Statement (EIS) that has the Phased Decision-making Alternative as the preferred alternative. Under the Phased Decision-Making Alternative, in Phase 1 DOE will decommission all WVDP facilities, with the exception of the Construction and Demolition Debris Landfill, the underground high-level waste tanks and the NRC-Licensed Disposal Area (NDA). DOE will manage these facilities in a safe manner but defer a Phase 2 Decision until 2025.

**Contract Purpose and Overview**

The purpose of the Contract is to achieve significant risk and financial liability reduction that provides the best overall optimal solution to Site accelerated completion and closure. Ultimately, the tasks, including the End States associated with the tasks, to be performed during the Contract ordering period will be defined in future Task Orders. The term "End State" is defined as the specified situation, including accomplishment of completion criteria, for an environmental cleanup activity at the end of the Task Order period of performance.

The DOE's goal is to efficiently optimize the scope, cost, and schedule associated with performance of all work while ensuring quality, protecting the safety of the workers, environment, and the public, to reduce DOE Office of Environmental Management's (EM) environmental liabilities.

The Contractor shall, to the maximum extent practicable, implement improvements to work processes, procedures, and technologies throughout the ordering period. This would include the addition of new/non-traditional entities into teaming arrangements or subcontracting agreements. New and/or non-traditional firms would have differing processes and ideas that, via inclusion into a contractor team, would help ensure that the best of industry practices are employed, allowing for efficient advancement of the DOE cleanup mission, and reduction to DOE financial liabilities and environmental risk.

Moreso, the purpose of the WVDP Phase 1B Contract is to complete Phase 1 Decommissioning at the WVDP and prepare for and perform Phase 2 activities as regulatory approval is completed (e.g., (a National Environmental Policy Act [NEPA] Record of Decision). WVDP Phase 1 Decommissioning is the first phase in a two-phase decommissioning process being used for final decommissioning of the site in accordance with the WVDP Act (Public Law 96-368). Phase 1 activities are described in the *Final Environmental Impact Statement for Decommissioning and/or Long-Term Stewardship of the West Valley Demonstration Project and Western New York Nuclear Services Center* (DOE/EIS-0226) and the *Phase 1 Decommissioning Plan for the West Valley Demonstration Project* (Phase 1 DP). DOE selected a phased decommissioning approach to move forward with decommissioning activities while simultaneously allowing for the continued evaluation and analysis of various closure alternatives to possibly reduce uncertainties with regard to the second and final phase of decommissioning. The Contractor shall comply with the Record of Decision (ROD), DOE/EIS-0226, Phase 1 DP, and all applicable regulatory requirements.

The scope of this contract generally includes: contract transition (incoming and outgoing); safeguards and security;; stewardship, maintenance, and operational activities necessary to maintain the site; waste management, storage, and disposal; soils excavation and remediation; facility deactivation and demolition; programmatic support activities to safely and compliantly execute the scope; and support for other DOE contractors as currently authorized under the existing regulatory framework at the WVDP. Specifically, this includes the WVDP contractor groups providing support services including, but not limited to, soil, sediment and groundwater characterization, environmental monitoring, and associated regulatory documentation supporting decommissioning activities at the WVDP site to support DOE in satisfying regulatory requirements in the WVDP Act of 1980 and the Cooperative Agreement between USDOE and NYSERDA and Supplemental Agreements to the Cooperative Agreement.

The Contractor is responsible for the performance of the entire scope under the Contract including defining the specific methods, innovations, regulatory approvals, and approaches for accomplishing all work performed and managing, integrating, and executing work described in this PWS. The DOE's goal is to optimize the scope, cost, and schedule associated with performance of all work, and minimize risk to the government.

The Contractor shall support DOE in coordination with the regulators to implement the current regulatory approach. The DOE encourages the development of innovative strategies for the regulatory framework by the Contractor. The Contractor shall not assume that each innovation will result in a change to the regulatory approach. Proposed changes to the regulatory approach will require the Contractor to consult and gain approval of DOE in advance of any proposed change. Following consultation with DOE, the Contractor is responsible for supporting regulatory coordination efforts with the regulators on the proposed changes to include preparing and submitting all regulatory and supporting documentation. In addition, DOE will perform the following:

Coordinate with the regulators to reach agreement on Contractor-prepared regulatory and supporting documentation;

Operate as a co-operator in coordination with the regulators to reach agreement on innovations that require changes to the regulatory approach;

Review, approve, and/or certify as required all regulatory and supporting documentation; and

Prepare any additional National Environmental Policy Act (NEPA) analyses and/or documentation that may be required (with Contractor support, see Section C.2.2.1).

The Contractor shall ensure that its technical approach and execution of the work comply with all current applicable laws, regulations, and DOE directives as identified in Section J, Attachment J-2, *Requirements Sources and Implementing Documents*. The list of laws and

regulations is not comprehensive. Omission of any applicable law or regulation from Attachment J-2 does not affect the obligation of the Contractor to comply with such law or regulation. Consequently, the Contractor shall ensure a comprehensive list is accounted for in a proposal (e.g., Applicable and Relevant and/or Appropriate Regulations or ARARs).

The Government will conduct audits and surveillances of all aspects of the terms of this Contract to ensure compliance with the terms of this PWS. The results of all audits and surveillances will be resolved with the Contractor. DOE reserves the right to stop work in accordance with the Section H Clause, entitled *Work Stoppage and Shutdown Authorization*.

Accelerated cleanup (i.e., accomplishing cleanup safer, faster and more efficiently than planned) is a cooperative undertaking that requires the Contractor and the Government to seek innovative approaches to achieve the End States. This approach will require both DOE and the Contractor to create an organizational culture to facilitate this change toward working cooperatively to ensure mutual understanding of the technical approach and strategy that will lead to successful achievement of the End States to be completed under this Contract. Streamlining the process, challenging requirements, and identifying efficiencies and performance improvements are critical to accomplishing accelerated cleanup. The Contractor, throughout the Contract ordering period, shall seek to identify requirements and processes that impede progress and recommend efficiencies and performance improvements that improve safety, reduce the actual cost, and/or improve the schedule for the work.

The Contractor and the Government will establish a Partnering Agreement (see Section H Clause entitled, *Partnering*) The desired outcome is to partner with DOE to establish a common vision with supporting goals and objectives, evaluate end state options, and perform good faith negotiation to award task order(s) by the end of the Implementation Period. The Contractor shall submit Task Order proposal(s) as directed by the CO and specified in the Request for Task Order Proposal (RTP) (Section H, clause entitled *Task Ordering Procedure*). The Contractor, in partnership with DOE, will use its best efforts to further the acceleration of cleanup activities and reduce DOE's long-term liability.

**General Requirements**

**Scope Summary**

The scope of this Contract includes the following:

- **Transition**: Includes activities for the incoming transition from the WVDP Phase 1 Decommissioning contract to the WVDP Phase 1B contract and outgoing transition. Additionally, Section C.1 Transition includes development of Deactivation and Demolition (D&D) planning documents to support field activities during the Task Order 2, Implementation Period.
- **Core Functions**: Includes activities associated with Environment, Safety, Health and Quality Assurance Program (ESH&QA), Nuclear Safety, Emergency Management,

Property Management, DOE Support, and core business functions integral to conducting base operations and remedial work scope. Section C.2 contains the current Core Functions configuration of work to be performed to maintain program and project management functions.

- **Safe and Compliant Base Operations**: Includes day-to-day management and operation of nuclear, industrial facilities and waste sites (including pipelines) to maintain safe and compliant configuration; maintain specified facilities in an operational capacity; perform surveillance and maintenance (S&M) activities; and provide general operations for waste processing, storage, packing, and disposal services. The operational and surplus facilities must be maintained in a safe and compliant configuration and are listed in Exhibit C-1, *Facility Description and Status*.

  Safe and compliant base operations include upkeep, repair, or replacement of equipment, instruments, and systems needed to maintain or preserve the facility's operating functions in a safe and compliant condition. Replacement includes replacing obsolete or unrepairable equipment, instruments, and systems with those that perform the same or similar functions, as needed. Operational refers to the capabilities used to deliver a service under the Contract and includes all staff, equipment, and facilities necessary to maintain a service capability, but does not advance the WVDP Site cleanup mission.

  Sections C.3, C.4, C.5, and C.6 contain the current Safe and Compliant Base Operations configuration of work to be performed to maintain safe and compliant base operations.

  The Contractor shall, throughout the duration of the Contract, continuously work to optimize the scope, cost, and schedule associated with performance of Safe and Compliant Base Operations work while ensuring this work is being performed in a safe, compliant, energy efficient, and cost-effective manner.

- **Facility D&D, Soil Removal, and Waste Management**: Performance of D&D and soil removal activities including waste management activities to store, package, and ship and dispose waste offsite.

- **Waste Management and Nuclear Materials Disposition**: Includes activities to retrieve, treat, store, transport and dispose of waste offsite. WVDP transuranic (TRU)[1] waste may be stored on the WVDP site or disposed offsite pending a disposition pathway. The disposal process includes initiating the process of characterizing and certifying WVDP TRU waste for disposal. Also included is the operations and maintenance of waste processing and treatment facilities to support D&D and soil removal activities.

The following additional general requirements are applicable:

[1] WVDP TRU waste is from a commercial reprocessing operation, and may be referred to as Greater than Class C (GTCC) or GTCC-like waste. To maintain clarity, this Section will retain WVDP TRU waste as the nomenclature.

- Requirement to maintain the facility DSA, TSR, Fire Hazards Analysis, Emergency Planning Hazards Assessment documents, or other documents that are part of the approved safety basis;
- Maintain all environmental permits and provide input as required to other site-specific permits; and
- Complete disposition activities in accordance with all actions and requirements contained in regulatory and supporting documentation applicable to each facility and/or waste site. All final remedial actions and other disposition actions shall be completed and documented, as required.

The following additional general requirements are also applicable in implementing WVDP scope:

- The deliverables associated with the PWS, as well as other sections of this Contract, are listed in Section J, Attachment J-4, *Contract Deliverables*. Not all deliverables included in Section J, Attachment J-4, *Contract Deliverables* are specifically referenced in the PWS. Additionally, the deliverables list is not all-inclusive and does not include situational deliverables and all deliverables for all applicable DOE Orders and other requirements. The Contractor shall provide the personnel, materials, supplies, and services necessary to perform the PWS and its deliverables or as directed by the DOE Contracting Officer (CO);
- The Contractor shall submit an update to the Graded Approach for Implementation of Contract Requirements Plan for DOE approval upon issuance of any task orders (see Section J, Attachment J-4, *Contract Deliverables)*; and
- The Contractor has responsibility to provide and maintain in good working order the WVDP Site infrastructure such as communications, electrical, water, sewer, fire, security protection services, and other WVDP site integration services.

## C.1 CONTRACT TRANSITION

### C.1.1 Incoming Transition

During the transition period, the Contractor shall perform those activities that are necessary to transition work being performed under the current WVDP Phase 1 contract in a manner that: (1) ensures that all work for which the Contractor is responsible under the Contract is continued without disruption; (2) provides for an orderly transfer of resources, responsibilities, and accountability from the WVDP incumbent contractor; (3) provides for the ability of the Contractor to perform the work in an efficient, effective, and safe manner; and (4) interfaces and coordinates with DOE and other site contractors in regard to shared transition elements. Workforce and benefits transition shall be managed in accordance with the requirements of applicable Section H Contractor Human Resource Management (CHRM) clauses.

The Contractor shall establish the necessary logistical support (office space, computers, telephone, etc.) for transition and shall ensure all necessary personnel, including the required key personnel (Program Manager and Decontamination & Decommissioning Manager), are available

during the transition period, unless specifically directed otherwise by the CO.

All key personnel shall be assigned full-time to their respective positions and shall meet the requirements detailed in the Section H Clause entitled, DOE-H-2070 *Key Personnel – Alternate I*. The desired outcome is the readiness to assume full responsibility for WVDP facilities and activities for execution of subsequent Task Orders upon CO direction.

As authorized by Task Order 1, the Contractor shall perform the activities necessary to declare readiness to assume responsibility for the:

- Facilities, activities, and in-process work documented in Task Order 2,
- Incumbent contractor's subcontracted work as deemed necessary,
- Workforce in accordance with the requirements of the Contractor Human Resources Management clauses in Section H of this Contract, and
- Coordinate to develop needed service interface agreement(s).

Within 15 days after Task Order 1 effective date, the Contractor shall submit a transition plan for DOE approval that provides a description of all necessary transition activities, a list of the organizations involved, and a transition schedule, including key milestones. The Contractor is responsible for performing due diligence to ensure that all transition activities are identified and completed during the transition period (see Task Order 1, Section J, Attachment J-4, *Contract Deliverables*). The Contractor shall prepare and submit a Task Order Proposal for Task Order 2 - Implementation Period (see Task Order 1, Section J, Attachment J-4, *Contract Deliverables*).

The list below includes the major elements necessary for contract transition, but does not include all transition requirements. The following items shall be addressed in the transition plan:

(a) **Public Release Statement:** Within 72 hours following the effective date of the Contract Transition Task Order, the Contractor shall release on its own website a brief executive summary of its offer including the following elements:

(1) Name of Contractor including the identification of teaming partners and subcontractors, and a description of the experience that each party brings to the project,

(2) Summary/description of Contractor's management approach,

(3) Organizational structure and identification of key personnel,

(4) Contractor performance commitments,

(5) Brief overview of Contractor's work on similar projects,

(6) Commitments to the community, and

(7) Commitments to small business subcontracting (if applicable).

(b) **Implementation of Contractor Human Resource Management Requirements:** The Contractor's workforce and benefits transition plans shall include a description of the Contractor's implementation of human resource management consistent with the Contractor Human Resource Management clauses in Section H (H.2 through H.13).

(c) **Inter-contractor Ordering and Financial Agreements:** The Contractor shall develop the inter-contractor ordering and financial agreements necessary to support transition and

Contract performance, and will be responsible for the costs incurred under these agreements.

(d) **Programs and Procedures:** To ensure continuity of operations, the Contractor may adopt, as applicable, the incumbent contractors' programs and procedures at the effective date of the Contract Transition Task Order (e.g., Safety Analysis Reports (SAR), TSR, operating procedures, etc.), provided the Contractor has formally reviewed the programs and procedures to ensure compliance with contract requirements, current regulatory requirements, DOE Orders and directives, and the Contractors' organizational roles and responsibilities. The Contractor shall revise those programs and procedures it deems necessary, provided the programs and procedures remain in compliance with DOE requirements, and shall maintain its plans, procedures, programs, etc. in accordance with this PWS. The Contractor shall partner with DOE, in order to address new and legacy opportunities for improvement and DOE comments on programmatic documents (particularly older documents that have become out-dated and/or inconsistent with operations) in a phased approach to support a successful Contract Transition and Implementation Period (Task Order 2). Any Programs and Procedures that are adopted shall be updated to the new Contractor's organization and to fully address DOE comments within the first year of the effective date of the Contract (end of Task Order 2).

(e) **Performance Measurement Baseline (PMB):** The Contractor shall submit an initial PMB in accordance with Section C.2.9, sub-section, Master Contract Performance Baseline (Master CPB), and Task Order 1, Section J, Attachment J-4, *Contract Deliverables*.

(f) **Status Reports – Transition Activities:** The Contractor shall provide a weekly Transition Status Report of transition activities to DOE (see Task Order 1, Section J, Attachment J-4, *Contract Deliverables*). The Contractor shall establish routine status meetings with DOE and affected contractors to review transition activities and issues.

(g) **Government-owned Property:** All real and personal property currently accountable to the incumbent WVDP contractor will be provided to the Contractor. During the transition period, an inventory record of such property in the DOE Facilities Information Management System (FIMS) and the incumbent contractor's personal property databases will be provided to the Contractor. Specifically, the following property acceptance requirements shall be implemented:

(1) The Contractor shall perform a joint comprehensive physical inventory with the incumbent contractor of all accountable high-risk and sensitive property, as defined in Code of Federal Regulations (CFR) Title 41, Chapter 109, during the transition period, and shall accept full accountability for the high-risk and sensitive property at the end of transition;

(2) At the end of transition, the Contractor shall accept transfer of accountability for the remaining government-owned real and personal property not covered under paragraph (1), based on existing inventory records on an as-is, where-is basis, or shall perform a wall-to-wall inventory within the transition period of the Contract. At the discretion of the Contractor, a review of existing inventory records may be performed during transition. Any discrepancies with the existing inventory records shall be reported to the CO. If the physical inventory is not accomplished within the allotted time frame, the previous contractor's records will become the inventory baseline;

(3) Once the Standard Form 122, *Transfer Order – Excess Personal Property*, is completed and approved by the CO/Organizational Property Management Officer, the Contractor shall assume responsibility and liability for subsequent losses and damages.

(h) **DOE Safeguards and Security (S&S) Survey:** During the transition period (within 90 days) and prior to assuming control (see Task Order 1, Section J, Attachment J-4, *Contract Deliverables*), the Contractor shall be subject to a DOE Safeguards and Security (S&S) initial survey conducted for activities under the scope of this Contract. The Contractor shall appoint within 30 days of Task Order 1 effective date, a WVDP, Facility Security Officer (FSO) (see Task Order 1, Section J, Attachment J-4, *Contract Deliverables*). The WVDP FSO (not corporate FSO) will be listed on the DOE F 470.1, Contract Security Classification Specification (CSCS) as the FSO after the transition period has concluded. The Contractor shall submit the initial CSCS and initial Facility Data and Approval Record (see Task Order 1, Section J, Attachment J-4, *Contract Deliverables*).

(i) **Legal Management Transition:** The Contractor shall ensure all legal management activities are addressed pursuant to the Section H Clause entitled, *Legal Management*, and 10 CFR Part 719.

(j) **Communication of Contractor's Approach:** The Contractor shall communicate its approach and commitments for accomplishing the scope of the Contract to workers, federal staff, stakeholders, and other interested entities during the transition period.

(k) **Graded Approach:** The Contractor shall submit a *Graded Approach for Implementation of Contract Requirements Plan* for DOE approval to streamline processes, apply a graded approach, and identify efficiencies and performance improvements (e.g., DOE directives, regulations, and others) that are critical to accomplishing the site mission (see Task Order 1, Section J, Attachment J-4, *Contract Deliverables)*. The plan shall include a review and recommendations of changes to the current site standards and implementing procedures for the elimination of requirements and/or streamlining of processes. The Contractor shall interface with the other site contractors on proposed changes, as necessary.

(l) **Task Order Proposals:** During transition, DOE will request Task Order proposals that are compliant with Federal Acquisition Regulations (FAR) Subpart 15.4. The CO will provide direction as applicable regarding these Task Orders and will establish time frames for submission of additional Task Order proposals.

(m) **Design Authority:** The Contractor assumes Design Authority responsibilities at the conclusion of the transition period.

(n) **Declaration of Readiness:** The Contractor shall submit a *Declaration of Readiness to Execute the Contract* to the CO prior to the end of transition, which indicates the Contractor's readiness to assume responsibility for execution of the Contract upon CO direction (see Task Order 1, Section J, Attachment J-4, *Contract Deliverables)*. The Contractor shall also identify any post-transition activities that are required to be completed (e.g., notifications to outside agencies of transfer of co-operator responsibilities, completion of procedure updates).

### C.1.2 Incoming Transition – Planning Support

During the transition period, the Contractor shall prepare and submit for DOE review and approval various planning evaluations and design documents (consistent with industry standards and applicable elements of *DOE Standard Review Plan: Lines of Inquiry for Design and Engineering Review of DOE Nuclear Facilities*) to support Phase 1B D&D fieldwork execution during the follow-on implementation period (Task Order 2). These activities include the following (see Task Order 1, Section J, Attachment J-4, *Contract Deliverables*):

#### C.1.2.1Fire Suppression System Design

Evaluate the existing Fire Suppression System (Fire Loop and Tank System) for reconfiguration and/or replacement to accommodate future D&D and remedial action and to maintain fire water protection to remaining facilities. Submit for DOE approval construction design documents see Task Order 1, Section J, Attachment J-4, *Contract Deliverables)* for fire water system reconfiguration consistent with implementation anticipated during Implementation Period Task Order. (See Section C.4.6.2)

#### C.1.2.2Fuel Receiving and Storage Facility Demolition Plan

Evaluate the Fuel Receiving and Storage (FRS) structure (metal building) and develop demolition design plan for demolition of the facility and submit for DOE approval (see Task Order 1, Section J, Attachment J-4, *Contract Deliverables)*.

#### C.1.2.3Waste Management Area 1 Remedial Design

Develop design for the Waste Management Area (WMA) 1 demolition of subsurface structures and soils excavation and submit for DOE approval (see Task Order 1, Section J, Attachment J-4, *Contract Deliverables)*. The design documents shall include a contaminated soils data-gap analysis to support the final WMA 1 design that accounts for subsurface complexities, such as building foundations, utilities, and the soil source term for the Sr-90 plume. The Contractor shall include a data-gap closure plan to optimally delineate impacted soils to support final WMA 1 remedial designs. The design shall be inclusive of all facilities and areas identified in Section C.9.1 and its subsections. The design will be advanced upon completion of the data-gap closure plan during the Implementation Period Task Order.

### C.1.3 Outgoing Transition and Closeout

The desired outcome is a seamless transition of full responsibility for WVDP facilities and activities to a successor contractor.

As authorized by Task Order, the Contractor shall perform those activities necessary to transition the work under this Contract to a successor contractor upon contract expiration, which includes:

(a) Cooperate with the incoming contractor to ensure all work for which the Contractor is responsible under the Contract continues without disruption in an efficient, effective, and safe manner; and

(b) Provide for an orderly transfer of resources, responsibilities, and accountability from the

Contractor.

The Contractor shall provide a plan for closeout activities at least 60 days prior to Contract expiration or when directed by the CO. The Contractor shall also cooperate with and support the successor contractor's phase-in plan.

## C.2 CORE FUNCTIONS

The following sections define the programs that the Contractor shall establish to perform the WVDP Phase 1B Contract mission safely and effectively. The requirements and associated implementing instructions established under these programs shall be applied to all work within the PWS. The desired outcome is the efficient performance of general program infrastructure and support activities necessary for the execution of the Contract, as authorized by Task Order.

### C.2.1 Integrated Safety Management System (ISMS)

The Contractor shall establish and maintain a single ISMS program as required by 48 *CFR* 970.5223-1, Integration of Environment, Safety and Health into Work Planning and Execution. The ISMS program shall ensure that safety and environmental protection considerations are integrated throughout the entire work planning and execution process (including subcontracts as appropriate) and shall extend through the execution of individual work packages where job-site safety is ensured for each worker. The Contractor shall ensure that the principles of ISMS serve as the foundation of the implementing mechanisms for work at the site. The Contractor shall ensure workers are involved in work planning and integrate the concepts of continuous improvement into work activities.

The Contractor shall:

- Develop and implement an ISMS that complies with the Section I Clause, DEAR 970.5223-1, entitled *Integration of Environment, Safety, and Health into Work Planning and Execution*. The Contractor shall submit its ISMS Description for DOE approval (see Task Order 1, Section J, Attachment J-4, *Contract Deliverables)*.
- Submit for DOE approval its DEAR 970.5223-1 Performance Objectives, Measures, and Commitments (see Task Order 1, Section J, Attachment J-4, *Contract Deliverables*).
- Conduct and submit for DOE approval its annual ISMS effectiveness review (see Section J, Attachment J-4, *Contract Deliverables*).

A comprehensive Environmental Management System (EMS) based upon the International Organization for Standardization (ISO) 14001 EMS standard shall be integrated into the ISMS. The EMS shall include measures to address federal sustainability requirements in compliance with DOE Order 436.1, *Departmental Sustainability*, other applicable DOE Orders, and the DOE Strategic Sustainability Performance Plan.. In accordance with DOE Order 436.1, the Contractor shall develop, submit for DOE approval, and implement Site Sustainability Plans (SSP) and an Environmental Management System (EMS). These plans shall include recycling and pollution prevention (see Section J, Attachment J-4, *Contract Deliverables*).

## C.2.2 Environment, Safety, Health and Quality Assurance Program

The Contractor shall implement and maintain an Environment, Safety, Health and Quality Assurance Program. The Contractor shall conduct all activities in accordance with applicable laws, regulations, agreements, and the Directives listed in the Contract and/or its attachments. The Contractor's ESH&QA program shall be operated as an integral, but visible, part of how the Contractor conducts business. Described below are several (but not all-inclusive) major ESH&QA related programs.

### C.2.2.1Environmental Management

The Contractor shall implement and maintain an Environment Program and conduct all activities in accordance with the DOE/EIS-0226, the Phase 1 Decommissioning Plan, the ROD, applicable laws, regulations, agreements, and the Directives listed in the contract and/or its attachments.

Environmental Compliance and Permitting

The Contractor's environmental compliance and permitting program shall include but is not limited to: environmental monitoring program; ground water monitoring program; waste minimization/pollution prevention program; hazardous materials transportation program; and emergency response/spill prevention and response program. The Contractor shall implement executive orders, directives, environmental regulations, environmental management policy directives and applicable procedures as listed in Section J, Attachment J-2, and as required by the following: Resource Conservation and Recovery Act (RCRA); Clean Water Act; Clean Air Act; Comprehensive Environmental Response, Compensation and Liability Act; NEPA; Toxic Substances Control Act (TSCA); and Safe Drinking Water Act as applicable to site activities. Furthermore, the Contractor shall comply with the National Emissions Standards for Hazardous Air Pollutant (NESHAP), State Pollutant Discharge Elimination System (SPDES), Potable Water, Wetlands, Asbestos, EMS, Fish and Wildlife, Storage Tank, Superfund Amendment and Reauthorization Act, and Federal Facilities Compliance Act (FFCA) requirements.

- The Contractor shall, as required, execute, maintain, modify, and revise all regulatory documents, including the provision of proposed transmittal letters, requested by/through DOE. Further, the Contractor shall maintain regulatory documents consistent with site conditions. At a minimum, regulatory documents shall be updated on a bi-annual basis. Regulatory documents include, but are not limited to regulatory correspondence, permits, licenses and certificates, and includes documents listed in Section J, Attachment J-2. All regulatory and related activities relative to the contract shall be coordinated with and approved by DOE under this paragraph, regardless of where they may appear in the Contract.
- The Contractor shall develop and prepare all regulatory documents necessary for all WVDP disposition activities required under the existing regulatory framework and/or as directed by the CO (see multiple applicable Section J, Attachment J-4, *Contract Deliverables*). These activities shall be coordinated with DOE as specified in the paragraph above.

- The Contractor shall provide support for all ongoing NEPA activities relative to the WVDP including, but not limited, to the provision of data, analysis of data whether or not such data was generated under the current contract, and interpretation of data and data analysis including relevant historical data.
- The Contractor shall comply with all applicable requirements of Section 3008(h) Administrative Order on Consent, 6 NYCRR 373-2, 6 NYCRR 373-3, and the RCRA Part A/Part B application with regard to the disposition of all facilities under the Contract. The Contractor shall support and maintain the existing Part A permit, as well as efforts related to a RCRA Part B permit application process, including the preparation and/or revision of documentation. If a Part B permit is acquired from New York State Department of Environmental Conservation (NYSDEC), then the Contractor will fully comply with all of the requirements and conditions of the Part B permit, along with its maintenance, modifications, and revisions in accordance with the first paragraph above.
- The Contractor shall develop and maintain an environmental monitoring, analysis, and assessment program in accordance with Contract requirements. The environmental monitoring program shall provide for effluent monitoring; environmental surveillance to measure both radiological and non-radiological constituents; and monitoring for erosion in areas that have the potential to impact project or WNYNSC facilities, whether or not those areas are located on or off the Project Premises or WNYNSC. Monitoring and surveillance includes both the continuous recording of data and the collecting of soil, sediment, water, air, and other samples at specific times. Evaluation and analysis of such data will be performed as requested in accordance with the first paragraph above. Further, the Contractor will be required to install additional or modify existing monitoring locations as required or requested by DOE. The Contractor shall also conduct other monitoring, sampling or inspection work as required by existing or future agreements between DOE and regulatory agencies (e.g., periodic underground line inspection).
- The Contractor shall institute a “Regulator Contact Reporting System” (or alike system) to ensure any and all interactions/communications with federal, state, tribal, or regional/local regulators are documented and results articulated to the DOE.
- The Contractor shall operate and maintain an accurate and readily accessible Laboratory Information Management System (LIMS) for management and evaluation of all environmental and analytical laboratory sample data. The existing LIMS was upgraded through 2023 and considered compliant with DOE standards.
- The Contractor shall assume responsibility for operating and advancing the incumbent Geographic Information System (GIS) and associated databases (and/or geodatabases). The Contractor shall optimize the site GIS through integrating the environmental data management system (environmental media samples and results), site feature datasets (e.g., buildings, utilities, slabs, roads, etc.), physical site datasets (e.g., topography, geologic boundaries, subsurface features, drainage, etc.), and radiological data (e.g., gamma walk-over surveys) into a comprehensive GIS architecture that supports data viewing, remedial decision making, and environmental permits reporting. The system will be Esri-product based and integrate the preferred data systems of the Contractor.

- Relative to activities performed in accordance with this Contract, the Contractor shall comply with the SPDES permit for the WVDP and any/all subsequent modifications including requirements to conduct a Mercury Study, as well as comply with the key regulatory and permit provisions outlined in 40 CFR Part 125.
- The Contractor shall provide support for all regulatory inspections including, but not limited to, making all requisite arrangements for inspection visits, accompanying regulators while on the Project Premises, conducting briefings, responding to comments, and completing necessary follow-up actions. The aforementioned also applies to visits by the Seneca Nation of Indians.
- Management of soil disturbed during onsite activities must be consistent with QP-450-01 Management of Environmental Media – Phase 1 Decommissioning of the West Valley Demonstration Project, the Phase 1 DP, the U.S. Nuclear Regulatory Commission Technical Evaluation Report, the Phase 1 Characterization Sampling and Analysis Plan (CSAP, 2011), and the Final Status Survey Plan (FSSP, 2011), as applicable to the PWS.

### C.2.2.2Worker Safety and Health

The Contractor shall develop and submit to DOE for approval a written Worker Safety and Health Program (WSHP) compliant with requirements appearing in 10 CFR 851(see Section J, Attachment J-4, *Contract Deliverables*). This approved WSHP shall be implemented and maintained by the Contractor. In addition, whenever a significant change or addition to the program is made an updated WSHP must be submitted to DOE for review and approval.

Annually, the Contractor shall submit either an updated WSHP to DOE for approval or a letter stating that no changes are necessary in the currently approved worker safety and health program (see Section J, Attachment J-4, *Contract Deliverables*).

### C.2.2.3Safety Culture

The Contractor shall promote a strong safety culture which encourages safe performance of work and involvement of workers in all aspects of work performance and promotes core values that should be deeply, strongly, and consistently held by managers and workers. Contractor organizations shall foster that culture through proscribed contract actions designed to establish leadership commitment and behaviors consistent with those values; promoting a safety conscious work environment in which employees are encouraged to freely raise safety concerns to management without fear of retaliation; prioritizing concerns based on safety significance; addressing and resolving those concerns in a manner that provides transparency; and supporting a questioning attitude concerning safety by all employees.

(a) The Contractor shall:

(1) Adopt and continuously improve Organizational Culture, Safety Culture, and Safety Conscious Work Environment, including implementation and utilization of programs/processes that support employees raising concerns without fear of retaliation. These programs/processes include, but are not limited to, the Employee Concerns Program

(ECP); the Differing Professional Opinions Process; Ethics and Compliance Program/Process; and Alternative Dispute Resolution.

(2) Continuously promote a work environment where employees are encouraged to raise concerns. The Contractor shall define expectations, rigorously reinforce those expectations, and take actions to mitigate the potential for a chilling effect.

(3) Conduct business in a manner fully transparent to DOE. Activities are demonstrated by open, clear, and well-communicated management actions and technical and project documentation. Identified issues and trends are proactively shared with DOE.

(4) Champion programs which encourage a culture that promotes proactive self-identification and reporting of issues that identifies and takes action on systemic weaknesses leading to sustained continuous self-improvement.

(5) Champion programs which encourage and emphasize the following safety culture attributes as described in DOE G 450.4-1C ISMS Guide, Attachment 10, "Safety Culture Focus Areas and Associated Attributes."

(i) Leadership

(A) Demonstrated safety leadership

(B) Risk-informed, conservative decision making

(C) Management engagement and time in the field

(D) Staff recruitment, selection, retention, and development

(E) Open communication and fostering an environment free from retribution

(F) Clear expectation and accountability

(ii) Employee/Worker Engagement

(A) Personal commitment to everyone's safety

(B) Teamwork and mutual respect

(C) Participation in work planning and improvement

(D) Mindfulness of hazards and controls

(iii) Organizational Learning

(A) Credibility, trust, and reporting errors and problems

(B) Effective resolution of reported problems

(C) Performance monitoring through multiple means

(D) Use of operations experience

(E) Questioning attitude

**C.2.2.4Quality Assurance**

The Contractor shall develop, implement, assess, and continuously improve an effective Quality Assurance Program (QAP) using a graded approach for DOE approval in compliance with 10 CFR 830 Subpart A and DOE Order 414.1, *Quality Assurance*. The Contractor shall perform work on site in accordance with applicable quality assurance requirements. Quality assurance requirements are stipulated in the Section E and Section J, Attachment J-2, Requirements Sources and Implementing Documents.

Contractors shall develop and submit for DOE approval a QAP (see Section J, Attachment J-4, *Contract Deliverables*). Development of a new QAP or modification of the existing version of a QAP from a prior contractor, does not alter a contractor's legal obligation to comply with 10 CFR 830, other regulations affecting quality assurance (QA) and DOE Order 414.1. For HLW items and activities, the Contractor shall establish and maintain an effective HLW QAP in compliance with DOE/RW-0333P, DOE/RW-0351, and the DOE/EM-0093.

The Contractor shall, at a minimum, annually review and update as appropriate, their QAP (see Section J, Attachment J-4, *Contract Deliverables*). The review and any changes shall be submitted to DOE for approval. Changes that reduce the level of commitments affecting nuclear safety shall be approved before implementation by the Contractor.

The Contractor shall develop and implement a comprehensive Issues Management System (IMS) for the identification, assignment of significance category, and processing of nuclear safety-related issues identified within the Contractor's organization. The significance assigned to the issues shall be the basis for all actions taken by the Contractor in correcting the issue from initial causal analysis, reviews for reporting to DOE, through completion of effectiveness reviews if required based on the seriousness of the issue.

**Quality Assurance Records**

The Contractor shall ensure records classified as Quality Assurance records under American National Standards Institute (ANSI)/ASME NQA-1 (Requirement 17), if applicable, are categorized appropriately and managed in accordance with NQA-1 and 36 CFR Chapter XII, Subchapter B, and are traceable to the applicable item, activity, or facility.

### C.2.2.5 Waste Management

The Contractor shall provide safe, compliant, and cost-effective management, storage, treatment, transport, and/or disposal of waste (i.e., sanitary and industrial waste, Low-Level Waste (LLW), Mixed Low-Level Waste (MLLW), RCRA waste, TSCA waste, and WVDP TRU waste) and materials that may be contaminated with radiological and/or hazardous constituents as a result of past operations, as well as newly generated waste. The Contractor, to the extent necessary to comply with regulatory and DOE requirements, shall operate and maintain a compliant Waste Management Program in accordance with DOE Order 435.1 and DOE Manual 435.1-1, *Radioactive Waste Management Manual*. The Contractor shall submit a Waste Management Program Plan, (see Section J, Attachment J-4, *Contract Deliverables*). The Waste Management Plan should reflect an integrated overarching approach to waste management that minimizes generation, maximizes recycling and reuse, and moves the site toward elimination of waste processing and storage as early as possible.

Waste is considered disposed of when it has been shipped to and accepted for final disposition at a properly licensed and permitted disposal site. The Contractor shall avoid generating waste from any operations within this PWS with no pathway for disposal. The Contractor shall take all reasonable actions to minimize waste generation and to preclude the generation of TRU, Mixed TRU (MTRU) and WVDP TRU wastes from any operations within the PWS. The Contractor shall obtain DOE approval prior to generation of TRU, MTRU or WVDP TRU waste. The Contractor shall assist DOE in evaluating obtaining disposal-site alternatives (e.g., cost/benefit analyses, NEPA documentation), especially for TRU, MTRU, GTCC and WVDP TRU waste.

The Contractor shall coordinate with disposal facilities to ensure their data needs and requirements for waste acceptance are met. All waste management activities shall meet the appropriate waste acceptance criteria with certification, as appropriate, for approved waste disposition/disposal options. The Contractor, in compliance with DOE M 435.1-1 requirements, shall prepare exemption requests for use of non-DOE treatment, storage, and disposal facilities, which includes lifecycle cost analysis for disposition (non-DOE treatment, storage, or disposal) options considered. The Contractor has access to the national IDIQ disposal and Basic Ordering Agreement treatment contracts (i.e., DOE LL/ MLLW Disposal Services IDIQ Contracts and DOE LL/ MLLW Treatment Services Basic Ordering Agreements) as needed for the execution of waste management activities.

The Contractor shall develop and submit for DOE approval appropriate transportation plans, including transportation security plans, for various waste types, obtain appropriate transport permits, and coordinate with DOE transport managers (see Section J, Attachment J-4, *Contract Deliverables*). The Contractor shall manage all waste storage, treatment, and disposition activities in compliance with DOE Order 435.1, RCRA, TSCA, and other applicable state or Federal requirements. The Contractor shall employ the EWTS system to track waste disposals in a manner compliant with DOE M 435.1 characterization information requirements. The Contractor shall ensure operation of storage and treatment areas or facilities, and comply with all

permits, orders, and regulatory requirements. The Contractor shall, to the extent possible, minimize the facilities used for waste storage and waste/materials in storage.

The Contractor shall establish an accounting system and baseline such that Waste Management and Operations costs (fully burdened) are distributed to the projects generating the wastes and utilizing these services. Legacy waste management activities are addressed in Section C.7 Legacy Waste Disposition.

### C.2.2.6 Contractor Assurance System

The Contractor shall establish a Contractor Assurance System (CAS) that includes: 1) assignment of management responsibilities and accountabilities; 2) provides evidence to assure both DOE and the Contractor's management that work is being performed safely, securely, and in compliance with all requirements; 3) risks are being identified and managed; and 4) the systems of control are effective and efficient in accordance with DOE Order 226.1, *Implementation of Department of Energy Oversight Policy*. The Contractor shall submit its CAS Description for DOE approval (see Section J, Attachment J-4, *Contract Deliverables*). The Contractor shall also submit an annual review of its CAS (see Section J, Attachment J-4, *Contract Deliverables*).

## C.2.3 Emergency Management and Fire Protection

The Contractor shall establish and maintain an effective Emergency Management Program approved by DOE in compliance with DOE Order 151.1, *Comprehensive Emergency Management System* and other relevant directives and standards. The Contractor shall develop and submit for DOE approval, its plan documenting the Emergency Management Program elements, and implement and maintain the approved program. The Contractor shall ensure that the Emergency Management Program provides the direction and approach to minimize the impact of an emergency upon the health and safety of workers, the public and the environment and to limit loss or damage to the facilities and plant equipment, as appropriate.

The Contractor shall provide and manage the Fire Protection Program for WVDP, that complies with DOE Order 420.1, Facility Safety, National Fire Protection Association (NFPA), and other applicable industry codes and standards (see Section J, Attachment J-4, *Contract Deliverables*). The Fire Protection Program shall include fire protection system inspections for all systems, testing of all systems, maintenance on fire suppression systems, fire protection system impairment strategy and reporting process, all fire investigations, and fire and comprehensive emergency response. The Contractor shall perform inspection, recharging, testing, and replacement of fire extinguishers, as required. The Contractor shall report any fire impairments that exceed 90 days from discovery and any that exceed 180 days must include compensatory measures and corrective actions with a completion schedule.

The Contractor shall be responsible for developing, implementing, and maintaining compliance with all programmatic documents and plans (per DOE Order 420.1), including, but not limited to Fire Protection Program (and updates), Fire Protection Manuals, (pre-fire) Plans, Fire Hazard

Analyses and/or Facility Fire Assessments, Transitional Fire Hazards Analysis, Baseline Needs Assessment(s), and Wildland Fire Management Plan(s) (see Section J, Attachment J-4, *Contract Deliverables*). The Contractor shall submit a Baseline Needs Assessment which includes details regarding Contractor emergency response capabilities including mission responsibilities, personnel, apparatus, equipment, facilities, programs, incident reporting, etc. (see Section J, Attachment J-4, *Contract Deliverables*). The Contractor shall request the designation of an individual responsible for interpreting the requirements of the NFPA code(s) and National Electric Code (NEC) or other applicable standards. The Contractor Authority Having Jurisdiction (AHJ) does not have decision-making authority for DOE facilities and operations, unless approved, specifically in writing from the Field Element Office. The Contractor AHJ in both Fire Protection and Electrical Protection shall be competent in each of their respective fields.C.2.4 Continuity Program

The Contractor shall develop and submit for DOE approval, implement, and update, as necessary, a Site Wide Continuity of Operations (COOP) Program per DOE Order 150.1, *Continuity Programs* (see Section J, Attachment J-4, *Contract Deliverables*). The COOP program is designed to assist the DOE in continuing to accomplish Departmental mission essential functions (MEFs), primary mission essential functions (PMEFs), essential supporting activities (ESAs), and address preparedness and response to current (COV-SARS-2/COVID-19) or potential epidemic and pandemic events.

### C.2.5 Radiation Safety

The Contractor shall develop and maintain a Radiation Protection Program approved by the DOE in compliance with 10 CFR 835 and other relevant directives and standards (see Section J, Attachment J-4, *Contract Deliverables*). The Contractor shall ensure that radiation exposures to its workers and the public, and releases of radioactivity to the environment are maintained below regulatory limits and deliberate efforts are taken to further reduce exposures and releases as low as reasonably achievable (ALARA).

Also, see Section C.2.17.3 *Dosimetry and Radiobioassay Program at the DOE EMCBC – New York Project Office* for dosimetry support services provided and interfaces supporting the dosimetry program.

### C.2.6 Nuclear Safety

The Contractor shall establish and maintain a nuclear safety program in compliance with 10 CFR 830, Subpart B, and relevant directives. The Contractor shall submit for DOE approval and maintain the program elements (see Section J, Attachment J-4, *Contract Deliverables*). The Contractor shall ensure that all nuclear facilities are maintained and operated within the DOE approved safety basis.

### C.2.7 Criticality Safety

The Contractor shall develop, submit for DOE approval, and maintain a Criticality Safety Program in compliance with DOE Order 420.1 (see Section J, Attachment J-4, *Contract Deliverables*).

### C.2.8 Engineering

The Contractor is responsible for determining the level of engineering support necessary for completion of the PWS. The Contractor will provide the most cost effective and efficient method for obtaining the necessary support. Engineering activities may include, but are not limited, to 1) engineering management, 2) waste management engineering, 3) facility engineering, 4) system engineering, 5) structural engineering, 6) project engineering, and 7) radiological controls and engineering.

Licensed Professional Engineers within the State of New York shall be required for all structural engineering assessments and may be needed for additional project support. The Contractor shall develop a process to delineate which products are stamped by a licensed professional engineer (and State licensing) for DOE's approval and implement as approved (see Section J, Attachment J-4, *Contract Deliverables*). All engineers shall design items and processes using sound engineering/scientific principles that integrate functional requirements, design criteria, configuration control. All engineers shall utilize appropriate consensus standards that incorporate applicable requirements and design bases in design work and design changes. Engineers shall identify and control design interfaces; verify/validate the adequacy of design products using independent individuals or groups; and verify/validate work before approval and implementation of the design. The Contractor shall maintain updated/revised engineering drawings, within a version-controlled document management system compliant with QAP requirements.

### C.2.9 Program Support Performance Requirements

#### C.2.9.1 Program Management

(a) Successful execution of the program management work scope will ensure cost and schedule efficiency while minimizing programmatic risks. The Contractor shall ensure that program management practices are used in the performance of work including the development of project management plans, baselines, disciplined change control processes and service level agreements.

(b) The Contractor shall provide all management and technical information to:

(1) Meet the requirements of the "Environmental Management Program Management Protocol," dated October 30, 2020, or any subsequent revisions.

(2) Support the budget formulation activities including, but not limited to, emerging work items list; budget formulation input (including Integrated Priority List), the fall limited

budget update submission, budget scenario development, and budget presentations (such as public and regulatory briefings, etc.).

(3) Meet the data requirements of the DOE Integrated Planning, Accountability, and Budgeting System (IPABS). Data for all scope authorized by Task Orders, including operations activities and capital projects, shall be uploaded into IPABS in accordance with the "Environmental Management Program Management Protocol" document, dated October 30, 2020, or any subsequent revisions, maintained by the EM Office of Project Management.

(4) Ensure transparency in program performance and efficiency in all PWS work scope execution.

(5) Support audits, evaluations, and external technical reviews.

(6) Support other DOE program performance assessments and information needs.

(c) All program management information developed under this Contract shall be accessible electronically by DOE. The desired outcome is predictable and consistent Contractor performance aligned to customer needs conducted within annual and multi-year baselines.

**C.2.9.2Program Integration and Control and Earned Value Management**

(a) The Contractor shall provide for DOE approval, an Earned Value Management System Description (EVMSD) that complies with the requirements of Section H Clause *Earned Value Management System*, the National Defense Industrial Association (NDIA) *Earned Value Management System Acceptance Guide* and NDIA *Earned Value Management System Intent Guide* (see Section J, Attachment J-4, *Contract Deliverables*).

(b) The EVMSD shall describe the management processes and controls that shall be used to implement a compliant Earned Value Management System (EVMS), manage and control work, and complete Contract requirements.

(c) The EVMSD shall include:

(1) The baseline development process and the hierarchy of documents that shall be used to describe and maintain the Master Contract Performance Baseline (Master CPB);

(2) Identification of the systems, tools and software and integration of these systems with the Work Breakdown Structure (WBS) and accounting systems and data;

(3) The process the Contractor intends to use for earned value management, configuration control, interface control, and document control;

(4) The Contractor's Performance Baseline Change Control Process;

(5) The Contractor's process for handling changes that are only impacts to costs and not identified as a schedule impact;

(6) The Organizational Breakdown Structure, including roles and responsibilities of each major organization and identification of key management personnel; and

(7) A list of program and project software the Contractor proposes to use for work control.

(d) The Contractor shall comply with the requirements of the Section H Clause, DOE-H-2024, *Earned Value Management System*, and, if required, have the EVMS evaluated against the EIA-748 standard by an independent entity.

(e) The Contractor shall also flow down EVMS requirements in accordance with the Section H Clause, DOE-H-2024, *Earned Value Management System*.

(f) A Task Order issued under this Master IDIQ Contract as Firm-Fixed-Price (FFP) or as a primarily level-of-effort (LOE) work scope may or may not require use of an EVMS.

**C.2.9.3Master Contract Performance Baseline (Master CPB)**

(a) The Master CPB shall be an integrated and traceable technical scope, schedule, and cost execution baseline that encompasses all activities to execute the requirements of Task Orders issued under this Contract, informs and is integrated with other site contractors' life-cycle scope, schedule and cost baseline, as applicable, and enables safe, effective and efficient advancement and completion of the site mission.

(b) The Master CPB shall include the following:

(1) Technical Scope. The following baseline documents shall be viewed collectively as the technical scope for the cost/schedule control system:

(i) Summation of the Task Order scopes of work;

(ii) Waste site and facility lists;

(iii) Approved interface agreements; and

(iv) WBS Dictionary Sheets (the WBS submittal shall include a data column which cross references the WBS elements at the lowest level to the appropriate Contract Line Item Number [CLIN]).

(v) The Contractor shall not deviate from the existing WBS provided in documents library, without DOE approval.

(c) The Master CPB shall comply with the following requirements:

(1) The WBS shall encompass all activities required in this Contract and provide the basis for all project control system components, including:

Estimating;

Scheduling;

Budgeting; and

Project performance reporting (as required under this contract).

(2) Control accounts within the WBS shall be identified; and

(3) The baseline and management thereof shall comply with standard EIA-748 *Earned Value Management Systems*.

(d) The schedule shall:

(1) Include all significant external interfaces, regulatory and Defense Nuclear Facilities Safety Board commitments, and Government-Furnished Services and Information (GFS/I) dependencies.

(2) Be an activity based, risk informed, resource loaded, logical network-based and integrated plan that correlates to the WBS and is vertically traceable to the EVMS control accounts and aligns with the Contractor's field schedules.

(3) Include earned value method at the activity level and be capable of summarizing from control accounts to higher WBS levels.

(4) Any additional working level schedules deemed necessary by the Contractor shall be integrated with the Master CPB and be able to provide earned value reporting in compliance with EIA-748.

(5) The Master CPB cost estimate shall include project resource plans, detailed resource estimates, basis of estimates, budgetary requirements, and identification of direct costs, indirect costs, management reserve, and fee.

(6) The method used to determine earned value shall be identified for each control account.

(7) The schedule shall be accessible to DOE upon request.

(e) The Master CPB shall be logically tied, driven and integrated with:

(1) Financial system(s) for consistency and accurate reporting of information with traceability to budget and reporting requirements.

(2) DOE, congressional, regulatory, and external commitments.

(3) Performance milestones including contract performance incentives and other performance measures established by DOE.

#### *C.2.9.3.1 Master Contract Performance Baseline Submittals*

(a) The Contractor shall develop and submit for DOE approval an initial Master CPB that is representative of the initial Task Order scopes of work (see Section J, Attachment J-4, *Contract Deliverables*). Subsequent updates to the Master CPB will occur as each Task Order is negotiated and awarded and implemented into the Master CPB. These proposed Master CPB updates, for additional Task Order work only, will be submitted as part of the Task Ordering Process to the CO, for DOE and Contractor negotiation, and DOE approval as part of the Contractor's Task Order Proposals. The Contractor shall ensure that its Task Order proposals meet the requirements of Section H, *Task Ordering Procedure* by providing the Task Orders' baseline submittal information and that the EVMSD requirements for the baseline change control process are met.

(b) The Contractor shall provide the WBS, WBS dictionary data, and basis of estimate data in either Microsoft Word© or Microsoft Access© format. Cost data shall be provided in Microsoft Access© or Excel© format and the schedule shall be provided utilizing the current version of Primavera Systems, Inc., Enterprise for Construction© software. These programs shall be used unless agreed to otherwise by DOE.

(c) The Contractor shall provide additional data that may be required by the DOE for development and maintenance of a Federal Site Life-cycle Estimate (FSLE).

### C.2.9.4Capital Asset Projects

(a) The Contractor shall provide all management and technical information to:

(1) Meet the requirements of DOE Order 413.3, *Program and Project Management for the Acquisition of Capital Assets*, when applicable

(2) Meet the data requirements of the Project Assessment and Reporting System (PARS), when applicable. Data for Capital Asset Project scope, authorized by Task Orders, shall be uploaded into PARS in accordance with the "Contractor Project Performance Upload Requirements" document maintained by the DOE Office of Project Management (see Section J, Attachment J-4, *Contract Deliverables*).

(b) The Contractor shall prepare and submit for DOE approval a Project Management Plan (PMP), consistent with the requirements in DOE Order 413.3, *Program and Project*

*Management for the Acquisition of Capital Assets* (see Section J, Attachment J-4, *Contract Deliverables*).

(c) If required, DOE-PM will certify the Contractor's EVMS as compliant with the EIA-748 standard. Subsequent to the initial evaluation and certification, DOE-PM may at any time require the Contractor to repeat the evaluation and certification process. The Contractor shall provide all necessary support to conduct the initial and any subsequent evaluations and closure of all corrective actions.

### C.2.9.5 Contract Performance Reporting

(a) The Contractor shall provide DOE with the necessary contract performance information to support budget planning and execution, contract planning and execution; performance reporting, audit and evaluation; and other DOE performance assessment and information needs. The monthly performance report will be provided to ContractorsMPR@em.doe.gov (see Section J, Attachment J-4, *Contract Deliverables*).

#### *C.2.9.5.1 Monthly Performance Report*

(a) The Contractor shall submit and transmit to DOE a Monthly Performance Report representing the prior month's performance by the 15th of each month (see Section J, Attachment J-4, *Contract Deliverables*).

(b) The Monthly Performance Report shall include a summary of overall contract performance and a separate report for each of the major work scopes, including task orders and projects at the PBS level.

(c) The summary of overall contract performance shall include:

(1) Key accomplishments

(i) Major issues including actions required by the Contractor and DOE;

(ii) Discussion of significant accomplishments, including regulatory milestones, other major milestones, key performance measures, and major deliverables;

(iii) Discussion of pending baseline change proposals, as applicable;

(iv) Analysis of funds expenditure, with projections for the task orders and projects by Fiscal Year and life of the Contract;

(v) Technical scope, schedule, and cost variance analysis; including implications to near term and long term milestones and deliverables at risk of being missed;

(vi) Discussion of corrective actions currently in place to address performance issues including initiation date of corrective actions; and

(vii) Information on any safety or quality matters that emerged or persisted during the reporting month.

(d) Each of the major work scopes, task orders, and project reports shall include:

(1) Contractor program manager's narrative assessment including:

(i) Significant accomplishments and progress towards completion of major work scopes, task orders, and project goals and objectives

(A) Key risks and challenges; and

(B) Evaluation of safety performance (including ISMS metrics and all recordable injuries, lost-time injuries, and near misses).

(2) Business structure information to demonstrate ongoing compliance with the requirements of the Section H Clause entitled, *Subcontracted Work;*

(3) Baseline Performance Reporting including:

(i) EVMS information using the following DOE Office of Project Management (PM) Integrated Program Management Report (IPMR) formats Data Item Description (DID) – DOE Version October 2018 (https://www.energy.gov/projectmanagement/services-0/earned-value-management/evms-implementation-guidance);

(ii) Format 1, Form 2734/1, Work Breakdown Structure;

(iii) Format 2, Form 2734/2, Organizational Categories;

(iv) Format 3, Form 2734/3, Baseline;

(v) Format 4, Form 2734/4, Staffing; and

(vi) Format 5, Form 2734/5, Explanations and Problem Analysis.

(4) The Contract Performance Reports shall be provided in DOE PM IPMR formats DOE Version October 2018 unless the Contract specifies otherwise;

(5) Contract Funds Status Report (CFSR) shall be provided in accordance with the DOE PM CFSR DID, DOE Version October 2018 or equivalent (https://www.energy.gov/projectmanagement/services-0/earned-value-management/evms-implementation-guidance);

(6) Baseline schedule status, which reflects progress against the baseline and includes critical path analysis, performance trends, variance discussion(s), and potential issues related to milestones;

(7) Task Order and Project ETCs and EACs;

(8) A change control section that summarizes the scope, technical, cost, and/or schedule impacts resulting from any implemented actions; and that discusses any known or pending baseline changes and utilization of management reserve;

(9) Task Order and project risk assessment, including identification of critical risks, actions planned, and actions taken to address those risks, potential problems, impacts, and alternative courses of action, including quality issues, staffing issues, assessment of the effectiveness of actions taken previously for significant issues, or the monitoring results of recovery plan implementation;

(10) The Task Order and project risk assessment shall also identify the engineering and technology to reduce the risk and uncertainty with the task/project; and

(11) Actions required by DOE, including GFS/I and DOE decisions.

#### *C.2.9.5.2 Contract, Program, and Project Review Meetings*

The Contractor shall participate in a monthly contract/program review (including projects, as applicable) and be prepared to address any of the information in the monthly report and other information as requested by DOE. A weekly contract or program status meeting shall be conducted at DOE's request to provide interim updates and address issues.

### C.2.9.6Cost Estimating

(a) Cost estimates shall be credible, well documented, accurate, and comprehensive.

(b) Contractor developed cost estimates form the basis of the cost baseline of the Master CPB and are important when evaluating proposed Contract changes. DOE uses these cost estimates for budget formulation, Contract change management, cleanup program planning, establishing a database of estimated and actual costs, and performance measurement. The Contractor shall prepare cost estimates in accordance with the requirements in Section H, *Cost Estimating System Requirements* and Section H, *Task Ordering Procedure* of this Contract and using *The Twelve Steps of High-Quality Cost Estimating Process* identified by the Government Accountability Office (GAO) in GAO-09-3SP, *GAO Cost Estimating and Assessment Guide*, for all priced Contract actions exceeding the simplified acquisition threshold.

### C.2.9.7Scheduling

(a) The Contractor's schedules shall utilize any DOE provided coding structure to integrate the Contractor's activities and capital asset projects at DOE HQ.

(b) The Contractor shall develop all schedules in accordance with the NDIA's *Planning & Scheduling Excellence Guide* (v3.0), and EIA748 Guidelines. The Contractor's IMS shall be resource loaded.

### C.2.9.8Risk Management

(a) Successful execution of the site cleanup mission requires an integrated risk management program where crosscutting risks and mitigation actions are identified, communicated, and coordinated with DOE and other site contractors. The conduct of risk management shall result in risk informed prioritization of program, project and infrastructure investments that facilitate successful program management and execution of contracts and projects.

(b) The Contractor shall implement a risk management program in compliance with DOE policy "Environmental Management Program Management Protocol." The Contractor shall also incorporate the principles of DOE G 413.3-7A, *Risk Management Guide*, and GAO-09-3SP in its risk management process.

(c) The Contractor shall submit a Risk Management Plan (RMP) to DOE for approval (see Section J, Attachment J-4, *Contract Deliverables*). The capital asset projects do not need to have standalone risk management plans and instead, may be an appendix to the RMP. The plan shall identify the processes and procedures that will be implemented to address risk identification, qualitative risk assessment, quantitative risk analysis, risk handling, schedule risk analysis, risk monitoring and reporting and calculating the recommended management reserve and schedule reserve required for adequate management of Contractor-controlled risk.

(d) The Contractor shall communicate its risk analysis pertaining to crosscutting decisions to DOE and other site contractors, including agreement as to who shall be the lead for managing each risk. These crosscutting impacts shall be quantified in terms of probability, cost, and schedule impact to the overall site cleanup mission where possible.

## C.2.10 Public Affairs and Communications

The Contractor shall assist and support DOE in the development and support of public participation program relative to the implementation of the Phase 1B decommissioning activities and the selection of the Phase 2 decommissioning decision for the site. The Contractor shall assist and support the DOE during meetings with the regulatory agencies and with the public including the Citizen Task Force (CTF), Quarterly Public Meetings (QPM), environmental groups, and other interested parties to discuss the progress and results of the work scope identified in this PWS including the preparation and submitting presentations at CTF and QPM meetings and compilation of site historical data, as needed. The Contractor shall support the DOE in outreach and response to elected officials, stakeholders, regulators, and Tribal entities including, but not limited to, preparation for briefings, public presentations, and search, review, and reproduction of documents and records.

The Contractor shall, in addition to its own employees, engage in cooperative interactions through and with these organizations, including but not limited to:

NRC, U.S. Environmental Protection Agency (USEPA), NYSDEC, NYSERDA, Occupational Safety and Health Administration (OSHA), EMCBC, DOE Headquarters, Congressional Staff, U.S. Department of Labor, Inspector General (IG), U.S. Attorney's Office, GAO, Defense Contract Audit Agency (DCAA), West Valley Citizens Task Force, Coalition on West Valley Nuclear Wastes, Seneca Nation of Indians, Local Emergency Responders and Law Enforcement, other State and Federal Agencies, as applicable.

### C.2.11 Real Property Asset Management

The Contractor shall comply with the real property asset management requirements identified in the Section H clause entitled *Real Property Asset Management,* as well as the other contract requirements applicable to real property, for all assigned real property, listed in Exhibit C-1 *Facility Description and Status*.

Regardless of who performs the work, the Contractor shall be responsible for compliance with this clause and is responsible for flowing down real property requirements to subcontractors to the extent necessary to ensure compliance.

The Contractor is responsible for input and maintenance of all data required to be included in the FIMS.

### C.2.12 Personal Property

The Contractor shall develop, submit to DOE, and maintain a DOE approved Property Management System that meets the criteria presented in Section H, entitled *Contractor Property Management System Administration* and *Management of Accountable Property* (see Section J, Attachment J-4, *Contract Deliverables*). The Contractor shall disposition Automatic Data Processing Equipment (ADPE) in accordance with the requirements in 41 CFR 109-43.307-53.

The Contractor shall perform personal property disposition operations to manage excess and surplus property, conduct public personal property sales, and coordinate other personal property disposition methods. The Contractor shall make provisions for site access for other entities to conduct required characterization and/or independent verification during the dispositioning of any personal property by the Contractor (e.g. safety briefings, monitoring, escorts, etc.).

The Contractor shall develop and maintain a program for the maintenance and operation of motor vehicles and equipment. The program shall comply with all applicable regulations, state and local laws and property management requirements.

The Contractor will develop a detailed inventory and proposed disposition of excess equipment (shipping containers, office trailers, etc.) located in outdoor areas throughout the WVDP Project Premises. Examples of such areas with excess equipment include the area adjacent to the

Vitrification Test Facility (See Facility 68) and the AA Hardstand (See Facility 142). The Contractor shall prepare a detailed inventory of all equipment, containers, and trailers located throughout the WVDP Project Premises and evaluate the future use, if any, of this material. The Contractor shall prepare an Annual Property Inventory Report for submittal to the DOE-WVDP that describes the proposed disposition of this material on an annual basis (see Section J, Attachment J-4, *Contract Deliverables*).

### C.2.13 Records

The Contractor shall create/manage records in accordance with 44 USC Chapters 21, 29, 31, 33, and 35; 36 CFR, Subchapter B (Chapter XII), "Records Management"; the current DOE Records Management Program Order in Section J, Attachment J-2, OMB/NARA Memorandum M-23-07, "*Update to Transitioning to electronic Records*", OMB/NARA Memorandum M-19-21, "*Transitioning to Electronic Records*" and any other DOE requirements as directed by the CO. All records shall be created electronically (born digitally) to the fullest extent possible. Records that cannot be born digital and historical records obtained from a predecessor contractor must also be managed in electronic format (digitized) in accordance with NARA requirements. The Contractor shall develop and implement records management controls to ensure that the identification, maintenance, and disposition of all records (including email), are managed utilizing an ERMS that meets the requirements of NARA's Universal Electronic Records Management (UERM) requirements. The Contractor shall ensure the ERMS for site records is designed and implemented to allow DOE access to the records inventory (e.g., drawings, sketches, specifications, procedures, etc.). The Contractor shall submit a Records Management Plan that documents the records lifecycle, including but not limited to electronic records, email records, digital signature process, audiovisual, quality records, essential records, file plans, electronic information systems, and disposition (see Section J, Attachment J-4, *Contract Deliverables*). The Contractor shall work with the EMCBC Records Management Field Officer (RMFO) regarding any records questions.

Record management functions include, but are not limited to, tasks associated with creation/receipt, maintenance, storage/preservation, protecting, scheduling, indexing, and dispositioning active and inactive records, (including email), records retrievals, managing Controlled Unclassified Information (CUI); providing Records Management training, and supporting ongoing Freedom of Information Act (FOIA), Privacy Act, Energy Employees Occupational Illness Compensation Program Act (EEOICPA), Former Worker Medical Screening Program, Congressional inquiries, litigation holds, legal discovery requests and other record requests.

The Contractor shall preserve, update, and correct (if necessary) all existing high-level waste (HLW) production and storage records in accordance with applicable waste-acceptance technical requirements. The Contractor shall receive and maintain records generated by other DOE contractors, as designated and directed by the Contracting Officer under Section C.2.17, Support to DOE.

The Contractor shall establish and sustain an essential records program to ensure continuity of operations (COOP) during and after an emergency as prescribed by laws, regulations, and directives, that ensures DOE makes and preserves records of the Department's organizations, missions, functions, policies, decisions, procedures, and essential transactions. A copy of the Essential Records Program Plan and Inventory shall be provided to DOE annually for approval (see Section J, Attachment J-4, *Contract Deliverables*).

***Electronic Information Systems (EIS)***

The Contractor shall manage records contained in electronic information systems (EIS) by incorporating recordkeeping controls into the system or exporting (moving) the records into the ERMS in accordance with 36 CFR 1236 "Electronic Records Management". An EIS is defined as systems that automate certain business functions. The Contractor must design and implement migration strategies to counteract hardware and software dependencies when electronic records are not exported to an ERMS and have a retention beyond the life of the information system in which the records are originally created and captured. The Contractor shall provide an inventory that shall include all elements required by NARA for an EIS inventory to DOE annually, for approval (see Section J, Attachment J-4, *Contract Deliverables*).

***Inventory and File Plan***

The Contractor shall conduct records inventories in order to develop a file plan that provides the identification, location, arrangement, assignment of the NARA-approved DOE Records Disposition Schedule/Disposition Authority, of all categories (record series) of records created and received, including Contractor-owned. The Contractor shall submit to DOE the site-wide file plan for review/approval by DOE (see Section J, Attachment J-4, *Contract Deliverables*). The plan shall be updated annually documenting via track changes updates from the prior approved version.

***Records Maintenance / Use***

The Contractor shall maintain and preserve all records, including records from a predecessor contractor stored at a Federal Records Center (FRC), and in the ERMS. The Contractor shall ensure that records generated in the performance of the Contract containing personal information routinely retrieved by name or other personal identifier are classified and maintained in Privacy Act System of Records (SOR) in accordance with FAR 52.224-2, *Privacy Act* (Apr 1984), and DOE Order 206.1, *Department of Energy Privacy Program*.

All records (see 44 USC 3301 for statutory definition of a record) acquired or generated by the Contractor in performance of this Contract, except for those defined as contractor-owned (see Section I, DEAR 970.5204-3, *Access to and Ownership of Records*), and including, but not limited to, records from a predecessor contractor (if applicable) and records described by the Contract as being maintained in Privacy Act SORs shall be the property of the Government.

***Records Disposition***

The Contractor shall preserve and disposition records in accordance with the NARA-approved records disposition schedules. (Note: Records retention standards are applicable for the classes of records described therein, whether or not the records are owned by the Government or the Contractor [DEAR 970.5204-3]). The Contractor shall submit a records Disposition Plan which shall include the destruction process for records and information content (see Section J, Attachment J-4, *Contract Deliverables*). The Contractor shall not destroy any records prior to working with the DOE EMCBC RMFO. All destructions certificates require both the DOE EMCBC RMFO and Chief Counsel approvals.

The Contractor shall prepare/revise, submit for DOE approval, and execute an approved Records Management Plan, which addresses at a minimum, Site-wide File Plan, Records Disposition Plan, Vital/Essential Records Program Plan, Vital Records Update, List of Electronic Information Systems, and Records Management Closeout Plan consistent with records management regulations (see Section J, Attachment J-4, *Contract Deliverables*).

### C.2.14 Communications and Information Management

The Contractor shall maintain, manage, and oversee a General Support System (GSS), Industrial Control System (ICS, and multiple standalone systems used to execute the PWS. The Contractor shall ensure full compliance with all laws, regulations directives, and requirements outlined in Section H, entitled *Information Technology and Cyber Security Requirements* for systems supported residing at the Ashford Office Complex (AOC) and the site.

The current GSS and ICS are encapsulated as one Federal Information Security Modernization Act (FISMA) system authorization boundary but are in the process of being separated into two unique FISMA system accreditation boundaries: The WVDP GSS (which currently encapsulates both the GSS and ICS), and the WVDP ICS. Outlying standalone systems discovered that are not accounted for within the WVDP GSS or ICS accreditation boundaries shall be integrated and managed in accordance with this PWS, and as directed by the EMCBC Authorizing Official Designated Representative (AODR).

#### C.2.14.1 Network and System Operations

The Contractor shall provide network and system operations support as follows:

- Provide staffing support (on premise and remote system/network management) for the operation of AOC and site wide FISMA systems, communication capability, maintenance and management of voice, data, fax, video, satellite, and radio communication systems during regular site business hours.
- Maintain communications capabilities with other DOE sites and provide communications support for emergency operations.

- Provide access to DOE systems, enterprise databases (such as Computerized Accident Incident Reporting System **(**CAIRS), Occurrence Reporting and Processing System (ORPS), Noncompliance Tracking System (NTS), etc.), and local systems and databases.
- Provide site-related data and information requested by the DOE for the DOE site-specific public website.
- Assist with conducting internal application cyber security assessments under the direction of the EMCBC AODR (or designee), WVDP GSS Information System Security Manager (ISSM), Security Officer (ISSO) and DOE cyber security support services Contractor personnel. The Contractor shall be responsible for the timely planning and implementation of corrective actions derived from all operations-related cyber security internal assessment findings.
- Maintain an accurate accounting of support requests, man-hours expended and completed activities in the sites help desk platform the execution of all discreetly sponsored/funded IT projects, as well as other projects designated by the COR or the AODR. The Contractor shall initiate, update and log to completion, all assigned projects, tasks, milestones, tickets and application bug entries assigned under the purview of this PWS in the site help desk platform.
- Coordinate system installation and maintenance activities with system stakeholders to ensure minimal downtime or disruption of service to site service customers.
- Migrate FISMA accreditation boundaries from the commercial chbwv.com domain to a wvdp.doe.gov domain to satisfy requirements outlined in the Office of Budget and Management (OMB) memorandum M-23-10 in conjunction with guidance provided by the EMCBC AODR.

### C.2.14.2 Operations and Program Management

The Contractor shall provide operations and program management support as follows:

- Provide Operations and Program Management support for AOC and site and personnel.
- Provide support to WVDP IT Applications Support Contractor staff in the preparation of project plans, policies, procedures, technical instructions (including wikis), and cyber security program documents and exhibits.
- Provide integrated project coordination with other EMCBC and WVDP personnel in support of overall EMCBC and WVDP missions and IT operations.
- Maintain electronic documents in a designated file share or application repository on the WVDP GSS as directed by the ADOR (or designee) and/or COR.
- Assist EMCBC and WVDP Federal and Contractor staff in the conduct of regular cyber security assessments and audits by means of; preparation of documents and exhibits, conduct of regular and ad-hoc internal reviews and checklists, attendance of team meetings, participation in work group activities, and preparing written or oral evaluations and recommendations of technical solutions to cyber security concerns.

- Provide technical (non-hardware, non-software) and administrative support for the conduct of *internal* application cyber security assessments and reviews, under the direction of the EMCBC AODR (or designee), WVDP ISSM, ISSO and DOE cyber security support services Contractor personnel. The Contractor shall be responsible for the timely correction of all technical and administrative-related cyber security internal assessment findings.
- Conform to general industry standards and methodologies for IT system documentation and change control. The Contractor shall prepare, update, and submit for approval Application Project Plans, Baseline Change Proposals and Test Plans in accordance with WVDP operating procedures (see Section J, Attachment J-4, *Contract Deliverables)*. The Contractor shall maintain a centralized repository on the WVDP GSS for all network operations and Service Desk documentation such as internal procedures, protected password lists, wikis and other documents that are necessary for the continued operation of the WVDP IT systems and support functions. The Contractor shall make all documentation freely available to the AODR (or designee) and COR through the provision of access credentials and server resource locations where required.
- Maintain an accurate accounting of support requests, person-hours expended and completed activities for all discreetly sponsored/funded projects.
- Maintain a centralized repository on the WVDP GSS for all IT operations and general documentation that would be required for operation and administration of the Systems in the event of activation of EMCBC and/or WVDP COOP protocol, or other major system-wide disruption of services. Where security and/or access restrictions are required, the Contractor shall make said available to the AODR (or designee) and COR through the provision of access credentials and server resource locations.
- Assist EMCBC and WVDP Federal and Contractor staff in the preparation of responses to data calls, Freedom of Information Act (FOIA) requests and legal discovery requests.
- Ensure Contractor personal attend and complete employee safety and security training and briefings as directed by the COR.

### C.2.14.3 Cybersecurity Support

The Contractor shall provide cybersecurity support as follows:

- Develop and maintain security authorization packages for all systems and networks under the purview of this PWS in accordance with guidance provided by the EM-CSPP and the EMCBC AODR (or designee); maintain valid Authorities to Operate (ATOs) for all respective systems and networks under the sites purview (see Section J, Attachment J-4, *Contract Deliverables*).
- Provide support in areas of cyber security for the design, development, operations, and maintenance of desktop computers and typical desktop business applications, including

installation and configuration of desktop and server-based security software, continuous monitoring (CM) software, and security hardware firewalls and appliances.

- Proactively identify, investigate and mitigate instances of cyber security concerns that have been identified by internal or external sources.
- Develop and maintain an inventory of desktop and server software installed in supported system and network environments.
- Ensure all Contractor personnel performing IT/Cybersecurity work under this Contract read and familiarize themselves with site IT/Cybersecurity policies, procedures and documentation required to support and manage the system and network environments. Personnel shall provide an acknowledgement statement that confirms their compliance with the required reading, annually and when new Contractor employees commence work.
- Provide support to the EMCBC AODR (or their designees) in the conduct of internal/external cyber security assessments in accordance with the sites respective SSP requirements and schedule by means of the following: preparation of documents and exhibits, conduct of regular and ad-hoc internal reviews and checklists, attendance of team meetings, participation in work group activities, and preparing written or oral evaluations and recommendations of technical solutions to cyber security concerns.
- Ensure Contractor staff members who are assigned elevated access/rights on WVDP network resources such as servers and desktop computers comply with all WVDP Privileged Rules of Behavior, as promulgated by the AODR or site leadership.
- Prepare and conduct training sessions and prepare training materials for site staff on cybersecurity requirements, the functions and operation of IT security hardware and systems installed in the sites accreditation boundaries.
- Conduct analyses of system logs, forensic results, vulnerability assessments and penetration tests and provide recommendations and develop implementation plans to correct or mitigate analysis findings.
- Prepare and issue Integrated Joint Cybersecurity Coordination Center (IJC3) Cyber Incident Reports, summaries, and updates, develop and maintain an online log of issued IJC3 Incident Reports and maintain an electronic record of all IJC3 reports and associated inter-office correspondence.
- Assess and maintain NIST compliance of desktop and server software, internally developed applications, hardware and software procurement activities, and new and existing operating policies and procedures.
- Protect information and systems against loss, improper use, compromise, or unauthorized alteration or modification of information as required by DOE directives.

### C.2.14.4 Application Support

The Contractor shall provide application support as follows:

- Develop, install, maintain, deploy, upgrade and archive/retire WVDP Hosted Systems, Applications, and Services as directed by the AODR (or designee) and/or COR for web applications, web-based intranet resources, client/server applications and Microsoft SharePoint sites/applications operated by the site.
- Work directly with customer Application System Owners and Data Owners to develop requirements for new applications and changes or upgrades to existing applications.
- Conform to general industry standards and methodologies for software development, documentation and change control.

### C.2.14.5 Core Support Skills

The Contractor shall ensure contract support staff have working knowledge of IT system support and cyber security principles, practices and procedures required to effectively protect and manage the WVDP from both internal/external threats. This includes, but is not limited to, the following:

- IT Service Desk
- Customer Service
- End-User Training
- User Account Creation/Management
- Desktop IT Hardware Installation and Management
- End User Software Support for Custom Applications and Different Departmental Needs
- Audio/Video Teleconferencing (VTC) including Meeting Broadcasting
- Workgroup Printing and Multifunction Devices (MFDs)
- Mobile “Smart” Device Management
- IT Project Planning and Execution
- IT Asset Management and Lifecycle Planning
- IT Acquisition and FITARA
- Contingency/Emergency Planning
- IT System Configuration Control and Change Management
- National Institute of Standards and Technology (NIST) Security and Privacy Controls for Federal Information Systems
- Cyber Security Framework
- FIPS 199 Standards for Security Categorization of Federal Information and Information Systems
- FISMA
- Cisco ASDM
- IDS/IPS, Content Filtering and SSL Decryption
- Enterprise Network Firewall and Switching Technologies
- Virtual Private Networks (VPN) and Encrypted Tunneling

- Datacenter Monitoring including Power, Environmental and Server Capacity
- Physical access control systems
- Email Filtering/Firewall "Spam" Solutions
- Two-Factor Authentication Systems
- Email and File Encryption Methodologies and Implementation
- Public Key Infrastructure (PKI) including FIPS 201 Requirements for PKI
- Audit, Assessment and Oversight Participation and Mitigation
- Security Information and Event Management (SIEM)
- Log Correlation and Analysis
- Data Loss Prevention (DLP) including End-Point Security, Device Control and Authorization
- Cyber Incident Response and Investigation Techniques
- Endpoint Protection, Security Platform and Threat Prevention
- Federal Continuity of Operations (COOP)
- Microsoft Windows Active Directory Technologies and Management
- Voice Over IP (VOIP) Telecommunications
- Enterprise Desktop Software Management
- HSPD-12 Logical Access with Two-Factor Authentication
- Enterprise/Desktop Software Installation and Patching
- System Hardware Firmware/Patching
- Wide Area Network (WAN) Design and Administration
- Local Area Network (LAN) Design and Administration
- Remote Access and Remote Desktop Protocol (RDP)
- Thin Clients "Diskless" Workstation
- Virtual Desktop Infrastructure (VDI)
- Network Switching and Routing including VLANs
- Network Performance, Configuration and Monitoring Solutions
- Infrastructure Health and Performance Monitoring
- Enterprise-Level Backup/Recovery Systems
- Microsoft Systems Center Configuration Manager (SCCM)
- Operating Systems Imaging, Deployment and Management
- Microsoft Exchange Administration
- Microsoft Hyper-V and Virtualization Technologies
- SQL-based DBMS
- Webpage and Application Presentation, Scripting and Programming Languages
- Database Administration
- Web Application Security Best Practices and Auditing
- Microsoft IIS Administration and Security Best Practices

- Website Content Management
- Electronic Records Management System (ERMS) Support
- Email Archiving Solutions
- Capstone General Records Scheduling (GRS)
- E-Discovery and FOIA
- Zero Trust Architecture
- Federal Risk and Authorization Management Program (FedRAMP) Authorization Process

### C.2.15 Administration of Pension and Benefit Plans

The Contractor shall sponsor and administer the West Valley Pension Plan and all other existing benefit plans (including post-retirement medical) for eligible employees in accordance with the terms and conditions in Section H and the respective plan documents.

Costs for benefit plans shall be reimbursable in accordance with Section H clause entitled, DOE-H-2001 *Employee Compensation: Pay and Benefits* (Jun 2022). Administration costs may include purchased services, fees/premiums, and contributions associated with the management of the benefit programs and pension plans.

### C.2.16 Other Project Support

The scope of this section includes activities such as Business Administration, Internal Audit, Employee Concerns Program (ECP), and other general performance requirements (see Section J, Attachment J-4, *Contract Deliverables*). The Contractor shall develop, implement, and maintain the required plans and actions in accordance with the laws, regulations, and DOE directives applicable to each of the scope areas described in this section and have optimized these services through an integrated planning approach.

The Contractor shall provide the resources necessary to perform the contract work scope including, but not limited to the following general management support:

- legal;
- contracting;
- procurement;
- human resource management;
- accounting and financial support; and
- administrative support.

### C.2.16.1 Internal Audit

The Contractor shall establish and maintain an internal audit function and submit to DOE (see Section J, Attachment J-4, *Contract Deliverables*). The Contractor shall:

- Conduct internal audits and examination of the records, operations, management systems and controls employed in programs and administrative areas, expenses, subcontractor costs and the transactions with respect to costs claimed to be allowable under this Contract, at least annually. Ensure the systems of controls employed by the Contractor are audited, documented, and satisfactory to the Contracting Officer. Up to eight (8) additional audits shall be conducted based on risk analysis, including input from DOE. The results of such audits, including the working papers, shall be submitted or made available to the DOE CO or a Contracting Officer Representative (see Section J, Attachment J-4, *Contract Deliverables*). The Contractor shall include this requirement in cost-reimbursement subcontracts (time and materials, labor hour, cost plus for non-fixed price contracts) with an estimated cost exceeding $5 million and expected period of performance for more than 2 years, and other cost-reimbursement subcontracts as determined by DOE;

- Provide annual Subcontract Audit plans for Contracting Officer approval, which lists planned audits to be performed. The Contractor shall perform internal audits consistent with unmodified Institute of Internal Audit (IIA) and external audits consistent with unmodified Generally Accepted Government Auditing Standards (GAGAS) (see Section J, Attachment J-4, *Contract Deliverables*).

- Provide annual Internal Audit plans for Contracting Officer lists planned audits to be performed. The Contractor shall perform internal audits consistent with IIA audit standards (see Section J, Attachment J-4, *Contract Deliverables*); and

- Provide to the Contracting Officer annually, or at other intervals as directed by the Contracting Officer, copies of the reports reflecting the status of recommendations resulting from management audits performed by its internal audit activity and any other audit organization (see Section J, Attachment J-4, *Contract Deliverables*).

### C.2.16.2 Employee Concerns Program

The Contractor shall establish, submit for DOE approval, and maintain an ECP that effectively addresses, resolves, and prevents recurrence of employees' concerns and complies with DOE Order 442.1, *Department of Energy Employee Concerns Program* (see Section J, Attachment J-4, *Contract Deliverables*).

The Contractor shall also:

- Accept, for resolution, existing employee concerns unresolved at the close of the initial Contract transition period;

- Participate in the chartered Site-wide ECP committee;

- Assist DOE in the resolution of employee concerns in a manner that protects the health and safety of both employees and the public and ensures effective operation of DOE-related activities under their jurisdiction;

- Conduct an annual self-assessment to measure the effectiveness of the ECP and implement corrective actions, as necessary; and

- Provide timely notification to DOE of significant staff concerns or allegations of retaliation or harassment.

### C.2.16.3 Infrastructure Support

The Contractor shall be responsible for infrastructure services including, but not limited to, the following infrastructure support services:

- on-site traffic management;

- transportation necessary to perform work under the contract;

- warehouse shipping/receiving;

- worker training and qualification services; and

- mail services (for on-site facilities and the Ashford Office Complex (AOC) offices).

### C.2.16.4 Government-Furnished Services / Items

The Contractor will be provided with some programs and services to accomplish its mission. A listing of services and information is given in Section J, Attachment J-3, *Government-Furnished Services / Items (GFS/I)*. DOE is committed to providing effective support to the Contractor throughout the period of Contract performance, and the Contractor may request that the DOE consider providing additional GFS/I.

To manage the GFS/I furnished under this Contract, and to evaluate additional GFS/I that may be required by the Contractor, the Contractor shall submit for DOE approval:

(1) GFS/I Request: 12-month advance projection of GFS/I to be furnished under the Contract and additional Contractor-requested GFS/I, submitted prior to each fiscal year for DOE approval (see Section J, Attachment J-4, *Contract Deliverables*).

(2) GFS/I Request - Updates: Quarterly update to the projection of GFS/I to be furnished under the Contract and additional Contractor-requested GFS/I, submitted prior to each quarter for DOE approval (see Section J, Attachment J-4, *Contract Deliverables*).

If the DOE can support the additional Contractor-requested GFS/I, the DOE will notify the Contractor within 30 days that the additional Contractor-requested GFS/I can be provided, and

will provide the Contractor details regarding DOE action(s). The supported GFS/I will be added to Section J, Attachment J-3 by Contract modification. If the DOE cannot support a Contractor request, the DOE will notify the Contractor within 30 days that the requested GFS/I cannot be provided, and there will be no DOE commitment to the Contractor to furnish the GFS/I. For the additional Contractor-requested GFS/I, the DOE will use its best efforts to meet these requests. However, in the event the DOE is unable, for any reason, to provide the Contractor with its requested additional GFS/I, the Contractor remains fully and solely responsible for obtaining the needed services and/or items in a timely manner and without any further recourse against the DOE.

### C.2.17 DOE Support

The Contractor shall provide additional DOE support as requested. The following sections provide background on the anticipated support tasks, although other support tasks may not be listed.

#### C.2.17.1 Support to DOE Office

The Contractor shall maintain the current office space at the AOC for approximately thirty-five (35) DOE personnel (including support personnel). The Contractor shall also provide on-site office space for up to ten (10) DOE or DOE support personnel. Office space shall include areas for information technologies and administrative functions (e.g., file storage, conference room, office supply storage). Any change to office space will be coordinated with and approved by DOE.

The Contractor shall provide one on-site office for NYSERDA personnel. The office should be no less than 200 square feet.

In satisfying all requirements identified in or relative to DOE responsibilities in the Cooperative Agreement between USDOE and NYSERDA, Supplemental Agreements to the Cooperative Agreement, and other agreements/orders, the Contractor shall provide technical and administrative support to DOE. The Contractor shall support DOE in outreach and responses to inquiries from Congressional offices, NYSERDA, stakeholders, regulatory, and Tribal entities, as well as with other requests for documents and information as stated in Section C.2.13 Records. Such support shall include, but not be limited to, preparation for briefings, public presentations, search, review, and reproduction of documents and records. Such support is in addition to and not in lieu of any regulatory support provided under Sections C.2.2, Environment, Safety, Health and Quality Assurance Program.

#### C.2.17.2 Radiological Assistance Program

The Contractor shall support Radiological Assistance Program (RAP) with separate funding provided by DOE through the National Nuclear Security Administration (NNSA). Upon request by DOE, the Contractor shall provide Radiological Control Technicians, Radiological Control Supervisors, and other support personnel as deemed necessary by DOE to support requests for

assistance during radiological emergencies or other events/activities requiring radiological expertise. The Contractor agrees to allow personnel supporting RAP to be appropriately trained in accordance with DOE requirements, and further agrees to provide for the storage and security of any DOE supplied equipment. The Contractor shall supplement response activities with Project equipment and vehicles when needed, if available, and maintain/develop all required plans, procedures and reports.

### C.2.17.3 Dosimetry and Radiobioassay Programs at the DOE EMCBC – New York Project Office

The Contractor shall provide dosimetry and radiobioassay services to EMCBC-New York Project Office, in full compliance with the requirements set forth in 10 CFR 835.

- Provide complete external dosimetry services including, but not limited to, TLDs (including extremity dosimeters), TLD issuance and processing, employee counseling, all required record keeping, and reporting and records issuance/requests for compliance with 10 CFR 835 and other applicable regulations.
- Provide complete whole body counting services (e.g., initial site employment, periodic, and termination of employment and/or additional whole body counts as required by procedure or agreed upon by contractor technical points-of-contact) including but not limited to, performing whole body counting, data interpretation, employee counseling, and record keeping.
- Provide complete radiobioassay services, including but not limited to, collection, processing, data interpretation, employee counseling and record keeping. In addition, to routine bioassays, special bioassays will be performed as required by procedure or as agreed upon by contractor technical points-of-contact.
- Provide all required and/or necessary initial and recurring training for EMCBC-New York Project Office staff, which may be involved in supporting the radiobioassay and dosimetry programs.
- Provide required quality assurance program support related to implementation of radiobioassay and dosimetry programs.
- Perform periodic audits of program activities implemented at EMCBC-New York Project Office.

EMCBC-New York Project Office reserves the right to increase or decrease the number of individuals participating in the program. Prior to increasing or decreasing the number of program participants, EMCBC-New York Project Office will submit a written request to the DOE-WVDP Contracting Officer and Program Point-of-Contact. The Contractor may provide the requested services in accordance with existing approved programs, policies, procedures or other program implementation documents. EMCBC-New York Project Office accepts full responsibility for ensuring that all personnel participating in the program, including subcontractors fully comply with all DOE-WVDP program requirements and programmatic decisions made by DOE-WVDP and implemented through the Contractor. In order to maintain the integrity of the WVDP

DOELAP accreditation, DOE-WVDP program procedures and requirements will apply to all of the services provided and in the event of a conflict, DOE-WVDP decisions are final. EMCBC-New York Project Office is not authorized to provide direction in any form or manner to the Contractor. All requests for programmatic, procedural, technical, or other direction will be processed through the DOE-WVDP Contracting Officer's Representative and/or the DOE-WVDP Contracting Officer.

The Contractor shall participate in Oak Ridge National Laboratory's In Vivo (Direct Bioassay) Intercomparison Studies Program in support of the radiation protection/dosimetry program and establish necessary services agreements. The Contractor shall also establish necessary services agreements to obtain specific irradiation and calibration services in support of this program through the Pacific Northwest National Laboratory. Both these actions will require Inter-Agency Agreements coordinated with the four DOE entities (WVDP, EMCBC-NY, ORNL, and PNNL) be in place upon initiation of the program.

The Contractor shall be reimbursed for any and all costs associated with the provision of Dosimetry and Radiobioassay Programs including, but not limited to, all labor (including costs associated with necessary overtime or on-call/wait time), materials, equipment, travel, per diem and subcontracted services, provided the costs are determined to be allowable, allocable and reasonable.

### C.2.17.4 Occupational Medicine & Health Support

The Contractor, under 10 CFR 851, shall obtain the services of a Board Certified Occupational Medical (Occupational Medicine) Doctor to provide occupational health services for DOE Federal employees meeting the requirements of DOE Order 341.1, Federal Employee Health Services (excluding Attachment 1, 2.b Employee Assistance Programs (EAPs)) to ensure the following:

- All DOE Federal Employees are screened in order to determine whether a medical evaluation is required;
- All Federal Employees in arduous and hazardous occupations are medically qualified for their positions through sound medical practices (inclusive, but not limited to) medical and physical examinations, interpretation and notification of test results, and necessary follow-on care or prescriptions;
- Medical assessments monitor individuals for adverse health effects and determines the effectiveness of exposure prevention strategies, inclusive of aggregate surveillance data over time, with the goal of reducing and ultimately preventing occupational illness and injury;
- The physician responsible for the delivery of medical services or his/her designee informs the DOE Federal Employee and DOE Federal Staff Manager of appropriate employee work restrictions; and

- All agency-funded occupational medical programs meet or exceed the guidelines set out by applicable federal regulation.

The Contractor shall provide DOE Federal Employee and DOE Federal contract support employees with safety and health Personal Protective Equipment (PPE) with full parity of the Contractor employees (e.g., over-the-shoe anti-slip (traction) devices, reflective gear, ANSI Class 2, ANSI Class 3, Public Safety, Flame Resistant, non-ANSI, Surveyors, and Incident Command, general use safety glasses (Z87.1, Occupational and Educational Personal Eye and Face Protection Devices), OHSA approved Hard Hat(s) (ANSI Z89.1., 29 CFR 1910.135(b)(1), and 29 CFR 1926.100(b)(1)). The Contractor shall also provide DOE Federal Employees and DOE Federal contract support employees with site-specific PPE, such as disposable gloves, work gloves, fall protection devices, and hearing protection, when required by an Industrial Work Permit, a similar work planning document, or upon request.

The Contractor shall provide DOE Federal Employee and DOE Federal contract support employees safety and health training in full parity with Contractor employees. The training shall be based on a systematic analysis of the WVDP Site and continuous assessment of the employee risk and potential exposures to complex occupational hazards. The Contractor shall provide HAZWOPER instructional training (40-hour, 24-hour, 16-hour bridge class when necessary, and annual 8-hour refresher).

The Contractor shall provide a record system for the maintenance of DOE Federal Employee records based on the previously established expectations and responsibilities regarding the current mandatory requirements under 5 CFR part 293, subpart E, Employee Medical File System Records, which is the required guidance on maintaining medical files by the DOE.

### C.2.17.5 Support to Other DOE Contractors

The Contractor shall provide support to other DOE contractor(s). The Contractor shall also support NYSERDA as required through its cooperative agreement with DOE (Cooperative Agreement between USDOE and NYSERDA and Supplemental Agreements to the Cooperative Agreement). The Contractor is responsible for providing support services, consistent with technical direction provided under Section I clause entitled DEAR 952.242-70, *Technical Direction*.

DOE anticipates the following types of services:

- Coordination and integration of interface between the Contractor, the Contractor's subcontractors, and other DOE contractor(s), and scheduling of work;
- Oversight of other DOE contractor(s) compliance with the requirements of the Contractor's ISMS;
- Laboratory analysis and characterization services;
- Environmental permit coverage;

- Access to existing utility services, including natural gas and electricity;
- Access to waste storage facilities and systems which could include physical access to such facilities and systems for the purpose of treating waste, and or storing waste;
- Disposal of other DOE Contractors' waste, however DOE expects that waste characterization responsibilities will reside with the generator;
- Access to existing communications capabilities;
- Site access, badges (HSPD-12), and security services;
- Site access training; and
- Provision of data, information, analyses and/or other documentation.

Additionally, the Contractor will be expected to interface with an environmental characterization contractor tasked with responsibility for independently verifying that decommissioning criteria have been met at the completion of activities described in this Contract (e.g., third-party remedial QA contractor for FSSU release). Once the Contractor has excavated soils from a survey unit, and confirmed that the area has met Decommissioning Plan and/or RCRA closure requirements, the Contractor shall allow the environmental characterization contractor(s) safe access to the survey unit for independent verification. In the event that a survey unit is determined to have failed the final status survey or RCRA verification process, the Contractor shall conduct additional remediation, as required to meet the requirements of the PWS.

In the event of a dispute between the Contractor and other DOE contractors, the DOE Contracting Officer shall serve as the point of contact for resolution of claims.

### C.2.17.6 Taxes and Insurance

The Contractor shall obtain liability insurance to cover NYSERDA staff and actions on the site (past policies limits were $5,000,000).

## C.3 SAFEGUARDS AND SECURITY (SAFE AND COMPLIANT BASE OPERATIONS)

The Contractor shall administer the S&S Program in accordance with the DOE directives, and site-specific S&S Security Plans and procedures approved by the EM Officially Designated Federal Security Authority (ODFSA).

The objectives of the Contractor S&S program shall be to incorporate a risk-based approach to protect assets and activities against the consequences of attempted theft, diversion, terrorist attack, industrial sabotage, radiological sabotage, chemical sabotage, biological sabotage, espionage, unauthorized access, compromise, and other acts that may have an adverse impact on national security, the environment, or pose significant danger to the health and safety of DOE Federal and contractor employees or the public, in accordance the DOE Design Basis Threat (DBT).

To meet these objectives, the Contractor shall ensure that sufficient personnel are appointed/assigned to implement the following S&S topic areas, consistent with applicable DOE directives and requirements:

**S&S Program Planning**
The Contractor shall develop, submit for ODFSA approval, and maintain an integrated plan that incorporates how the Contractor will comply with (see Section J, Attachment J-4, *Contract Deliverables*):

- ODFSA approved S&S plans and procedures,
- Security conditions (SECON) program,
- Performance assurance program, and
- Survey, review and self-assessment program.

**S&S Program Management Operations**
The Contractor shall develop, submit for ODFSA approval, and maintain an integrated plan that incorporates how the Contractor will comply with (see Section J, Attachment J-4, *Contract Deliverables*):

- Foreign ownership, control, or influence (FOCI) program,
- Facility clearance and registration of S&S activities,
- S&S awareness training program,
- Control of classified visits program,
- S&S training program,
- Restrictions on the transfer of security funded technologies program, and
- Process for requesting exemptions and equivalencies for S&S programs.

**Protective Force (ProForce) Operations**
The Contractor shall develop, submit for ODFSA approval, and maintain an integrated plan that incorporates how the Contractor will comply with (see Section J, Attachment J-4, *Contract Deliverables*):

- Management,
- Training,
- Duties,
- Weapons and munitions,
- Facilities and equipment, and
- Performance testing

**Physical Protection**
The Contractor shall develop, submit for ODFSA approval, and maintain an integrated plan that incorporates how the Contractor will comply with (see Section J, Attachment J-4, *Contract Deliverables*):

- Physical protection planning,
- Security areas,
- Prohibited and controlled articles,
- Posting notices,
- Security locks and keys,
- Barriers,
- Secure storage,
- Entry and exit screening, and
- DOE security and local site-specific badge program.

**Insider Threat Program (ITP)**
The Contractor shall d develop, submit for ODFSA approval, and maintain an integrated plan that incorporates how the Contractor will comply with (see Section J, Attachment J-4, *Contract Deliverables*):

- Develop and Maintain an ITP to deter, detect, mitigate, analyze, and respond to insider threats,
- Fulfills and maintain consistency with
  - National Insider Threat Policy and,
  - Minimum Standards for Executive Branch Insider Threat Programs.
- Develops methodology to identify and deter insider threats,
- Ensures legal, civil and privacy rights and civil liberties are preserved and protected,
- Integrates insider threat related policies, procedures, and resources,
- Identification, collection, and processing of data required to identify and address insider threats;
- Coordinates insider threat analysis, response and mitigation actions with appropriate law enforcement agencies, DOE intelligence, security, legal counsel, inspector general, human capital and other cognizant organizations,
- Establishes, maintains, and conducts training or awareness activities to ensure all cleared Federal and contractor employees are informed of their responsibilities and provided required information related to the ITP.

**Information Security and Classification**
The Contractor shall develop, submit for ODFSAs Federal Classification Officer approval, and maintain an integrated plan that incorporates how the Contractor will comply with Information Security and Classification requirements, that include (see Section J, Attachment J-4, *Contract Deliverables*):

- General requirements, handling and protection, marking, accountability, classified information in use, storage, reproduction, transmission and receipt, and destruction,
- Ensuring foreign government information is protected,
- Release or disclosure of US classified information to foreign governments,
- Disclosure and release in emergency situations, and
- Operations Security programs to ensure protection of critical information.

The Contractor shall ensure a contractor classification officer is designated to administer the classification program and monitor classifications programs under its cognizance.

**Controlled Unclassified Information (CUI)**
The Contractor shall develop, submit for DOE approval, and maintain an integrated plan that incorporates how the Contractor will comply with (see Section J, Attachment J-4, *Contract Deliverables*):

- CUI applicability,
- Identification,
- Marking,
- Communication,
- Safeguarding,

- Training,
- Access and sharing,
- Dissemination,
- Decontrol,
- Destruction,
- Equivalency and exemptions, and
- Misuse.

**Personnel Security (PerSec)**
The Contractor shall develop, submit for ODFSA approval, and maintain an integrated plan that incorporates how the Contractor will comply with (see Section J, Attachment J-4, *Contract Deliverables*):

- Cleared and uncleared issuance of Homeland Security Presidential Directive (HSPD) 12 badges,
- Access authorizations,
- Human reliability,
- Control of classified visits, and
- S&S awareness training program.

**Foreign Visits and Assignments (FVA&A)**
The Contractor shall develop, submit for ODFSA approval, and maintain an integrated plan that incorporates how the Contractor will comply with (see Section J, Attachment J-4, *Contract Deliverables*):

- Sponsor program management and administration,
- Counterintelligence requirements,
- Export controls and technology transfer,
- Security plan requirements, and
- Approval, periodic assessments, and reporting.

The Contractor shall ensure that all S&S personnel appointed/assigned to perform the duties listed above have appropriate access authorization, requisite knowledge, experience, qualifications, required equipment, and information technology resources. The Contractors shall ensure these personnel are not assigned other tasks that have the potential to impact the performance of their S&S duties.

The Contractor shall ensure that interfaces and necessary interactions between S&S programs and other disciplines such as other site contractor(s), off-site response, safety, emergency management, classification, counterintelligence, facility operations, cyber operations, and business and budget operations including property management are clearly identified, defined, documented, and approved.

## C.4 SITE OPERATIONS, MAINTENANCE, AND UTILITIES (SAFE AND COMPLIANT BASE OPERATIONS)

The desired outcome for Site Operations and Maintenance is to maintain nuclear and non-nuclear operational and surplus facilities, and inactive waste disposal areas in a safe, regulatory compliant, energy efficient, and cost-effective manner in accordance with State and Federal

requirements, approved authorization basis, and regulatory permit requirements (See also Section H Clause entitled, *Real Property Asset Management*.

### C.4.1 Site Operations and Maintenance

The Contractor shall perform day-to-day operations, maintenance, and repair of all designated facilities, systems, and equipment including, but not limited to, responding to service calls, emergencies, day-to-day systems operation, preventive maintenance, and minor alterations to site operations or conditions. The operational and surplus facilities to be maintained in a safe and compliant configuration are listed in Exhibit C-1, *Facility Description and Status*. In addition to site utilities, systems requiring maintenance are expected to include, but may not be limited to:

- Heating, ventilation, air conditioning and refrigeration systems (HVAC&R);
- Energy management control systems (EMCS);
- Fire alarm/suppression systems (including fire-suppression supply lines and water storage components);
- Backup generators/Uninterruptible Power Supply (UPS);
- Interior building finishes;
- Interior and exterior lighting;
- Exterior walls, windows, and signage; and
- Moisture protection and roofing.

### C.4.2 Roads and Grounds Services

The Contractor shall provide all grounds keeping services on an appropriate seasonal basis. Services are to include green space maintenance (grass cutting, trimming, planting); walkway, road, and parking lot repairs; snow plowing and removal, salting/sanding, and other general site maintenance as necessary to minimize incursion of wildlife into the populated areas of the site, and provide for the health, safety and well-being of employees and visitors to the site.

### C.4.3 Janitorial Services

The Contractor shall provide janitorial services necessary to keep and maintain a safe and healthful environment for employees and visitors to the site and the AOC offices.

### C.4.4 Site Utility Services

The Contractor shall provide utility services to all site facilities. The Contractor shall operate and maintain at all times all operating utility systems until they are no longer required.

The Contractor shall take utilities out of service as necessary to support site footprint reduction to support end-state completion. The Contractor may transition utility services as necessary to more effectively or efficiently operate facilities as the site footprint diminishes. The Contractor shall strive to minimize cost of this transition in utilities and maximize efficiency as it relates to

the WVDP mission. Any requests for utility upgrades or improvements for needs not related to performance of the contract scope will be addressed on a case-by-case basis.

The Contractor shall ensure compatibility with the maintenance and operational standards of the organization providing utility services to the site boundary. The Contractor shall procure electric power, natural gas, and natural gas transportation through an established Government contract. The Contractor is responsible for the daily management of these services including, but not limited to, ordering, receiving invoices, validation of invoices, and payment of invoices. The Contractor is responsible for the accurate monitoring and reporting of site utility usage.

Utility systems requiring maintenance are expected to include, but may not be limited to:

- Electrical distribution system;
- Natural gas distribution system;
- Potable water treatment and distribution system;
- Storm-water culverts and piping systems;
- Sanitary sewer piping systems;
- Miscellaneous utility and data systems; and
- Wastewater (including both radiological and industrial) treatment system, including ponds and lagoons.

### C.4.4.1 Operation and Maintenance of the Site Potable Water System

The Contractor shall continue the safe operation and maintenance of the site potable water system. The potable water system must be maintained and operated in compliance with NYCRR 10, Part 5. The potable water treatment system was constructed in 2016 and resides in a 24-foot by 24-foot modular construction pre-engineered metal building. The system services approximately 250 personnel with approximately five service connections and provides a raw water supply to the existing storage tank 32D-1 (used for fire suppression and industrial/utility uses). The raw water supply comes from two water withdrawal wells that are located in close proximity to the potable water treatment system building. There are two sentinel wells downstream of the site potable water system that are monitored in accordance with WVDP Standard Operating Procedure (SOP) 573.

### C.4.4.2 Operation and Maintenance of the Site and Ashford Office Complex Data Center

The Contractor shall continue safe operation and maintenance of the equipment in the onsite and AOC data centers. The onsite data center (See Facility 182) is housed in a constructed pre-engineered metal building and the AOC data center is housed in the AOC central server room. The Contractor shall communicate all proposed changes to either data center to DOE for approval.

### C.4.5 Operation and Maintenance of the Reservoir, Spillway, and Rail Line

The Contractor shall operate and maintain the site reservoir, auxiliary and emergency spillways, dams and all appurtenant structures in a safe condition at all times. The Contractor shall repair and maintain the reservoir, spillway system, and dam structures to ensure full functioning of the site water system, ensure integrity of the WNYNSC Class 1 railroad line supported by the dams, and eliminate overtopping of the dams. Improvements should be designed to ensure continued functioning of the system for 20 or more years. Such repair may entail 1) dredging of the channel connecting the two reservoirs; 2) repair of access road drainage features and dam groin areas; 3) maintenance and operation of the auxiliary and emergency spillways and primary outfall; 4) maintain the intake of the 18-foot diameter culvert under the railroad tracks near Dam 1 (including headwall reinforcement); and 5) design and installation of erosion control improvements to prevent erosion of the spillway toe, effusion of the outfall area, and erosion or scouring damage of any other susceptible areas.

The Contractor shall monitor, inspect, and maintain (to Class 1 Rail Standards) the segment of the Rail Spur that extends from the FRS Building to the main Buffalo & Pittsburgh (B&P) railroad line located south of the WNYNSC to ensure it remains operational for the transporting of waste generated during the WVDP Phase 1B D&D and Soil Remediation Contract. The Contractor shall follow DOE Order 437.1, *Bridge and Tunnel Management* as applicable to the site rail system. The Rail Spur runs for approximately 8,000 feet to the southeast from the FRS Building to where it connects with the main railroad line located south of the WNYNSC (See Facility 105). The northern 1,500 feet of the Rail Spur and a 100 feet long rail siding is located within WMA 6.

#### C.4.5.1Reservoir, Spillway, and Rail Line Modifications

The Contractor shall conduct an evaluation of the long-term management of the reservoir, spillway, and rail line and provide a recommendation to DOE and NYSERDA. The rail line configuration near WMA 1 may require reconfiguration in preparation of the WMA 1 remediation. The Contractor shall ensure the rail configuration is adequately sized to support Phase 1B waste shipments. The Contractor shall implement the reconfiguration as approved by DOE. DOE and NYSERDA shall approve all designs prior to implementation (see Section J, Attachment J-4, *Contract Deliverables*). The Contractor shall implement the reconfiguration as approved by DOE. DOE and NYSERDA shall approve all designs prior to implementation.

#### C.4.5.2Dam System Modifications

The Contractor shall implement modifications, renovations, and/or improvements as directed by task order.

### C.4.6 WMA 1 Operation, Maintenance, and Replacement

The Contractor shall operate, maintain, and renovate, where required, the waste management, utility, and site-operations facilities throughout the period of performance and in a manner that allows remaining site features (post remediation) to be managed and operated to support future Phase 2 planning.

### C.4.6.1Operation and Maintenance of the Site Fire Fighting System

The Contractor shall operate and maintain the site's fire fighting infrastructure capability including the existing Fire Pump House, Water Storage Tank 32D-1, and the underground fire main loop around the MPPB. The Contractor shall operate and maintain the site fire fighting system (or its replacement).

### C.4.6.2Replacement of the Site Fire Fighting System

The Contractor shall modify the fire suppression system in order to relocate fire protection infrastructure outside of the area of the planned removal of the MPPB, Vitrification Facility (VF), WMA 2 facilities, and the associated underlying soil excavation. This replacement/reconfigured fire protection infrastructure shall continue to meet site fire protection requirements for site facilities remaining after the completion of the Phase 1B D&D and Soil Remediation Contract with a design life of at least 20 years or more. Once the new fire protection infrastructure is in place, and the original infrastructure will no longer be needed, the Contractor shall demolish the original fire protection infrastructure (see Section C.9.1.6) and process, package, and dispose all waste at offsite disposal facilities.

### C.4.6.3Operation and Maintenance of the Low-Level Radiological Waste Treatment System

The Contractor shall operate and maintain the current WVDP Low-Level Radiological Waste Treatment System (LLRWTS) and lagoons until its use is no longer required for WVDP operations. The LLRWTS is used to treat low-level wastewater prior to discharge through a SPDES permit. The LLRWTS includes four holding lagoons (2-5), the Old Interceptor, the New Interceptors, the Neutralization Pit, a Low-Level Waste Treatment Building (LLW2), and associated treatment skids, equipment, and piping.

Influents to the LLRWTS include low-level wastewater from the site facilities including the NDA Interceptor Trench and Waste Tank Farm (WTF) Dewatering Well, precipitation, and surface water and groundwater that enters Lagoon 2. The Contractor shall address the treatment of these influents, which are currently estimated at five million gallons per year that are produced at a relatively constant rate. These influents may be treated using the existing skids in the LLW2 in a batching process.

The Contractor shall be responsible to obtain any necessary modifications to the WVDP SPDES permit for the LLRWTS during performance of the Contract. The Contractor shall support the DOE throughout the permit modification review and approval process with the NYSDEC Water Division as specified in Section C.2.2, Environment, Safety, Health and Quality Assurance Program. Because the Lagoons are also identified as Solid Waste Management Units, the Contractor shall be required to support any discussions and coordination that may be required by the site regulators. If required, the Contractor shall prepare a NESHAP evaluation for radiological airborne emissions resulting from alterations to the WVDP wastewater management system.

### C.4.6.4Replacement of the Low-Level Radiological Waste Treatment System

The LLRWTS will be removed during this WVDP Phase 1B D&D and Soil Remediation Contract (see Section C.9.3), the Contractor shall propose a replacement low-level wastewater treatment or water management system for the future treatment of WVDP low-level wastewater that may be generated from sources such as the NDA Interceptor Trench and WTF Dewatering Well. The Contractor shall demonstrate to and obtain approval from DOE that the proposed replacement treatment system will provide a suitable mechanism to safely and economically treat and disposition low-level radioactive wastewater from a life-cycle perspective (i.e., as long as low-level liquid wastewater management is necessary at the WVDP). The Contractor shall install /construct the replacement as approved by DOE. The Contractor shall ensure compliance with all regulatory requirements for discharge under SPDES permits, regardless of the system used.

## C.4.7 Operation and Maintenance of Vitrified Tank Waste Canister Storage

The Contractor shall operate and maintain the Vitrified Tank Waste (VTW) Canister Interim Storage Facility (Facility 180) located on the south plateau of the WVDP in accordance with applicable site procedures. This facility is a 110 foot by 144-foot concrete pad enclosed by a security fence that is used to store 56 vertical concrete storage casks, each of which contains another multi-purpose canister that physically protects and stabilizes up to five canisters of VTW per cask. The five canisters in each cask contain high-level wastes (HLW) vitrified from high-level sludges extracted from the on-site tank farm facility. This canister-storage facility is also known as the HLW Canister Storage Facility in WVDP-specific policies and procedures (termed VTW in this document to educate the reader on the nature of the waste form).

The Contractor shall operate and maintain the VTW Canister Interim Storage Facility in accordance with site policy and procedures until a permitted or licensed waste-disposal option becomes available.

## C.4.8 Operation and Maintenance of Construction and Demolition Debris Landfill

The Contractor shall monitor and maintain the Construction and Demolition Debris Landfill (CDDL). The Contractor shall monitor and maintain the earthen cover overlying the CDDL, the surface water drainages surrounding the CDDL, and the groundwater-monitoring network at the CDDL according to site procedures.

The CDDL is a 1.5-acre area used from 1963 through 1984 for the disposal of non-radioactive construction, office, and facility debris generated during site operations. The CDDL was closed in 1986 in accordance with 6 NYCRR 360 regulations and covered with a 2 feet thick compacted soil and topsoil cover. The waste in the CDDL is expected to be radiologically impacted by groundwater from the North Plateau Groundwater Plume. Historically, trace amounts of volatile organic compounds (VOC) have been detected in leachate and groundwater from the CDDL; no recent off-site discharges of VOC-impacted water have been recorded.

### C.4.9 WMA 5 Operation, Maintenance and Renovation

The Contractor shall operate, monitor, and maintain Remote Handled Waste Facility (RHWF), Lag Storage Addition 3 (LSA 3) and Lag Storage Addition 4 (LSA 4) LLW and TRU waste storage facilities. The Contractor shall maintain and operate the RHWF and supporting waste-storage and sorting facilities (i.e., LSA 3, LSA 4, the Shipping Depot, Container Sorting and Packaging Facility [CSPF], and Waste Packaging Area [WPA]) for waste processing and packaging, until all waste is dispositioned. Once a pathway for the disposal for GTCC-like waste (here-in referred to as WVDP TRU waste) is identified, the RWHF will be used to perform the safe, cost effective and efficient characterization, processing, packaging, transportation, and disposal of all remaining legacy waste.

### C.4.10 Waste Tank Farm Operation and Maintenance

The desired outcome is the continued safe operation and maintenance of Permanent Ventilation System (PVS) and Tank and Vault Drying System (T&VDS) located in the PVS Building in the Waste Tank Farm. The Contractor shall also monitor and maintain in a safe configuration Tanks 8D-1, 8D-2, 8D-3, and 8D-4 and Waste Tank Farm support facilities such as the Supernatant Treatment System (STS) Support Building until final disposition.

The PVS provides ventilation and HEPA filtration for Tanks 8D-1, 8D-2, 8D-3, and 8D-4 and their vaults in the Waste Tank Farm and the Valve Aisle in the Supernatant Treatment System Support Building. The T&VDS is a rotary desiccant air dryer system that was initially used to evaporate liquids in the four tanks and their associated vaults and currently maintains a low relative humidity in the tanks and vaults to reduce the potential effects of corrosion on the 8D-1 and 8D-2 carbon steel tanks.

The Contractor shall operate, inspect, maintain, and repair all systems required for the continued operation of the PVS and T&VDS. The PVS and T&VDS shall be operated 24 hours per day, along with all necessary utility and support systems. The Contractor shall continue to eliminate and/or control surface-water infiltration into the Waste Tank Farm. Groundwater infiltration into the subsurface tank vaults is minimized by a groundwater extraction well that commonly discharges to the LLRWTS. The Contractor shall maintain this dewatering system throughout the performance period, respective of the WMA 2 disposition.

### C.4.11 Facility/System Reconfiguration or Replacement

The Contractor shall reconfigure, renovate, construct, and/or replace facilities as needed to accommodate waste disposition and D&D work activities.

## C.5 PERMEABLE TREATMENT WALL MANAGEMENT (SAFE AND COMPLIANT BASE OPERATIONS)

The desired outcome is the safe and regulatory compliant management of the Permeable Treatment Wall (PTW). The Contractor shall continue the safe and regulatory compliant operation, management, monitoring, and maintenance of the PTW (See Facility 158 on Drawing

913-D-0003, Sheets 1 and 2) and the associated Soil Containment Structure (See Facility 159) and Smart Ditch in accordance with:

- WVDP-512 - North Plateau PTW Performance Monitoring Plan;
- WVDP-516 - North Plateau PTW Protection and Best Management Plan; and
- WVDP-520 - North Plateau PTW S-09 Storm Water Discharge Outfall and Parshall Flume *Lagoon 3 Embankment Operations and Maintenance Plan.*

The PTW is an 850-foot long, 3-foot-wide, and 19 to 30-foot-deep subsurface trench filled with the natural zeolite clinoptilolite that passively removes Sr-90 by ion exchange from the North Plateau Groundwater Plume. Maintenance actions shall be performed as necessary, to maintain PTW performance goals. The Contractor shall execute routine monitoring per site plans and compile quarterly monitoring summaries, annual monitoring reports, and five-year comprehensive performance reports for DOE review and acceptance (see Section J, Attachment J-4, *Contract Deliverables*).

The previous site contractor investigated areas that show degradation of PTW performance and provided recommendations to sustain the performance. The Contractor shall build upon that work and develop a corrective action plan that details remedial actions to be implemented to mitigate known breakthrough and plans that would be implemented in the event of a breakthrough of Sr-90 activity through the PTW resulting from the depletion off the ion-exchange media.

## C.6 U.S. NRC LICENSED DISPOSAL AREA (SAFE AND COMPLIANT BASE OPERATIONS)

The desired outcome is the safe and regulatory compliant monitoring, operation, and maintenance of the NRC Licensed Disposal Area (NDA). The Contractor shall monitor, maintain and operate the facilities at the NDA, including the disposal area, the NDA Interceptor Trench, geomembrane cover, subsurface groundwater barrier wall, erosion controls, surface-water routing features, leachate transfer line, and groundwater-monitoring network in a safe and regulatory compliant manner.

The NDA is a near-surface radioactive waste disposal facility located in WMA 7 and approximately 400-feet wide by 600-feet long. The NDA is divisible into three distinct areas: (1) the NFS waste disposal area containing shallow special holes and deep burial holes, (2) the WVDP disposal trenches and caissons, and (3) the area occupied by the NDA Interceptor Trench. Other structures and facilities include the NDA Hardstand, an inactive plant water line, a leachate transfer line from the Interceptor Trench to the LLRWTS, and a former lagoon located beneath the former Interim Waste Storage Facility floor slab. The NDA was operated by NFS under license from the NRC for disposal of solid radioactive waste exceeding 200 mrem/h from fuel reprocessing operations.

The Contractor shall monitor, operate, maintain, and repair the facilities at the NDA in accordance with site procedures. The NDA components are detailed below.

**NDA Interceptor Trench**

The NDA Interceptor Trench was installed after groundwater contaminated with tributyl phosphate, n-dodecane, and several radionuclides was detected in a well in the NDA. The purpose of the trench was to intercept potentially contaminated groundwater migrating from the NDA. The trench is located on the northeast and northwest boundaries of the disposal area. The base of the trench extends to a minimum of one foot below the contact of the weathered Lavery till with the unweathered Lavery till. The trench is drained by a perforated pipe that directs accumulated water to a collection sump (NDATR). The collection sump has a submersible pump to transfer groundwater to the LLRWTA in WMA 2 for treatment and release through a SPDES-permitted outfall.

The Contractor shall monitor, operate, and maintain the NDA Interceptor Trench in accordance with site procedures.

**Groundwater Barrier Wall (Slurry Wall)**

In July 2008, a subsurface groundwater barrier wall was installed on the southwest and southeast sides of the NDA to minimize groundwater migration into the disposal area. This barrier wall is a soil-bentonite slurry wall with a maximum hydraulic conductivity of 1E-07 cm/s that is keyed at least five feet into the underlying unweathered Lavery till. The slurry wall is approximately 850 feet long, three feet wide, and is 15 to 20 feet deep.

The Contractor shall repair the groundwater barrier wall at the NDA, if required.

**Geomembrane Cover**

In the fall of 2008, the NDA was covered with XR-5, an ethylene inter-polymer alloy geomembrane, to limit infiltration of precipitation into the disposal area. Prior to the installation of the XR-5 geomembrane, imported backfill was placed on the surface of the NDA and the surface was graded to form a suitable foundation for the installation of the XR-5 geomembrane.

The Contractor shall monitor, maintain and repair the Geomembrane Cover in accordance with site procedures.

**Leachate Transfer Line**

The leachate transfer line is a two-inch diameter polyvinylchloride pipeline that runs along the northeast and northwest sides of the NDA, and continues northward across WMA 6, eventually discharging into Lagoon 2 in WMA 2. It was originally used to transfer liquids from the SDA lagoons via a pump house next to the NDA hardstand, to Lagoon 1. The total length of the line is 4,000 feet. The section of the transfer line from the SDA to the interceptor trench sump is inactive and the two ends are capped. The section of the line from the northeast corner of the

NDA to Lagoon 2 is currently used to transfer groundwater from the NDA interceptor trench sump.

The Contractor shall monitor, operate, maintain, and repair the active extent of the NDA Leachate Transfer Line in accordance with site procedures.

## C.7 LEGACY WASTE DISPOSITION

The desired end state includes the identification of a pathway for disposal for GTCC-like (or WVDP TRU waste) waste, and the safe, cost effective and efficient characterization, processing, packaging, transportation and disposal of all remaining legacy waste.

Consistent with the requirements of the Waste Management Program (see Section C.2.2.5 Waste Management), the Contractor shall manage, characterize, store, process, package, transport, and dispose of all remaining legacy waste. The Contractor shall assist DOE in evaluating obtaining disposal-site alternatives (e.g., cost/benefit analyses, NEPA documentation), especially for TRU, MTRU, GTCC and WVDP TRU waste. The Contractor shall ensure operation of storage and treatment areas or facilities, and comply with all permits, orders, and regulatory requirements.

As noted in Section C.4.9, the Contractor shall maintain the RHWF, LSA 3, and LSA 4 including the Shipping Depot, CSPF, and WPA for waste processing and packaging until all waste is dispositioned. Prior to the disposition of legacy waste, the Contractor shall provide safe, cost effective and efficient storage of waste. Upon disposition of the legacy waste, the Contractor shall demolish and remove the RHWF, LSA 3 and 4, and process, package, transport, and dispose at offsite waste disposal facilities in accordance with Section C.9.2.2.2.

## C.8 WASTE TANK FARM DISPOSITION

The Waste Tank Farm includes four underground tanks (Tanks 8D-1, 8D-2, 8D-3, and 8D-4) and their associated concrete vaults, the PVS Building, the STS Support Building, STS vessels and contents in Tank 8D-1, the T&VDS, the High-Level Waste Transfer Trench, and various process piping, ventilation piping, and tank superstructures.

The WTF tanks are isolated to prohibit addition of additional liquids. Tanks 8D-1, 8D-2, and 8D-3 and their vaults are currently dry. Tank 8D-4 contains an estimated 2,500 gallons of liquid and 1,060 gallons of sludge/solids at the bottom of the tank. The HLW Transfer Trench contains HLW transfer lines, waste header lines, and condensate header lines from the Waste Tank Farm to the former Vitrification Facility. All lines within the HLW Transfer Trench have been isolated and capped. Water infiltration into the underground tank vaults has been mitigated.

The desired outcome is the safe and regulatory compliant removal and offsite disposal of the HLW mobilization pumps, transfer pumps, and suction pumps from Tanks 8D-1 and 8D-2; the liquid and sludge/solids in Tank 8D-4; and the HLW transfer lines, waste header lines, condensate header lines from the High Level Waste Transfer Trench, and tank superstructures. These lines are approximately 3,000 linear feet in total length.

### C.8.1 Tank 8D-1

The Contractor shall characterize, remove, process, package, transport, and dispose at offsite disposal facilities the five (5) HLW mobilization pumps, one (1) HLW transfer pump, and one suction pump in Tank 8D-1. These components were used historically to mobilize and transfer zeolite used in the STS process from the floor of Tank 8D-1 to the WVDP VF for vitrification. After the pumps have been removed and access points sealed, the Contractor shall monitor and maintain Tank 8D-1 and its STS equipment in a safe configuration (see Section C.4.10).

Note that Tank 8 D-1 was not used by Nuclear Fuel Services (NFS) to store high-level radioactive liquid waste during reprocessing. However, Tank 8D-1 was used by the WVDP to house the STS equipment used to process the supernatant and sludge wash solutions from Tank 8D-2 (see Facility 114). The STS equipment in Tank 8D-1 includes four (4) ion-exchange columns filled with Cs-137 loaded zeolite, the supernatant feed tank, sluice feed tank, supernatant cooler, STS prefilter, and STS postfilter. This equipment shall remain in Tank 8D-1 during this contract period. Total estimated inventory remaining in Tank 8D-1 is 230,000 Ci with Cs-137 comprising nearly 100% of the total inventory.

### C.8.2 Tank 8D-2

The Contractor shall characterize, remove, process, package, transport, and dispose offsite the four (4) HLW mobilization pumps, one (1) HLW transfer pump, and one suction pump in Tank 8D-2. These pumps were used to mobilize and transfer HLW and spent zeolite from Tank 8D-2 to the WVDP VF for vitrification. After the removal of the pumps and access points sealed, the Contractor shall monitor and maintain Tank 8D-2 in a safe configuration (see Section C.4.10).

Tank 8D-2 was used to store neutralized PUREX HLW generated during its spent nuclear fuel reprocessing operations (see Facility 115). After STS operations were completed, the WVDP transferred most of the PUREX waste in Tank 8D-2 to the VF for vitrification into borosilicate glass from 1996-2002. Total estimated inventory remaining in Tank 8D-2 is 167,000 Ci with Cs-137 comprising approximately 72% of the total.

### C.8.3 Tanks 8D-3 and 8D-4

Tanks 8D-3 and 8D-4 are 16,000-gallon stainless steel tanks housed in a common concrete vault (See Facilities 116 and 117). Tank 8D-4 was used to store acidic HLW generated during a single THOREX reprocessing campaign. The WVDP transferred this waste to Tank 8D-2 for transfer to the VF for vitrification. The liquid and sludge/solids currently in Tank 8D-4 originated from the submerged bed scrubber in the VF. Tank 8D-4 currently contains 2,500 gallons of liquid and 1,060 gallons of sludge/solids at the bottom of Tank 8D-4 with a total inventory of 90 PE-Ci.

Tank 8D-3 was used by the WVDP to store condensate from HLW Vitrification and is now empty; the tank contains a total radionuclide inventory less than 1PE-Ci. The transfer pumps in Tanks 8D-3 and 8D-4 and equipment inside the 8D-4 pump pit have been removed.

The Contractor shall monitor and maintain Tank 8D-3, Tank 8D-4, and their common concrete vault in a safe configuration (see Section C.4.10).

**Tank 8D-4 Waste Removal**

The Contractor shall perform removal, processing, packaging, characterization, transportation, and offsite disposal of approximately 3,560 gallons of liquid and sludge/solids at the bottom of Tank 8D-4. After the liquid and sludge/solids have been removed from Tank 8D-4, the Contractor shall remove and dispose of any equipment, facilities and/or hardware used in connection with the liquid and sludge/solids removal, processing, packaging, characterization, and transportation.

### C.8.4 High Level Waste Transfer Trench Piping Removal

The desired outcome is the safe and regulatory compliant removal, processing, characterization, packaging, and offsite disposal of the HLW transfer piping, waste header lines, and condensate header lines and associated equipment located within the HLW Transfer Trench. The Contractor shall dispose, at an offsite facility, all double-walled HLW transfer piping, waste header lines, and condensate header lines and associated equipment located within the HLW Transfer Trench. In addition, the Contractor shall remove, process, package, and dispose offsite all equipment remaining in HLW Pump Pits 1, 2, 3, 4, 5, and 6.

The High Level Waste Transfer Trench was used to convey waste from the WTF to the VF (See Facility 19). The trench is approximately 500 feet long, 6 to 20 feet wide, and 6 to 9 feet high and it contains six piping runs with approximately 3,000 linear feet of double-walled stainless steel HLW transfer, waste header, and condensate header piping.

Once the piping has been removed from the HLW Transfer Trench, the Contractor shall perform a remedial action survey inside the empty trench to establish the radiological status of the trench after removal of the piping as required by the CSAP. The concrete High Level Waste Transfer Trench structure will remain in place at the end of this contract.

## C.9 FACILITY DISPOSITION

The desired outcome is the safe and regulatory compliant completion of the D&D activities described in the Phase 1 DP, including the demolition of the MPPB. Phase 2 activities may be incorporated as regulatory evaluation is completed. All waste, debris, and excavated soil generated during these demolition and soil excavation activities shall be processed, packaged, characterized, transported, and disposed of at offsite disposal facilities. Exhibit C-1, *Facility Description and Status* and the reference library provides information regarding facility type (e.g., HAZCAT 3, etc.), current permitting status, and facility construction.

The near-grade to subgrade facility demolition and soil excavation scope is organized in geographical areas, referred to as Waste Management Areas (WMA) as defined in the Phase 1 DP. WMAs are organized around common facilities such as the MPPB and VF, the LLRWTS,

the Waste Tank Farm, disposal areas, and other site support areas. (The near-grade portions of the MPPB include all structures or building remnants remaining after the completion of the current Phase 1A contract.) Consistent with and in addition to the detailed scope and requirements elsewhere in this Section C, the Contractor shall complete any deactivation, decontamination, and decommissioning required for the safe demolition of the remaining portions of the MPPB, VF, and associated ancillary facilities. This shall include the Contractor's preparation of demolition plan(s) and excavation plan(s) that describe methods to accomplish the removal, packaging, characterization, transport, and offsite disposal of the following waste streams (see Section J, Attachment J-4, *Contract Deliverables*):

- Near-grade and subsurface remnants of the MPPB and VF;
- Surface and subsurface soils within the proposed WMA 1 excavation, including the source area of the North Plateau Groundwater Plume, underground piping, and foundation piling underlying the MPPB;
- Surface and subsurface soils within the proposed WMA 2 excavation as per the Phase 1 DP; and.
- Site ancillary facilities (Balance of Site Facilities).

**Deactivation**

In support of the hazard reduction objectives of deactivation, the Contractor shall ensure the facilities are in a safe configuration and demolition ready. The criteria for deactivation is successful removal of nuclear materials in facilities in a manner that precludes potential criticality conditions (i.e., Criticality Incredible (CI)) and ensures the resulting demolition waste meets available off-site waste disposal waste acceptance criteria (WAC).

The Contractor shall complete deactivation activities by removing hazardous equipment and materials, fissile materials and equipment, and other items necessary to leave a facility in a demolition-ready state including, but not limited to, the following:

- Evaluation and determination of the need for the continued safety requirements for monitoring and/or maintaining systems;
- Deactivation and/or verification activities, per DOE Order 420.1, *Facility Safety* and contractor safety basis documentation; and
- Removal of fire loading from each facility scheduled for demolition and removal.

### C.9.1 Main Plant Process Building and Vitrification Facility (WMA 1) Below Grade Demolition

The desired outcome is the safe and regulatory compliant demolition, removal, waste processing, packaging, offsite transportation and disposal of the remaining portions of the MPPB, Vitrification Facility (VF), underground piping, underground tanks, contaminated soils, and foundation pilings. This also includes the removal of all ancillary facilities, pads, and foundations, which are described in Section C.9.1.4.

### C.9.1.1Main Plant Process Building and Vitrification Facility Demolition and Excavation

The Contractor shall demolish and remove the near-grade and subgrade components of the MPPB; then process, package, transport, and dispose of waste at offsite waste disposal facilities. During the process of demolition, the Contractor shall minimize the generation of difficult to dispose of waste streams, such as TRU and MLLW, and shall prevent the spread of radioactive contamination from all exposed surfaces. The Contractor shall submit a demolition and excavation plan outlining means and methods that describes their demolition and remedial approach for DOE review and approval (see Section J, Attachment J-4, *Contract Deliverables*). The plan will be subject to review and comment of certain regulatory agencies. The Contractor will be expected to respond to regulatory agencies concerns and obtain DOE approval prior to commencement of demolition operations.

Several near-grade and subsurface portions of the remaining MPPB will contain reinforced concrete walls which may be up to six feet thick (with an average thickness of four feet) and floors up to five-foot thick around former process cells. A few process cell walls are composed of high-density concrete. The MPPB is supported by approximately 460 driven steel H-piles that have a maximum length of 70 feet.

The vast majority of the process piping and equipment will be removed in the former processing cells due to previous Phase 1A efforts. Legacy utility and pipe stubs (electrical, water, air, and steam lines) within floors and subsurface walls are expected to be in place, but isolated and inactive. The Contractor shall verify that all piping and utilities have been isolated, are inactive, and openings secured with foam filler (or alike).

MPPB near-grade and sub-grade structures requiring demolition and disposal include:

- Liquid Waste Cell (LWC),
- General Purpose Cell (GPC),
- GPC Crane Room (GCR),
- GPC Operating Aisle (GOA),
- Miniature Cell and airlock (MC),
- GPC Crane Room Extension (GCRE),
- North Stairwell floor,
- Equipment Decontamination Room (EDR) Soaking Pit and subsurface grouted base,
- Off Gas Trench,
- Tanks (12-35104, 13-D7, & 15-D6),
- Vitrification Melter Pit,
- Off Gas Blower Room (OGBR),
- Uranium Load Out (ULO),
- Head-End Ventilation (HEV) Building,
- Process Mechanical Cell (PMC) (including grouted floor and plate-steel table),

- Lower Warm Aisle (LWA) and Pump Niches,
- Chemical Process Cell floor (including grouted bases of HLW Interim Storage racks),
- Fuel Receiving and Storage (FRS) Facility Main Pool and Cask Unloading Pool, and
- FRS Transfer Tunnel.

These cells/rooms extend to depths of 11 to 50 feet with the base of the LWC at 11 feet, the GPC at 31 feet, and the Fuel Receiving and Storage Facility Cask Unloading Pool at a maximum depth of 50 feet.

Nine vessels are present in the LWC (the tanks will be removed during the current Phase 1A actions). Three tanks (12-35104, 7D-13, and 15D-6), along with supporting piping and equipment, are located below grade outside of the MPPB. All vessels and tanks have been emptied and stabilized with grout, foam, or fixative and shall be removed as LLW during demolition of the MPPB.

**Vitrification Facility Below Grade Demolition and Excavation**

The VF was demolished down to a Plant Elevation of 100 +/-3 feet. The Contractor shall remove, process, package, transport, and dispose at offsite waste disposal facilities all of the near-grade and below-grade structures of the VF, including all grout and/or gravel backfill that may be present within these structures.

Remaining VF structures include radioactively contaminated sub-grade structures and piping below a Plant Elevation of 100 feet, concrete floor slabs at Plant Elevation 100 feet, stainless steel liners covering portions of the 100-foot floor elevation and adjacent stub walls, and remnant concrete stub walls that extend upwards of 3 feet above the concrete floor at the 100-foot elevation.

The floor of the VF at a Plant Elevation of 100 feet is covered with approximately 2-3 feet of grout, gravel, and soil like material with a geomembrane cover designed to drain surface-water runoff away from the VF. Portions of the concrete floor at a Plant Elevation of 100 feet contained residual radioactivity that required the placement of grout for shielding during VF demolition.

The major sub-grade structure beneath the VF concrete floor slab at Plant Elevation 100 feet is the VF Melter Pit that extends to a depth of 17 feet and is filled with 1,200-psi grout.

The remaining sub-grade interior surfaces and piping within the VF are radioactively contaminated. All interior surfaces were sealed with fixative to limit removable contamination.

### C.9.1.2Fuel Receiving and Storage Facility and Associated Waste Storage Areas

The Contractor shall remove, process, package, transport, and dispose at offsite waste disposal facilities the entire above grade and below grade structures associated with the FRS Facility including the subsurface Fuel Storage Pool (FSP), Cask Unloading Pool (CUP), FRS Water Treatment Area (WTA), FRS Transfer Tunnel, and foundations and the above grade structural steel and sheet metal surface structure enclosing the FRS subsurface structures (i.e., the balance of enclosure remaining after Phase 1A actions).

The FRS Facility received and sub-aqueously stored irradiated nuclear fuel prior to reprocessing (See Facility 17); the facility is currently dewatered. The structure is a 50-foot-wide, 130-foot-long, and 50-foot-tall steel framed building with insulated corrugated steel sandwich panel siding and roofing. The FRS contains three adjoining concrete subsurface structures, the FSP, the CUP, and the FRS WTA. The FRS also contains an overhead 100-ton bridge crane used for unloading fuel shipping casks and a pair of 5-ton service cranes used to lift fuel assemblies.

The FSP is a 40-foot-wide, 70-foot-long, and 29-foot-deep concrete basin that was used for underwater storage of irradiated nuclear fuel prior to reprocessing. The concrete FRS Transfer Tunnel connects the FSP to the Process Mechanical Cell (PMC) in the MPPB. The water and fuel storage racks were removed and a 2 feet thick layer of grout was placed over the floor of the FSP to cover residual radioactive contamination.

The CUP is a 20-foot-wide, 20-foot-long, and 44-foot-deep stainless steel lined concrete basin that was used to unload spent nuclear fuel assemblies from fuel shipping casks. The floor of the CUP was covered with a 2-foot layer of grout to cover residual radioactive contamination.

The WTA is a 12-foot-wide, 20-foot-long, and 44-foot-deep concrete basin adjacent to the CUP that contained the FRS water treatment equipment, which has been removed.

#### *Fuel Receiving and Storage Area High Integrity Container and Surepak™ Staging Area*

The Contractor shall remove, process, package, and dispose at an offsite waste disposal facility all the materials on the High Integrity Container and Surepack staging area (the HICs have been removed). The area is a 50 foot by 50-foot gravel pad located on the north side of the FRS Building (See Facility 87). Six concrete over packs each containing a single High Integrity Container (HIC) isolating fuel pool resins and wastes were formerly stored on the pad. All materials remaining after the Phase 1A action and the gravel pad itself will be remediated.

### C.9.1.3 Head-End Ventilation Building

The Contractor shall remove, process, package, transport, and dispose at an offsite waste disposal facility all the materials on the remaining portions of the Head-End Ventilation (HEV) Building, including its subgrade foundations. The HEV Building filter room is filled with grout. The HEV Building was demolished to a Plant Elevation of 106 feet leaving the lower 10 foot of

the structure and its filter room in place. The HEV Building filter room was covered with approximately 2 feet of soil.

The HEV Building was a 23 feet by 17 feet by 22-foot high concrete and concrete block building located on the north side of the MPPB (See Facility 54); it was used to ventilate and filter air from the MPPB head end cells. The filter plenum blower room and the associated air inlet ducts to the HEV are highly contaminated.

### C.9.1.4 Concrete Floor Slabs and Foundations in WMA 1

The Contractor shall remove and disposition all concrete floor slabs and associated foundations to meet requirements in the Phase 1 DP. The Contractor shall remove, process, package, characterize, transport, and dispose at offsite waste disposal facilities the following concrete floor slabs, foundations, remaining walls, associated grout and/or gravel cover materials, steel floor plating, and contaminated underlying soils:

- 01-14 Building,
- Fuel Receiving Storage Ventilation Building,
- Radwaste Process (Hittman) Building,
- Utility Room,
- Utility Room Expansion,
- Laundry Room,
- Plant Office Building,
- Emergency Vehicle Shelter,
- Load-In/Load-Out Facility,
- Cold Chemical Facility,
- Master Slave Manipulator Repair Shop,
- Contact Size Reduction Facility,
- Uranium Product Cell,
- Process Mechanical Cell (including grouted floor and steel-plate table, also see C.9.1.1),
- Chemical Process Cell (also see C.9.1.1),
- Extraction Cells & Product Purification Cell,
- Equipment Decontamination Room (also see C.9.1.1),
- Acid Recovery Pump Room,
- Lower Warm Equipment Aisle and Pump Niches (also see C.9.1.1),
- Product Packaging & Shipping,
- Vitrification Facility (also see C.9.1.1),
- Scrap Removal Room,
- Miscellaneous Slabs

The construction and dimensions of the slabs and pads are provided in Attachment C-1. Any miscellaneous building slabs (concrete to gravel) that are not identified above but later defined during Contract execution shall be removed and any contaminated material and/or underlying soils will be containerized, characterized, packaged, and removed for off-site disposal.

### C.9.1.5Vitrification Off-Gas Trench

The Contractor shall remove, process, package, transport, and dispose at offsite waste disposal facilities the Vitrification Off-Gas Trench. The Vitrification Off-Gas Trench is a subsurface concrete walled trench with one-foot thick walls located west of the MPPB between the VF and the 01-14 Building (See Facility 47). It is approximately 6 feet wide, 4 feet deep, and 290 feet long with removable concrete covers. The Off-Gas Trench contained piping that conveyed off-gas from the Vitrification Facility Off-Gas System and liquids from the Supernatant Treatment System to the 01-14 Building for treatment. All process piping within the Off-Gas Trench was removed during the WVDP Phase 1 Decommissioning - Facility Disposition Contract and the concrete trench was backfilled with gravel. Radiological surveys indicated that the Vitrification Off-Gas Trench is radioactively contaminated.

### C.9.1.6Fire Pump House and Water Storage Tank (32D-1)

The Contractor shall remove the Fire Pump House and Water Storage Tank, subsequent to replacement Fire Protection System. At that time, the Contractor shall remove, process, package, and dispose at offsite waste disposal facilities the Fire Pump House and the Water Storage Tank (32D-1) including all equipment, and associated structures, concrete slabs, and foundations.

The Fire Pump House is a 20-foot by 24-foot by 10-foot high, steel frame and sheet metal structure on a four-inch concrete slab floor (See Facility 15). The Pump House contains two pumps on concrete foundations. An adjacent small metal storage shed is used to store fire hoses and fire extinguishers. The Fire Pump House is not contaminated. Tank 32D-1 is a 475,000-gallon tank used to supply water for site utilities and fire protection system. Tank 32D-1 is not contaminated.

The Contractor is required to design, certify, and install, and operate a replacement Fire Protection Systems on the following structures prior to the demolition of the Fire Pump House and Water Storage Tank (32D-1): STS, PVS, RHWF, and Shipping Depot.

### C.9.1.7Tanks 12-35104, 7D-13, and 15D-6 and Associated Piping

The Contractor shall characterize, remove, process, package, and dispose at offsite waste disposal facilities Tanks 12-35104, 7D-13, and 15D-6 and their associated piping. The tanks are radioactively contaminated and all three tanks are filled with foam/grout.

Tank 12-35104 is a 5,900 gallon (22,330 liter) stainless steel tank located in a below grade concrete vault at the west end of the General Purpose Cell Crane Room Extension (See Facility 54). Tank 12-35104 received radioactive liquids from several MPPB crane rooms, the Equipment Decontamination Room, and decontaminated Supernatant Treatment System liquids from Tank 8D-3. Tank 12-35104 is expected to be disposable as LLW.

Tank 7D-13 is a 2,000-gallon (7,570 liter) stainless steel tank located below ground adjacent to the south side of the former Plant Office Building (See Facility 54). Tank 13D-7 is expected to

contain 150 – 300 gallons (~20-40 cubic feet) of solids containing upwards of 84 curies of residual radioactivity.

Tank 15D-6 is a 1,500-gallon (5,678 liter) stainless steel tank located below ground east of the former Master Slave Manipulator Repair Shop (MSM Shop) (See Facility 150). Tank 15D-6 received spent decontamination solutions from the floor drains in the MSM Shop and is estimated to contain 2.2 E-4 Ci of residual radioactivity.

### C.9.1.8WMA 1 Soil Removal

The Contractor shall perform demolition, removal, waste processing, packaging, offsite transportation and disposal of at and below grade portions of the MPPB and VF in WMA1, along with the excavation of surface and subsurface soils in WMA 1 as described in the Phase 1 DP. Additional deeper excavation will be required if soil concentrations exceed the subsurface soil clean-up goals established in the Phase 1 DP. The Contractor shall perform remedial action surveys to support the completion of the WMA 1 soil excavation project consistent with requirements in the CSAP, FSS Plans, and all applicable requirements under RCRA closure plans.

The North Plateau Groundwater Plume (NPGP) is derived from a radioactive acid released from the MPPB acid recovery system in approximately 1969, which migrated into the saturated zone of the sand and gravel unit beneath southwest corner of the MPPB (specifically beneath the floor slab of the Off-Gas Cell (OGC) and the Southwest Stairwell). Dose rates and the radionuclide inventory of the source area soils beneath the OGC are currently unknown, but likely reflect a HLW radionuclide distribution. The WMA 1 soil excavation will include the removal of the source area of the NPGP in both the vadose and saturated zone underlying the MPPB. The anticipated WMA 1 excavation footprint is depicted in Figures 7-6 and 7-7 of the Phase 1 DP; additional subsurface soil sampling and characterization may alter this footprint and estimated extent.

#### *WMA 1 Soil Removal*

The Contractor shall perform soil excavation, packaging, characterization, transportation, and disposal at offsite disposal facilities of all fill, soil, and geologic strata down to a minimum depth of at least one foot into the underlying Lavery till within the planned WMA 1 excavation limits, as shown in Figure 7-6 and Figure 7-7 of the Phase 1 DP. Once the excavation is within 2 feet of the proposed minimum excavation depth, the Contractor shall perform an initial remedial action survey as described in the CSAP and FSS Plan to characterize the contamination status of soils immediately above the Lavery till.

The Contractor shall perform a second remedial action survey when the WMA 1 excavation reaches its excavation design depth of one foot into the Lavery till. If this remedial action survey identifies areas that exceed the subsurface soil CGs in Table 5-14 of the DP, then the excavation will continue in those areas until the subsurface soil CGs are achieved.

If elevated activity is not detected during the second or third survey (if required), an independent DOE contractor shall perform a final status survey (FSS) of the sides and bottom of the WMA 1 excavation in accordance with the *Phase 1 Final Status Survey Plan for the West Valley Demonstration Project*, (Phase 1 FSS Plan) to verify that the subsurface soil CG have been achieved. The decommissioning Contractor shall be required to maintain the final status survey unit(s) in a safe configuration that allows an independent verification survey to be performed by the regulatory agencies. Approval to backfill the final status survey unit(s) shall be given upon DOE concurrence that remedial action is complete through its independent verification process. The Contractor shall backfill the WMA 1 excavation with uncontaminated geologic material obtained from offsite geologic deposits (sources) that possess geologic and hydrologic properties similar to the native geologic materials removed from the WMA 1 excavation (e.g., silty sand gravel).

The Contractor shall prepare and submit a WMA 1 Soil Excavation Plan, which includes, but is not limited to, the details of the planned excavation method, the excavation sequence, segregation of oversize materials, water management, and mitigative measures to prevent contamination of the backfilled WMA 1 excavation from the remaining portion of the NPGP (see Section J, Attachment J-4, *Contract Deliverables*).

Soil remediation activities shall include, but not be limited to:

- Overburden and contaminated soil and debris excavation;
- Soil and/or debris treatment;
- Surface/infiltration water management;
- Erosion controls;
- Temporary stockpiling of contaminated soil for dewatering;
- Stockpiling of clean fill material;
- Contaminated soil and debris packaging, packaging and disposal;
- Backfilling with clean material as defined under future Task Orders (e.g., backfill meeting NYSDEC criteria for remedial actions), and
- Site restoration grading/seeding.

***Underground Piping***

The Contractor shall perform removal of approximately 10,000 linear feet of underground piping for packaging, characterization, transportation, and disposal at offsite disposal facilities. The underground piping is radioactively contaminated and non-contaminated carbon steel, stainless steel, and cast iron process, chemical, utility, and waste transfer piping within the planned WMA 1 excavation. A list of pipelines and approximate radionuclide inventory within the planned WMA 1 excavation is available in Appendix F, *Estimated Radionuclide Inventory in Subsurface*

*Piping*, of the DP. Underground piping was isolated at the 100-foot Plant Elevation and the Contractor shall remove this piping and dispose of this piping at off-site disposal facilities.

The HLW transfer lines (7P113-3 and 7P120-3) originate within the MPPB and exit the plant on the west side, where they run northward to the Waste Tank Farm. Each three-inch diameter stainless steel pipe is contained within a six-inch diameter carbon steel pipe, which are located within a concrete pipe trench located approximately 10 feet below ground.

Floor drains in the MPPB and the FRS Cask Decontamination Area connect to underground Duriron™ piping to convey low-level radioactive wastewater to either the Old Interceptor or New Interceptor for treatment in the sites low-level wastewater treatment system. Duriron™ is a two to six-inch diameter high silicone cast iron bell and spigot type pipe with the individual pipe segments sealed with lead. The Duriron™ piping was encased within a poured 12-inch square concrete pipe trench. The Duriron™ piping is located 8 to 10 feet below the MPPB floor slab. Estimates of radionuclide inventory in Duriron™ piping is provided in Appendix F, *Estimated Radionuclide Inventory in Subsurface Piping*, of the DP.

***Foundation Piling***

The Contractor shall remove the foundation pilings within the WMA 1 excavation and package, characterize, transport, and dispose the pilings at offsite disposal facilities. Approximately 460 steel piles are located beneath the MPPB and the FRS within the WMA 1 excavation boundary (See Drawing 15A-Q-1). These piles are driven through the Sand and Gravel Unit to various depths into the underlying Lavery till and Kent recessional sequence during construction of the MPPB to provide support for the thick concrete shield walls of the cells in the MPPB.

The Contractor will remove the steel piles down to a level at or slightly below the final depth of the WMA 1 excavation and dispose of the removed piling at offsite disposal facilities. Once the excavation depth has been reached, the Contractor shall characterize the downward extent of contamination along a representative number of pilings in accordance with requirements in the CSAP. If sampling indicates that the subsurface soil cleanup goals (CGs) are exceeded, the Contractor shall continue excavation until CGs are met.

***WMA 1 Waste Disposition***

The Contractor shall compliantly manage, characterize, process, and package all waste generated as result of WMA 1 Demolition activities. This includes final characterization, packaging, labeling, transportation and final offsite disposal of all waste. All waste-management activities shall meet the appropriate waste acceptance criteria with certification, as appropriate, for approved waste disposition/disposal options. The Contractor has access to the national IDIQ disposal and Basic Ordering Agreement treatment contracts (i.e., DOE LL/MLLW Disposal Services IDIQ Contracts and DOE LL/MLLW Treatment Services Basic Ordering Agreements) as needed for the execution of waste management activities.

The Contractor shall perform all activities associated with the characterization, packaging, handling and hauling/transportation of waste to various facilities with waste certification as appropriate. This includes the transport to off-site and on-site treatment and/or storage facilities, and off-site and on-site disposal facilities. All packaging and transportation practices shall be in accordance with applicable Federal, state, and local regulations and requirements. In addition, the Contractor shall:

- Consider the DOE-negotiated tender for transportation services;
- Procure necessary packaging and carrier services for transport to/from treatment facilities and to disposal facilities;
- Make the appropriate requests and gain approval from DOE Officially Designated Security Authority (ODSA) for classified shipments;
- Develop appropriate transportation plans, including transportation security plans, for various waste types, obtain appropriate transport permits, and coordinate with DOE as appropriate;
- Receive and manage the disposal certificates for all wastes shipped off-site;
- Establish or accept the current existing program for meeting the applicable waste certification process;
- Annually report LLW/MLLW volumes for prior year actual and forecast shipments as requested by the DOE Office of Environmental Management; and
- Provide auditor support for DOECAP audits of commercial facilities if non-DOE treatment and disposal services are used.

***WMA 1 Soil Excavation Backfill and Restoration***

The Contractor shall procure soil from offsite commercial suppliers that meets the requirements for acceptable backfill for the WMA 1 soil excavation as discussed in the Phase 1 DP and described in the soil backfill requirements note above. After the completion of all final status and confirmatory surveys, and after regulatory concurrence is received, the WMA 1 excavation will be backfilled with uncontaminated geologic materials that will be compacted for geotechnical stability and graded as necessary to restore these areas to a near natural appearance.

The backfill material shall be obtained from offsite deposits with similar geologic, hydrologic, and engineering properties (texture, hydraulic conductivity, distribution coefficients, etc.) that are similar to the properties of the Sand and Gravel Unit in the North Plateau of the WVDP. Radiological concentrations of this backfill will not exceed WVDP site background concentrations for the Sand and Gravel Unit in the North Plateau of the WVDP. Chemical concentrations of this backfill shall meet the most restrictive concentration limits identified in 6 NYCRR Part 375.

The excavation footprint shall be restored in accordance with the Contractor's backfill and restoration plan and all applicable laws, rules and regulations.

## C.9.2 BALANCE OF SITE FACILITIES DECOMMISSIONING

The Contractor shall perform demolition and removal of the WVDP ancillary facilities, also known as the Balance of Site Facilities (BOSF), as described in the Phase 1 DP.

The Contractor shall demolish, remove, package, characterize, transport, and dispose offsite waste from the BOSF including all structures, building floor slabs, concrete and gravel pads, foundations, and associated soil to a depth of up to 2 feet below-grade within the facility footprints as described in the Phase 1 DP. The Contractor shall perform characterization and remedial action surveys after the demolition and removal of these ancillary facilities consistent with requirements in the CSAP and all applicable RCRA requirements.

These BOSF may be radiologically or chemically contaminated and range in construction from steel-sided buildings to shielded concrete structures.

### C.9.2.1 WASTE MANAGEMENT AREA 2 (WMA 2)

The Contractor shall remove, package, characterize, transport, and dispose at offsite disposal facilities of the following Balance of Site Facilities in WMA 2 (including slabs and foundations) as described in the Phase 1 DP.

#### *Vitrification Test Facility*

The Vitrification Test Facility (See Facility 68) is a 40 by 120 by 36 feet high structural steel building on a concrete floor slab that was used for cold testing of vitrification components. This facility is not radioactively contaminated.

#### *Maintenance Shop Leach Field*

The Maintenance Shop Leach Field is located northeast of the Maintenance Shop Slab (See Facility 93) and it includes three out of service sand filled septic tanks, a distribution box, a tile drain field, and associated piping covering an area of approximately 1,500 square feet. This facility is located in close proximity of the underlying North Plateau Groundwater Plume.

#### *Fire Brigade Training Area*

The Fire Brigade Training Area (See Facility 84) located north of Lagoon 4 was a training area used until 1993 for fire fighting exercises. The Contractor shall reach regulatory closure for this area based upon governing regulations (e.g., PFAS criteria).

#### *Concrete Floor Slabs and Foundations in WMA 2*

The Contractor shall remove concrete floor slabs, associated foundations, and underlying soils to a depth of 2 feet below-grade in WMA 2 to meet requirements in the Phase 1 DP and relevant RCRA requirements. The Contractor shall remove, process, package, characterize, transport, and dispose at offsite waste disposal facilities the contaminated concrete floor slabs, foundations, associated grout and/or gravel cover materials, and underlying soils. The construction and

dimensions of the slabs and pads are provided in Attachment C-1 (scoping under future Task Orders will include dimensions for waste-volume estimates).

**Test and Storage Building Slab**

The Test and Storage Building concrete slab is 80 by 120 feet located northeast of the MPPB (See Facility 60). The floor slab is not contaminated.

**Maintenance Shop Slab**

The Maintenance Shop concrete slab is 60 by 98 feet located northeast of the MPPB (See Facility 38) that formerly housed non-radiological fabrication shops. The floor slab is not contaminated.

**Vehicle Maintenance Shop Slab**

The Vehicle Maintenance Shop concrete slab is 30 by 47 feet located next to the southwest corner of the MPPB (See Facility 64) that was used for vehicle maintenance. The floor slab is not contaminated.

### C.9.2.2Waste Management Areas 5 (WMA 5)

The Contractor shall demolish, remove, package, characterize, transport, and dispose at offsite disposal facilities of the following WMA 5 facilities (including slabs and foundations).

#### C.9.2.2.1 HLW Storage Vaults

The Contractor shall remove and dispose of offsite the HLW Storage Vaults and associated HLW mobilization/transfer pumps, waste stored at the Vitrification Vault/HIC Corral, and the WMA 5 BOSF.

#### C.9.2.2.2 Remote Handled Waste Facility, LSA 3, LSA 4, and associated facilities

Facilities in WMA 5 such as the Remote Handled Waste Facility, LSA 3, LSA 4 and its associated Shipping Depot, and numerous concrete and gravel pads were used to process or store containerized low-level or TRU waste, so will not be demolished until TRU and legacy HLW are disposed offsite or relocated for continued interim storage elsewhere on site (e.g., Drum Cell at the end of Phase 1B).

Upon disposition of the TRU or legacy waste, the contractor shall demolish and remove the RHWF, LSA 3 and 4, and process, package, transport, and dispose at offsite waste disposal facilities. Details of the individual facilities in WMA 5 are provided below.

***RHWF***

The RHWF is a three-story concrete and steel shielded building completed in 2004. It includes equipment for processing, packaging, characterization, and shipping of remote handled wastes. The RHWF includes a reinforced concrete main structure with a Receiving Area extension at the north end, an adjoining Load Out/Truck Bay on the east side, and an adjoining Office Building at the south end. The Receiving Area, Load Out/Truck Bay, and Office Building are pre-engineered structures with a metal wall and roof system. The reinforced concrete structure consists primarily of the Buffer Cell, Work Cell, Waste Processing Area/Aisle (WPA), Operating Aisle, Contact Maintenance Area and HVAC Areas.

***Lag Storage Addition 3***

Lag Storage Addition (LSA) 3 is an approximately 291-foot-long, 88-foot-wide and 40-foot-high pre-engineered steel frame and steel sheathed structure that rests on a 7-inch thick concrete slab and is used to store containerized low-level radioactive and TRU waste awaiting shipment and disposal (See Facility 25).

***Lag Storage Addition 4 and Shipping Depot***

LSA 4 is similar to LSA 3 in size and construction, except that it includes the attached Shipping Depot, a 91 feet by 85 feet metal frame structure with steel sheathing (See Facilities 26 and 145); and underlying concrete slab floor. LSA 4 is also used to store containerized low-level radioactive and TRU waste. Two separate waste processing and packaging facilities are located inside of LSA 4, the CSPF and the WPA (See Facilities 9 and 122).

***High Level Waste Tank Pump Storage Vaults***

High Level Waste Tank Pump Storage Vaults consists of two concrete vaults (See Facility 136) and the HLW mobilization and transfer pumps stored within the vaults. The Contractor shall safely remove, process, package, and appropriately manage the HLW mobilization and transfer pumps stored within the vaults. Once the HLW pumps have been removed and dispositioned the Contractor shall remove, process, package, and dispose the two concrete storage vaults at offsite disposal facilities.

The two storage vaults are 8-feet wide, 8-feet high, and 60-feet long concrete vaults used to store two failed HLW mobilization pumps and portions of a failed mobilization and transfer pump removed from Tank 8 D-2. The vaults do not have concrete lids or tops.

***Vitrification Vault/HIC Corral/Empty Container Hardstand***

The Contractor shall perform removal and offsite disposal of the six oversized LLW containers and four TRU containers stored at the HIC corral (See Facility 119).

### *Concrete Slabs and Gravel Pads*

The Contractor shall perform removal of concrete floor slabs, gravel pads, and underlying soils to a minimum depth of 2 feet to meet requirements in the Phase 1 DP. The Contractor shall remove, process, package, transport, and dispose at offsite waste disposal facilities the following concrete floor slabs, associated grout and/or gravel cover materials, gravel pads, and underlying soils. The construction and dimensions of the slabs and pads are provided in Attachment C-1; slabs/pads without known thicknesses are assumed to vary between six inches and one foot (scoping under future Task Orders will include dimensions for waste-volume estimates).

#### Lag Storage Building

The Lag Storage Building slab is 60 by 140 feet concrete floor slab that was used to store containerized mixed waste and LLW (See Facility 27). The concrete slab is 8 to 20 inches thick with a 6-inch concrete curb along its margins. The concrete floor slab is not radiologically contaminated.

#### Sample Storage and Packaging Facility

The Sample Storage and Packaging Facility (Area) is a 10 feet by 20 feet concrete floor slab that was used to store containerized and LLW (See Facility 57). The pad and the area beneath are assumed to be radiologically impacted.

#### Lag Storage Addition 1

Lag Storage Addition 1 (LSA 1) is a 55 by 191 feet gravel pad that was used to store containerized mixed waste and LLW (See Facility 23). Radiological surveys indicate the gravel pad is not radiologically contaminated.

#### Lag Storage Addition 2 Hardstand

Lag Storage Addition 2 (LSA 2) is a 55 by 191 feet gravel pad that was used to store containerized mixed waste and LLW (See Facility 24). Radiological surveys indicate the gravel pad is not radiologically contaminated.

#### Old and New Hardstand

The New Hardstand (See Facility 103) is 100 feet by 100 feet compacted gravel pad that was used to store packaged LLW. Radiological surveys indicate that the New Hardstand is not radioactively contaminated. The New Hardstand is an asphalt pad located near the Old Hardstand and measures 175 by 175 feet. It was used by NFS to store radioactive equipment and later removed in 1984. The material was placed in Lagoon 1 during its closure. The asphalt and surrounding soils were radioactively contaminated.

**Lag Hardstand**

The Lag Hardstand (See Facility 22) is 60 feet by 100 feet compacted gravel pad located southwest of LSA 3 and LSA 4 that was used to store packaged equipment and containers of LLW. This area is not radiologically impacted.

**Vitrification Vault/HIC Corral/ Empty Container Hardstand**

All waste containers, structures, gravel pad, and underlying soil to a depth of 2 feet shall be removed and disposed of offsite in accordance with the Phase 1 DP. The excavation will be surveyed in accordance with the CSAP before backfilling with clean earthen fill obtained from offsite. The Vitrification Vault/HIC Corral/Empty Container Hardstand (See Facility 119) is located adjacent to the LSA 2 Hardstand and consists of a gravel pad used for the storage of containerized LLW and TRU waste.

**Product Purification Cell Box Storage Area**

The pad will be characterized and evaluated for disposition in accordance with the Phase 1 DP. The Product Purification Cell Box Storage Area (See Facility 51) is a gravel pad used to store packaged waste removed during the deactivation of the Product Purification Cell (PPC) in the MPPB. It is located adjacent to the LSA 2 Hardstand.

## C. 9.2.3 WASTE MANAGEMENT AREA 6 (WMA 6)

The Contractor shall perform removal of ancillary facilities and underlying soils in WMA 6 to meet requirements in the Phase 1 DP. The Contractor shall remove, process, package, transport, and dispose at offsite waste disposal facilities all waste generated during the removal of ancillary facilities from WMA 6, including all excavated soil.

***North and South Demineralizer Sludge Ponds***

The Contractor shall excavate the North and South Demineralizer Sludge Ponds and remove, process, package, transport, and dispose all generated waste and contaminated soil to offsite disposal facilities. The excavation will be considered complete when residual soil contamination meets the surface soil CG's specified in the Phase 1 DP.

The North and South Demineralizer Sludge Ponds are separate, unlined basins excavated in the sand and gravel unit (See Facility 79). They are approximately 100 feet long, 50 feet wide, and five feet deep. They are no longer in service and they were formerly used to receive water softener regeneration waste, clarifier overflow and blow-down, boiler blow-down, sand-filter backwash, and demineralizer regeneration waste from the Utility Room. Both ponds are radiologically contaminated based upon sampling conducted in 1988.

***Waste-Water Treatment Facility***

The Contractor shall remove, process, package, transport, and dispose at offsite waste disposal facilities the STP including the surface and subsurface structure, above and in-ground tanks, concrete foundations, and underlying soils.

The Waste-Water Treatment Facility (Facility 72), also referred to as the Sewage Treatment Plant (STP), is a wood framed and steel-sided and steel-roofed structure that contains equipment that was used to treat sanitary waste generated during WVDP operations. The STP contains six in-ground concrete tanks, one above ground polyethylene tank, and one above ground stainless steel tank. The facility is currently used as a black- and gray-water holding tank; wastes are removed and taken off site when required (i.e., capacity specific removal schedule).

Note that this facility currently receives waste flows from both old and new buildings, thus will require temporary replacement if removed prior to the removal of buildings that feed the facility.

***High-Level Waste Canister Interim Storage Facility Spoil Pile***

The Contractor shall remove, process, package, transport, and dispose at offsite waste disposal facilities all soils associated with the High-Level Waste Canister Interim Storage Facility Spoil Pile.

The High-Level Waste Canister Interim Storage Facility Spoil Pile (Facility 110) is 140 feet by 200 feet by 10 feet high spoil pile that contains soils excavated during the construction of the reinforced concrete storage pad for the High-Level Waste Canister Interim Storage Facility (Facility 180) located immediately to the east. The Spoil Pile was emplaced in six separate 1 to 2-foot lifts, which were surveyed for gamma radiation after each lift was emplaced (SEC April 2014). Contamination observed in the Spoil Pile during emplacement was removed to the extent practical, but it is reasonable to assume that radiological contamination above background concentrations may be present within the Spoil Pile.

## C.9.2.4WASTE MANAGEMENT AREA 7 (WMA 7)

The Contractor shall perform removal of the radiologically contaminated NDA Hardstand and underlying soils to meet requirements in the Phase 1 DP. The NDA Hardstand is 20-feet wide, 20-feet long sloped pad of crushed rock located near the southeast corner of the NDA (See Facility 41); the pad was an interim storage area to stage radioactive waste before being buried. The Contractor shall characterize, remove, transport, dispose offsite the crushed rock pad, the XR-5 cap underlying the cover gravel, any underlying contaminated soils, and restore site in accordance with the Phase 1 DP.

## C.9.2.5WASTE MANAGEMENT AREA 9 (WMA 9)

The Contractor shall perform removal and offsite disposal of facilities in WMA 9 that meets the requirements of the Phase 1 DP. The Contractor shall remove, process, package, characterize, transport, and dispose at offsite disposal facilities the following facilities in WMA 9.

***Drum Cell***

The Drum Cell is a 60 by 375 by 26 feet high pre-engineered metal building (See Facility 11) that was used to store approximately 20,000 drums of cement-solidified treated supernatant from Tank 8D-2. The drums were removed and disposed offsite in 2007. The facility consists of a gravel pad, concrete shield walls, remote handling equipment (cranes), and a control room. This facility may be required to support both Phase 1B and Phase 2 Decommission activities, therefore shall remain and maintained in an operational posture until a Phase 2 decision is reached. Site radiological surveys indicate that this facility is radioactively contaminated, so small-scale decontamination will be required.

***Subcontractor Maintenance Area***

The Subcontractor Maintenance Area is a 20 by 30 feet gravel pad located northwest of the Drum Cell adjacent to the WVDP Rail Spur (See Facility 113). The pad was used as a staging area for heavy equipment and construction materials, and is radioactively contaminated.

***NDA Trench Soil Container Area***

The NDA Trench Soil Container Area is a gravel pad used to store roll-off containers containing soil excavated during the installation of the NDA Interceptor trench in 1990 (See Facility 98). The pad is located on the north side of WMA 9 and now empty of containers. Radiological surveys indicate that this area is potentially contaminated due to leakage from some containers.

### C.9.2.6WASTE MANAGEMENT AREA 10 (WMA 10)

The Contractor shall perform removal of the New Warehouse and underlying soils to meet requirements in the Phase 1 DP. The New Warehouse is an 80 by 250 by 22 feet high pre-engineered steel building resting on a concrete floor slab supported by approximately 40 concrete piers and a concrete foundation wall (See Facility 43 & 49). The New Warehouse was not used for radiological operations; however, adjacent soils may have surface contamination.

## C.9.3 WMA 2 FACILITY DEMOLITION AND SOIL REMOVAL

The desired outcome is the safe and regulatory compliant removal and offsite disposal of the LLRWTS, LLRWTS Interceptors, Lagoons 1 through 5, and soils associated with the proposed WMA 2 soil excavation described in the Phase 1 DP. The removal of the LLRWTS, Interceptors, Lagoons 1 through 5, and surrounding soils associated with the WMA 2 soil excavation will extend to a depth of at least one foot into the underlying Lavery till. This also includes the removal of all ancillary facilities, piping systems, pads, and foundations.

From 1965 to 1971, low-level wastewater was routed through the Old and New Interceptors to Lagoons 1, 2, and 3 in series before discharge to Erdman Brook. In 1971, the Low Level Waste Treatment Facility O2 Building and Lagoons 4 and 5 were added to actively treat site operations wastewater. From 1971 to 1982, low-level wastewater was routed sequentially through the Interceptors, Lagoon 1, Lagoon 2, and the O2 Building for treatment, then to Lagoons 4 or 5, and

finally to Lagoon 3 before discharge to Erdman Brook. Following the closure of Lagoon 1 in 1982, low-level wastewater has been routed sequentially through the Interceptors, Lagoon 2, the O2 Building or LLW2 for treatment, Lagoons 4 or 5, and then to Lagoon 3 before discharge to Erdman Brook.

### C.9.3.1D&D of the Neutralization Pit, Old Interceptor and Interceptor

The Contractor shall perform removal and offsite disposal of the Old Interceptor, the Neutralization Pit, and New Interceptor.

The Old Interceptor is a 40 by 25 by 11.5-foot-deep below grade unlined concrete liquid waste storage tank, which received low-level liquid waste generated at the MPPB (See Facility 101). The floor is 24-inches thick and the walls 12 inches thick. The floor was originally 12 inches thick. However, a contamination event in 1967 required the placement of another 12 inches of concrete to provide shielding for continued operations. The roof is made of wood framing and steel sheathing. The Old Interceptor is currently used for temporarily storing radiologically contaminated liquids that exceed the influent standard of 0.005 µCi/mL gross beta activity for the LLWTS.

The Neutralization Pit is a 9 by 7 by 5.5-foot-deep stainless steel lined concrete tank with six-inch thick concrete walls and floor (See Facility 42). The Neutralization Pit received low-level radioactive wastewater from the MPPB, which was subsequently transferred, to the Old or New Interceptors.

The New Interceptors are twin below-grade stainless steel lined concrete storage tanks, each 22 by 20 by 11.5 feet deep (See Facility 20). The walls and floor are 14 inches thick and are lined with stainless steel. The roof is steel. The New Interceptors were built in 1967 to replace the Old Interceptor, which had high levels of radioactivity. The New Interceptors are used to collect and sample wastewater before it is transferred to Lagoon 2.

### C.9.3.2Deactivation and Removal of the Low-Level Radiological Treatment System Lagoons and Associated Soils

The Contractor shall excavate, process, package, characterize, transport, and dispose at offsite waste disposal facilities the site Lagoon system once no longer required under Phase 1B activities.

The lagoon system includes Lagoons 1, 2, 3, 4, and 5, contaminated sediment, liners, piping, associated support equipment, and all fill, soil, and geologic strata down to a depth of one foot into the subsurface Lavery till. The Contractor shall also excavate, process, package, characterize, transport, and dispose at offsite waste disposal facilities all surface and subsurface soils in WMA 2 down to a minimum depth of at least one foot into the subsurface Lavery till within the planned WMA 2 excavation limits as described in the Phase 1 DP. Additional excavation will be required if subsurface soil concentrations exceed the subsurface soil clean-up goals established in the Phase 1 DP.

***Lagoon 1***

Lagoon 1 was an unlined basin approximately 80 by 80 by 5 feet deep excavated into the surficial Sand and Gravel Unit (See Facility 28). It received wastewater from the Old Interceptor and the New Interceptors, and had a storage capacity of more than 200,000 gallons. It was removed from service in 1984. Most of the contaminated sediment was transferred to Lagoon 2 and Lagoon 1 was filled with contaminated debris from the Old Hardstand and then capped with clay and topsoil.

Groundwater and subsurface soil sampling down gradient of Lagoon 1 indicates that radiological contamination has migrated from Lagoon 1 to the northeast and has impacted nearby soil and groundwater.

The Contractor shall remove, process, package, characterize, transport, and dispose at offsite disposal facilities all components of Lagoon 1. This includes its clay cap and topsoil cover, contaminated debris used to backfill the lagoon, remnant contamination remaining from the 1984 closure, and underlying soils to a depth of one foot into the subsurface Lavery till as described in the Phase 1 DP. Additional deeper excavation will be required if soil concentrations exceed the subsurface soil clean-up goals established in the Phase 1 DP. The Lagoon 1 excavation will be backfilled after final status surveys have been completed and the regulatory agencies have performed their confirmatory surveys of the WMA 2 excavation and all regulatory concurrence has been received.

***Lagoon 2***

Lagoon 2 is an unlined 280 by 195 by 17-foot deep basin excavated through the Sand and Gravel Unit into the unweathered Lavery till (See Facility 29). This lagoon has a storage capacity of 2.4 million gallons and stores wastewater transferred from the New Interceptors before treatment in the WVDP LLW2. The Lagoon 2 sediment has not been sampled or analyzed.

Once operation of the WVDP LLRWTS is no longer required to support WVDP operations, the Contractor shall remove, process, package, characterize, transport, and dispose at offsite disposal facilities all components of Lagoon 2. This includes its bottom sediments and underlying soil to a depth of at least one foot into the underlying Lavery till or until the Phase 1 subsurface soil cleanup goals are met, as described in the Phase 1 DP. The Lagoon 2 excavation shall be backfilled after final status surveys have been completed and the regulatory agencies have performed their confirmatory surveys of the WMA 2 excavation and regulatory concurrence has been received.

***Lagoon 3***

Lagoon 3 is an unlined 280 foot by 195 foot by 24-foot deep unlined basin excavated through the Sand and Gravel Unit into the unweathered Lavery till (See Facility 30). It has a storage capacity of 3.3 million gallons and receives treated water from Lagoons 4 and 5. Lagoon 3 is periodically batch discharged to Erdman Brook through a SPDES permitted discharge.

Once operation of the WVDP LLRWTS is no longer required to support WVDP operations, the Contractor shall remove, process, package, characterize, transport, and dispose at offsite disposal facilities all components of Lagoon 3. This includes its bottom sediments and underlying soil to a depth of at least one feet into the underlying Lavery till or until the Phase 1 subsurface soil cleanup goals are met as described in the Phase 1 DP. The Lagoon 3 excavation shall be backfilled after final status surveys have been completed and the regulatory agencies have performed their confirmatory surveys of the WMA 2 excavation and all regulatory concurrence has been received.

***Lagoons 4 and 5***

Lagoons 4 and 5 are lined basins constructed in the sand and gravel unit on the North Plateau with a capacity of 204,000 and 166,000 gallons, respectively (See Facilities 31 and 32). Both lagoons receive treated water from the LLW2 and are discharged to Lagoon 3. Both lagoons were originally excavated into the sand and gravel unit on the North Plateau and lined with reworked glacial tills (presumably remaining from the excavation of Lagoons 2 and 3). In 1974, a synthetic membrane liner was installed in both Lagoon 4 and 5 after it was identified that Lagoons 4 and 5 were potential sources of tritium to groundwater in the sand and gravel unit (WVNSCO 1997). In the late 1990's, the synthetic membrane liners were removed from both lagoons and replaced with concrete grout and an XR-5 liner.

Once operation of the WVDP LLRWTS is no longer required to support WVDP operations, the Contractor shall remove, process, package, characterize, transport, and dispose at offsite disposal facilities all components of Lagoon's 4 and 5. This includes any collected sediment, the synthetic membrane liner, concrete and clay liners, piping systems, and underlying soil to a depth of 2 feet into the underlying Lavery Till as described in the Phase 1 DP. The excavation will be surveyed in accordance with the Phase 1 Characterization Sampling and Analysis Plan for the West Valley Demonstration Project, before backfilling with clean earthen fill obtained from offsite sources.

### C.9.3.3Deactivation of the Low-Level Waste Treatment Building

The Contractor shall perform deactivation, removal, characterization, and offsite disposal of the equipment in the LLW2 Building once no longer required to support WVDP operations.

The LLW2 is a 40 foot by 60-foot by 25-foot tall pre-engineered, single-story, metal-sided building that rests on a concrete wall foundation with floor slab (See Facility 36). The building houses two skid-mounted equipment modules used to treat radiologically contaminated wastewater from site facilities and radiologically contaminated groundwater from the NDA Interceptor Trench. The associated processing equipment includes ion exchangers, valves, piping, pumps, filters, instrumentation, and controllers, two surge tanks, and a sand filter. An adjacent packaging room contains a 4 by 4 by 9-foot-deep stainless steel lined catch basin. A portable ventilation unit located outside of the packaging area contains a high-efficiency particulate air (HEPA) filter and a short stack on the roof of the building. Equipment and piping within the LLW2 is expected to be radiologically contaminated.

The Contractor shall demolish and remove the LLW2 structure including associated foundations.

### C.9.3.4Removal of the Solvent Dike

The Contractor shall remove, process, package, characterize, and dispose of at offsite disposal facilities radiologically and chemically contaminated soils associated with the former NFS Solvent Dike. The excavation will extend to a depth at least one feet into the underlying Lavery Till, as per the Phase 1 DP.

The Solvent Dike is 45-foot by 50-foot unlined basin that was excavated into the Sand and Gravel Unit at the south end of WMA 2 (See Facility 111). During operations, the Solvent Dike received precipitation runoff from the MPPB Solvent Storage Terrace, which contained three tanks used to store a degraded mixture of n-dodecane and tributyl phosphate awaiting disposal in the NDA. Floor drains in the SST conveyed precipitation runoff from the SST via piping to the Solvent Dike. The Solvent Dike was excavated in 1986 and the area backfilled. However, the Solvent Dike area still contains radiologically and chemically contaminated soil.

### C.9.3.5D&D of the Transfer Pump Shed

The Contractor shall perform removal and offsite disposal of the Transfer Pump Shed.

The Transfer Pump Shed is located on the berm separating Lagoons 2 and 3 (See Facility 143). This wood framed and steel-sided structure measures 20 feet by 20 feet by 10 feet high and contains pumps and piping used to transfer liquids from Lagoon 2 to the LLW2 Building for treatment.

### C.9.3.6 WMA 2 Soil Excavation

The Contractor shall perform excavation of surface and subsurface soils in WMA 2 as described in Section 7.4 of the Phase 1 DP. The Contractor shall excavate, characterize, process, package, transport, and dispose at offsite waste disposal facilities all fill, soil, and geologic strata to a minimum depth of at least one foot into the underlying Lavery till within the planned WMA 2 excavation limits as shown in Figure 7-11 and Figure 7-12 of the Phase 1 DP. Additional excavation will be required if subsurface soil concentrations exceed the subsurface soil clean-up goals (CG's) established in the Phase 1 DP.

Once the excavation is within 2 feet of the proposed minimum excavation depth, the Contractor shall perform a remedial action survey as described in the CSAP to characterize the contamination status of soils immediately above the Lavery till. The initial survey shall provide information on where contamination may extend deeper into the Lavery till.

A second remedial action survey shall be performed once the WMA 2 excavation reaches its excavation design depth of one foot into the Lavery till. If this remedial action survey identifies areas that exceed the subsurface soil CGs in Table 5-14 of the Phase 1 DP, the excavation will continue in those areas until the subsurface soil CG are achieved.

If elevated activity exceeding the subsurface soil CG's is not detected during this survey, an independent DOE contractor shall perform a final status survey of the sides and bottom of the WMA 2 excavation in accordance with the Phase 1 FSS Plan to verify that the subsurface soil CGs have been achieved. The decommissioning Contractor shall be required to maintain the final status survey unit(s) in a safe configuration that allows an independent verification survey to be performed by the regulatory agencies. Approval to backfill final status survey unit(s) shall be given upon DOE concurrence that remedial action is complete through its independent verification process. The Contractor shall backfill the WMA 2 excavation with uncontaminated geologic material (e.g., sand, gravel, or sandy loam) obtained from offsite geologic deposits. This offsite geologic material will possess geologic and hydrologic properties similar to the native geologic materials removed from the WMA 2 excavation.

The Contractor shall prepare and submit a WMA 2 Soil Excavation Plan, which includes, but is not limited to, the details of the planned excavation method, the excavation sequence, segregation of oversize materials, water management, and mitigative measures to prevent contamination of the backfilled WMA 2 excavation from the remaining portion of the NPGP (see Section J, Attachment J-4, *Contract Deliverables*). Specific components of WMA 2 are described below.

***Removal of Underground Piping***

The Contractor shall safely remove, package, transport, and dispose of all piping at off-site disposal facilities. There is approximately 2,000 linear feet of underground radioactively contaminated and non-contaminated carbon steel, stainless steel, and cast iron process, chemical, utility, and waste transfer piping within the planned WMA 2 excavation. Waste transfer piping includes piping used to transfer low-level wastewater for treatment in the site LLRWTS. A list of pipelines within the planned WMA 2 excavation is available in Appendix F of the Phase 1 DP.

***Lagoon Waste Disposal***

The Contractor shall perform waste management activities as described within this PWS. Additionally, the Contractor shall monitor, track, and document data on soils and debris excavated, shipped, and disposed and shall submit an annual Interim Completion Report on quantities excavated and disposed (see Section J, Attachment J-4, *Contract Deliverables*).

***WMA 2 Soil Excavation Backfill and Restoration***

The Contractor shall procure soil from offsite commercial suppliers that meets the requirements for acceptable backfill for the WMA 1 soil excavation as discussed in the Phase 1 DP and described in the soil backfill requirements note above. After the completion of all final status and confirmatory surveys, and after regulatory concurrence is received, the WMA 1 excavation will be backfilled with uncontaminated geologic materials that will be compacted for geotechnical stability and graded as necessary to restore these areas to a near natural appearance.

The backfill material shall be obtained from offsite deposits with similar geologic, hydrologic, and engineering properties (texture, hydraulic conductivity, distribution coefficients, etc.) that are similar to the properties of the Sand and Gravel Unit in the North Plateau of the WVDP. Radiological concentrations of this backfill will not exceed WVDP site background concentrations for the Sand and Gravel Unit in the North Plateau of the WVDP. Chemical concentrations of this backfill shall meet the most restrictive concentration limits identified in 6 NYCRR Part 375.

The excavation footprint shall be restored in accordance with the Contractor's backfill and restoration plan and all applicable laws, rules, and regulations.

## C.10 PHASE 2 ACTIVITIES

The Contractor shall perform deactivation, decommissioning, decontamination, demolition, soil remediation and excavation, surface-water and groundwater remediation, and waste management activities in support of Phase 2 activities as directed by task order.