

**STATEMENT OF WORK  
FOR  
CONSTRUCTION**

**Requisition #: 306281**

**Title: 100K Waste Sites Remediation & Backfill**

**Revision Number: 00**

**Date: 11/8/2017**

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PART 1 – GENERAL

1.1 INTRODUCTION / BACKGROUND

CH2M HILL Plateau Remediation Company, LLC (CHPRC) as a prime contractor to the U.S. Department of Energy (DOE) requires field remediation/backfill of waste sites and burial grounds located within the Hanford Site's 100K Area. These are legacy waste sites related to nuclear reactor operations and fuel production comprising liquid waste disposal cribs and trenches, buried pipelines and areas contaminated by operational leaks and accidental spills.

1.2 DESCRIPTION OF WORK - GENERAL

1.2.1 Work is located in the 100 Area of the Hanford Site and is located approximately 40 road miles north of Richland, Washington.

1.2.2 Work consists of remediation of up to three (3) waste sites as described herein. Contractor shall remove, treat, and dispose of radiological and chemical hazards that includes excavation of contaminated soils to be retrieved and loaded into roll-off waste containers, a portion of this may be non-contaminated overburden to be used as backfill later, may contain various sizes and types of pipe, rebar reinforced concrete and will include backfill of four sites. This Statement of Work (SOW) contains base work as well as option work.

1.2.3 Overburden and gravel from an on-site pit will be used to perform the backfill portion of this work.

1.2.4 Contractor shall provide a trailer for offices, lunch room, and pre-job meetings, and a bathroom trailer at the worksite. Power is in place and provided by CHPRC. A container queue and tarping tent is provided by CHPRC.

1.2.5 The contractor is responsible for providing a drive on scale; haul road; repair and maintenance of Buyer provided tarping/survey tent; and CTA lighting repair and maintenance.

1.2.6 The total depth of the excavation is not expected to exceed 40 feet with the exception of waste site 116-KE-2 which is estimated to not exceed 60 feet.

1.3 DESCRIPTION OF **BASE WORK** - SPECIFIC

1.3.1 **Included Work:** The following identifies major work elements only. The work is considered a "remove, treat, and dispose" activity that includes up to three (3) radiological and chemical contaminated sites. These sites collectively contain about 121,000 U.S. tons of contaminated material that must be removed and placed in CHPRC-provided roll-off containers. Non-contaminated, overburden will be removed, stockpiled and sampled for potential use as backfill later. In addition to this material there is

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approximately 800 linear feet of < 24 inch diameter pipe and up to 5,000 tons of rebar reinforced concrete. Backfill of four waste sites with approximately 124,800 cubic yards.

- 1.3.1.1 For backfill of the waste sites gravel will be available from near-by Pit 23 which is located approximately 2.5 miles (5 miles round trip) from the job site for Contractor to use in performing the work.
- 1.3.1.2 Contractor shall provide and manage labor, equipment, material, and services required to complete work. Labor includes participation of Contractor's employees in training and medical examinations required by Contract. Contractor shall provide Plan of the Day/Office Trailer; bathroom trailer and/or portable toilets with associated janitorial/maintenance services for men and women on the job site all site; preparatory and compliance material such as, drive on load scales, signs/postings, rope, container liners, container socks, fence posts, and soil fixative.
- 1.3.1.3 Before receiving Notice to Proceed for excavation, the Contractor shall participate in a readiness assessment/review to demonstrate to CHPRC that all required documentation is in place and that its personnel, procedures, submittal and equipment are ready to commence work. CHPRC will review all documents and discuss readiness with Contractors key personnel prior to issuing a Notice to Proceed.
- 1.3.2 Base Work consists of waste sites as follows;
- 1.3.2.1 **116-KE-2:** The waste site is a wooden crib structure and associated piping. The crib dimensions are 3 meters (10 feet) by 3 meters (10 feet) by 3 meters (10 feet), and rests 0.9 meters (3 feet) above the bottom of an excavaton. The length and width of the excavation measured approximately 9.1 meters (30 feet) by 9.1 meters (30 feet) at grade and 4.9 meters (16 feet) by 4.9 meters (16 feet) at the base, and was 10.5 meters (34.5 feet) deep. The bottom 3 meters (10 feet) of the excavation was filled with crushed stone then backfilled. The distribution pipes enter the crib structure 7 meters (23 feet) below grade. The site also includes two 5.1-centimerer (2 inch) steel schedule 40 pipelines that terminate at the west wall of the 1706-KER Building approximately 6.1 meters (20 feet) below grade. The pipelines are approximately 55 meters (180 feet) long. The waste site has been partially remediated and is currently an open excavation.
- 1.3.2.2 **100-K-47:1:** Underground process sewer pipeline, this pipeline system includes process sewer lines from both 105KW and 105KE buildings. The line runs east and west and then heads north to a point just south of the 116-K-3 outfall where they intersect into one single line. The main portion is 1.68 meters by 1.68 meters (66 inches by 66 inches) concrete sewer.
- 1.3.2.3 **100-K-94:** There is a dry well at the former 1702-KW guard house; the guard house has since been removed. The well measures 30 inches round and approximately 4-5 feet

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deep. The well received effluent drinking water from the water fountains in each guard house through underground piping.

- 1.3.2.4 **100-K-13:** The site is a French drain that is a 1.5 meter (5 foot) diameter vertical concrete pipe filled with gravel. The drain was installed and used as a disposal site for sanitary type waste from several temporary 100-KW construction facilities located very near the site.
- 1.3.2.5 **183.2 KE Sedimentation Basin, 1607-K1, 1607-K5 and 100-K-103:** Backfill will be conducted in these locations. The fill material will be provided from Pit No. 23 near the intersection of Route 1 and Route 4N of the Hanford 100 Area.

1.3.3 Description of Option Work:

**Included Option Work:** The following identifies major work elements only. The work is considered a “remove, treat, and dispose” activity that includes up to three radiological and chemical contaminated sites. These sites collectively contain 92,503 U.S. tons of contaminated material that must be removed and placed in CHPRC-provided roll-off containers. Non-contaminated overburden will be removed and stockpiled and sampled for potential use as backfill later. In addition to this material there is approximately 630 linear feet of < 24 inch diameter pipe and up to 100 tons of rebar reinforced concrete.

Option Work consists of waste sites as follows:

- 1.3.3.1 **Uncompleted sites from Base Work:** Remaining work from the Base scope that is not completed will continue concurrently with the activation of the Option Work.
- 1.3.3.2 **100-K-47:2:** Underground process sewer pipeline, this pipeline system includes process sewer lines from both 105KW and 105KE buildings. This pipeline segment includes a 4” diameter cement asbestos pipe, an 8” diameter vitrified clay pipe, 12” carbon steel pipe, and a 16” carbon steel pipe.
- 1.3.3.3 **120-KW-6:** This site is a below grade concrete structure that provided brine for the 165-KW Powerhouse. The roof of the structure is approximately 0.3 m (1 ft) above ground level. A valve pit is located south of the brine pit in a 1.2 m (4 ft) diameter corrugated galvanized pipe. The valve pit contains residue and was part of the brine operation. The liquid was removed in 1998, and the open pit was backfilled to grade. The brine pit has inner dimensions of 4.3 m (14 ft) long, by 2.4 m (8 ft) wide, by 2.7 m (9 ft) tall. The bottom of each pit is filled with gravel.
- 1.3.3.4 **100-K-50:2:** The 100-K-50 site was an underground, sanitary sewage holding tank that serviced 1725K and 1726K. The holding tank, a portion of the piping, and contaminated soil were removed in October 2015. The 100-K-50:2 site includes the remainder of the 8-inch sanitary sewer pipeline that was not removed in 2015.

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1.3.4 Excavation Operations

Each waste site shall be excavated in compliance with the Contactor provided earthwork plan, unless otherwise directed by Buyer. The Above Cleanup Levels (ACL) material shall be temporarily held within the Area of Contaminates (AOC) or Buyer-approved staging piles, in accordance with the Contract documents, until the material is sampled and released by the Buyer. Loaded containers shall meet survey requirements prior to pick up and release from the contaminated area.

The Contractor's approach to excavation shall be coordinated in advance with the Buyer to maximize sampling efficiency, minimize the amount of uncontaminated material excavated, and assure that unknown waste and excavated materials with no identified disposal path remain within the AOC, and are neither transported to staging pile areas nor loaded out into Environmental Restoration Disposal Facility (ERDF) transportation containers.

The Contractor shall excavate soil and debris to the lines and grades shown on the Project Drawings for Contractor processing. Excavations shall be conducted in accordance with Contract documents and in a safe manner for the type of soil and or debris present at a given location.

The Buyer will provide radiological surveying to support the excavation and sorting operations using a graded, observational approach.

The Contractor will observe the excavation and sorting operations continuously. Observations and radiological surveying shall be for items that could contain liquids, greater than Class C radioactive material, asbestos, PCBs, discolored or anomalous soil or discrete items, sealed containers, sludge, mercury, high dose rate items greater than 100 mrem/hr at 30 cm, metallic objects with densities or weights higher than other metallic objects encountered, unknown media and waste forms requiring further evaluation, or other materials potentially not meeting the ERDF waste acceptance criteria (WAC) and ERDF Supplemental WAC. The Contractor shall remove and segregate this material within the AOC or staging pile area, at the direction of the Buyer, and place it in the AOC or staging pile for supplemental characterization and identification by the Buyer. If encountered, high-dose rate items greater than 100 mrem/hr at 30 cm on contact will be stored in a shielded bunker provided by the Contractor. Staging pile areas outside the AOC shall be as directed by the Buyer and in accordance with the Contract Documents. Staging areas shall be surrounded by berms to control runoff. During the removal, sorting, and segregation process, the Buyer may direct the Contractor to place potentially dangerous waste such as (but not limited to) pieces of elemental lead, batteries, and jars into Buyer-provided drums or containers. After the necessary items are removed from the excavated material, the remaining soil and debris shall be placed in the staging pile area for characterization work.

The physical limits of the pipeline-related excavation, demolition, and removal work are as follows:

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- Required depth of excavation is 0.305 m (1 ft) beneath the lowest point of all pipelines, concrete, and other engineered structures.
- Side slopes of 1.5 horizontal to 1 vertical (1.5:1).
- Base width of trench to be determined by Contractor to allow safe access for project personnel. A minimum excavation base width of 1 m (3.28 ft) laterally beyond the plan-view extent of the pipeline or structure is required.

The control points and depths shown on the Project Drawings are the expected lateral extent and maximum depth of the excavation. However, it is possible that actual waste site contamination locations may vary from the boundaries shown on the Project Drawings. Consequently, the Buyer reserves the right to alter the shape of excavations. Should the Buyer choose to exercise this right, the Contractor shall excavate to revised limits. The actual volume of soil and debris removal will be determined by the Buyer as excavation progresses.

Following excavation, the Contractor shall remove and stockpile permanent fencing and concrete burial ground markers for disposal as directed by the Buyer. The Contractor shall secure access to open excavations by placing adequate physical barriers across unsecured access points. Excavations may remain open for an extended period of time.

The Contractor shall anticipate and be prepared for multiple handling of soil and debris excavated from the waste site. Excavated material shall be sorted, segregated, size reduced as necessary, and staged within the AOC or Buyer-approved staging pile areas, in accordance with the Contract documents. The excavated material shall remain staged until the material is sampled and the Buyer has reviewed sample results and determined if the material is ACL or Below Cleanup Levels (BCL). The ACL material that meets the ERDF WAC (WCH-00191) and Supplemental WAC (0000X-DC-W0001) shall be loaded into ERDF containers. Waste that meets the ERDF WAC does not necessarily meet the Supplemental WAC.

The ACL material that does not meet the ERDF WAC and Supplemental WAC shall remain staged until direction is received from Buyer unless the material is elemental lead, cadmium, or a lead-cadmium alloy. Elemental lead, cadmium, and lead-cadmium alloy may be in the form of “dummy” reactor slugs, clad in aluminum jackets. These materials, including the aluminum-jacketed materials shall be placed in Buyer-supplied containers directed by Buyer.

If material is determined to be BCL, it shall be moved to a separate stockpile area.

The exposed surface area of contaminated combustible materials (e.g., cardboard boxes, used Personal Protective Equipment (PPE) shall be minimized during excavation, sorting, stockpiling, and load out processes. During operations, the exposed surface area of contaminated combustible materials shall be kept suitably moist or covered to prevent combustion or movement of the materials outside of controlled boundaries resulting from wind. At the end of shift work and overnight, exposed surface areas of contaminated combustible materials shall be

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covered with processed soil, or other Buyer approved methods, that will prevent combustion or movement of materials outside of controlled boundaries.

1.3.5 Excavation/Sorting Methods

Contractor shall be responsible for implementing an excavation and sorting method, or combination of methods, that will meet the sorting requirements specified in this SOW. If the Contractor chooses a method that does not work, they shall be responsible for providing a system that does work at no additional cost to the Buyer and without any schedule extension.

With the exception of excavation material containing separable Land Disposal Restrictions (LDR) waste, selection of the excavation/sorting method shall be made by the Contractor, and the method may be changed based on the type of material being excavated. Alternate excavation/sorting methods may be approved by the Buyer on a case-by-case basis when proposed by the Contractor. During the excavation process, care shall be taken to prevent the breakage or puncture of unopened or sealed cans, jars, and containers.

Excavation and sorting methods shall include, but not be limited to, the following:

1.3.6 Rough Sorting during direct waste load out

Rough sorting is typically conducted while preparing earthen materials for direct load into roll off containers or direct-transport vehicles. This is allowed where process knowledge indicates a low probability that contained unknown wastes and high radiation dose rate items will be encountered. The equipment operator and field crew must be instructed to be observant while preparing and loading materials for transport. If anomalous items are encountered, work must stop and Buyer field management must be contacted immediately.

1.3.7 Excavation and Initial Sorting

This process is required for wastes site that are suspected of containing hazardous materials (e.g., bulk elemental lead) that require segregation before shipping to a disposal facility. Waste sites typically requiring this type of sorting include, but are not limited to burial grounds, hazardous materials landfills, and burial pits with documented hazardous materials inventory.

- 0.3 m (1 ft) Horizontal Lifts for Excavation and Initial Sorting. For excavation and initial sorting in the vicinity of the excavation face, the exposed surface of each lift shall be observed, radiologically screened as deemed necessary by the Buyer using a graded approach, sorted to remove unknown material, material requiring special handling, and large debris, and then excavated using heavy equipment and



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stockpiled/moved to a stockpile or staging pile area. Material shall also be observed as it is being stockpiled for additional sorting to segregate like materials, dissimilar materials, land-banned materials, debris and discrete high dose rate items (> 100 mrem/hr at 30 cm on contact). The Contractor shall be responsible for sorting/segregating waste.

- 0.3 m (1 ft) Diagonal (Sloping) Lifts for Excavation and Initial Sorting for excavation and initial sorting in the vicinity of the excavation face, the exposed surface of each lift shall be observed as it is raked down the face of an excavation slope using appropriate equipment. Material will be radiologically surveyed at the bottom of the excavation slope as deemed necessary by the Buyer using a graded approach, and shall be sorted to remove unknown material, material requiring special handling, and large debris, and stockpiled. Material shall also be observed as it is being stockpiled for additional sorting to segregate like materials, dissimilar materials, land-banned materials, debris and discrete high dose rate items (> 100 mrem/hr at 30 cm on contact). The Contractor shall be responsible for sorting/segregating waste.
- 0.2 m (0.5 ft) Loader Lifts for Excavation and Initial Sorting. The surface of each lift shall be observed, will be radiologically surveyed as deemed necessary by the Buyer using a graded approach, and shall be sorted to remove unknown material and large debris, and then excavated using the front-end loader with a 0.2-m (0.5-ft) cut depth. The Contractor shall be responsible for sorting/segregating waste.

#### 1.3.8 Field Screening and In-Process Sampling for Waste Characterization.

The Buyer is responsible for sampling and analysis activities, which may be performed concurrently with excavation of new materials. Excavation operations may be temporarily halted by the Buyer to facilitate and safeguard sampling and field screening activities. The Contractor shall provide access to survey locations or sample points using the following methods:

- Contouring the excavation or providing (and installing) shoring/ramps to permit worker entry in accordance with the requirements of OSHA; and
- Retrieving soil or debris from using heavy equipment excavation side walls and bottom at locations determined by the Buyer.

Field screening and sampling will be conducted prior to and during excavation activities to classify excavated material as ACL or BCL. Material shall not be loaded until the determination of ACL or BCL has been verified. The Contractor shall be required to double handle the material initially classified as BCL if subsequent laboratory analysis indicates that the material exceeds cleanup criteria. The Contractor shall also be required to double-handle ACL material if subsequent laboratory analysis indicates the materials contain dangerous waste. Lab analysis can take from 7 – 21 days.

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1.3.9 Verification Sampling

Upon completion of waste site excavation, access to the excavation side wall and bottom soil will be required at discrete sample points for clean site verification sampling. Any portion of equipment used for contouring or retrieving soil (e.g., track hoe bucket) shall be clean and free of radiological and chemical contamination so as not to cross contaminate the excavation sample locations. If cross-contamination occurs, additional excavation and decontamination costs shall be borne by the Contractor, with no allowance for schedule extension.

Stockpiles will be subject to sampling by the Buyer to determine if overburden material and other clean spoils are acceptable for use as backfill. The soil beneath ACL staging piles will be subject to cleanup verification sampling by the Buyer after final removal of the staging pile material.

The Contractor shall ensure the Buyer has access to stockpiles for sampling. Moving materials within the stockpiles will not be permitted until after sampling and Buyer approval. The Contractor shall build stockpiles and maintain them in a manner that allows personnel access onto them.

1.3.10 Cross-contamination of Excavated Areas

The excavation shall be sequenced such that areas already excavated are not cross contaminated. Material that has been cross contaminated due to waste removal or size reduction shall be removed from the excavation or staging area upon completion of waste removal and size reduction activities. Side slopes of excavations shall be protected to prevent contaminated materials from eroding or sloughing onto uncontaminated areas of the excavation or surrounding areas. Additional material removal and replacement due to cross-contamination shall be performed at no additional expense to the Buyer. Equipment that comes in contact with contaminated material will not be permitted to make contact with uncontaminated material, equipment, or containers until contamination has been removed.

1.3.11 Trenching and Potholing

The Contractor shall excavate potholes (vertically) and trenches (laterally) at the Buyer's direction during any phase of the project. Trenches shall have a minimum width of 1.0 m (3.3 ft) and a maximum depth of 6.1 m (20 ft). Potholes shall have a maximum length of 3.1 m (10 ft), a maximum width of 3.1 m (10 ft), and a maximum depth of 6.1 m (20 ft).

1.3.12 Septic Waste Removal

Septic waste shall be removed, treated (dewatered in accordance with Washington administrative code (WAC) 173-303-140(4)(b), including pathogen reduction in accordance with 40 CFR 503, Appendix B) and contained before transportation to

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Container Transfer Area (CTA). No cross-contamination is allowed during removal and treatment of septic waste. If the lime stabilization option is executed, the Contractor shall ensure the pH of the stabilized sewage sludge is below pH 12.5 (ERDF WAC). Buyer will support the Contractor in obtaining necessary permits if required. Contractor shall submit their plan for neutralizing sewage waste.

1.3.13 Work Zone Delineation and Radiological Control

The work area currently exists within a radiological controlled area (reactor site area). The majority of the waste sites are currently posted as underground radioactive material areas (URMA). Some sites are posted as a Soil Contamination Area (SCA) and some are posted as Contamination Area (CA).

The delineation and posting of these radiological work areas will be used to maintain radiological control of the work area and to minimize the potential for cross-contamination outside of the work area. Any work area where radioactive contamination exists or is likely to exist will be posted by the Contractor as a CA, a SCA or other, as directed by the Buyer. As directed by the Buyer, a radiological buffer area (RBA) may be posted around contaminated work areas (CA, SCA, etc.) by the Contractor based on Contractor's means and methods and work practices. The Buyer will provide radiological posting (signs and labels) for Contractor installation. The Contractor shall provide tee-posts and rope (magenta and yellow), and barriers and guards for radiological postings, as required.

An area will be designated as the exit point from any CA. These exits should be chosen to maintain exposure to radiation and other hazardous materials As Low as Reasonably Achievable (ALARA). The exit area will be for the purpose of PPE disrobing, personnel surveying, and potential decontamination. The exit area will include a step-off pad, shoe cover receptacle, and trash receptacle. Equipment and personnel will be subject to a contamination survey upon exit from a CA or RBA, as directed by the Buyer. Where necessary to facilitate the movement of containers when using a temporary container staging area, control zone/work area boundaries may be moved after containers are surveyed and released by the Buyer. Decontamination may be required to release personnel or equipment from areas containing radioactive or chemical contamination.

The Contractor shall provide and maintain RMAs for the storage of radioactive material and equipment used to support radiological work. Reusable PPE that is potentially contaminated shall be stored in an RMA. Only labeled radioactive material may be stored in the RMA, as directed by the Buyer. The RMA shall be posted by the Contractor, as directed by the Buyer. The RMA will contain material stored in sealed bags, boxes, drums, etc.

1.3.14 Separation of Excavated Materials

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Excavated materials will be identified by the Buyer as either BCL material (subject to verification) or ACL material depending on the type of waste and level of radiological and chemical contamination. ACL material may be divided into subgroups of waste depending on the waste makeup. Examples of subgroups of ACL material include material exceeding Land Disposal Restrictions (LDRs), asbestos, and PCB waste. All of these ACL subgroups will require additional segregation, sorting, and handling steps beyond identification as ACL. In addition, combustible and noncombustible materials must be staged separately. A minimum of 15 m (50 ft) clearance between combustible waste piles, and between combustible and noncombustible waste piles shall be maintained.

#### 1.3.14.1 Below Cleanup Levels (BCL) Materials

BCL material is most likely to occur in waste site overburden and side-slope areas. Verification that these materials have contaminant levels below cleanup levels will be required prior to use as backfill. The Buyer will perform the verification. The Contractor shall minimize the amount of materials ultimately disposed of at the ERDF. The Buyer will verify BCL materials are clean by radiological surveys of stockpiles on a lift-by-lift basis. The Contractor shall place clean materials in stockpiles in lifts of no greater than 0.31 m (1 ft) thickness or in small piles with 360 degree access to allow the Buyer to complete these surveys. After surveys are complete, the piles will be smoothed to a 3 ft lift to allow for an additional survey. No additional material shall be placed prior to Buyer approval of underlying lift.

#### 1.3.14.2 Above Cleanup Levels (ACL) Materials

The ACL materials will typically be within waste site boundaries. The ACL material that does not meet the ERDF WAC ERDF-00011 Rev 0 (Formerly WCH-00191 Rev 4) shall be placed in an AOC or staging pile as directed by the Buyer, and in accordance with the SOW.

#### 1.3.14.3 Demolition and Removal of Contaminated Debris

The Contractor shall demolish and remove asphalt, concrete, wooden or steel structures, piping, conduits, wiring, and miscellaneous debris. Steel plates and pipes shall be size-reduced with mechanical shear to the extent possible. No torch cutting allowed.

Roll off containers shall be protected with a 150-mm (6-in.) layer of soil prior to loading concrete and steel debris. Prior to demolition, the Contractor shall confirm that any existing utilities are inactive. Additional guidance is provided in ERDF supplemental WAC (0000X DC W0001).

#### 1.3.15 Housekeeping

The Contractor shall perform housekeeping for support facilities as required to keep the site free of miscellaneous litter, trash, and debris. With the exceptions of the Buyer office

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trailer and RCT trailer, the Contractor is responsible for housekeeping activities (e.g., water, trash, janitorial) for support facilities. The Contractor shall conduct routine, daily cleaning required to keep Contractor-controlled/operated or occupied support facilities, site grounds, roads, and waste site free of trash, litter, food, and tumbleweeds.

The Contractor shall provide to the Buyer for approval by October 1 of each year a cold weather protection plan that describes the methods the Contractor will use to ensure buildings, utilities, facilities, materials and equipment are not negatively impacted by the freezing temperatures.

- 1.3.15.1 The Contractor shall furnish and maintain dedicated spill kits and fire extinguishers at the CTA, near equipment maintenance areas, and at the waste site where work activities are underway.
- 1.3.15.2 The Contractor shall furnish and be responsible for storing new and laundered PPE in a PPE storage facility. The Contractor shall also prepare soiled non-disposable PPE for laundry pickup throughout the duration of the project.
- 1.3.15.3 Wastes and hazardous substances shall be stored, handled, and disposed of in accordance with applicable State and Federal regulations, Hanford Site practices, and relevant and appropriate requirements specified in the applicable CERCLA Record of Decisions. The Contractor shall maintain an accurate inventory of chemicals and the applicable material safety data sheets (MSDS) and/or safety data sheets (SDSs) at the job site and provide a list and quantity of chemicals to the Buyer upon request and in accordance with the Contract documents.
- 1.3.15.4 The Contractor shall keep the job site areas free of accumulation of combustible materials (e.g., used oil, wooden pallets, rags, etc.) including vegetation around facilities, windblown vegetation and windblown trash.

1.3.16 Moisture and Dust Control

Dust from excavation, haul operations, and other site traffic areas shall be controlled through engineering and administrative controls. Controlled locations include, but are not limited to, the limits of waste site excavation and access ramps, roads within the Project Limits, parking areas, the CTA, and staging piles, as shown on the IFC drawings. The CTA, site roads, parking lots, and excavation materials such as ash shall receive Buyer-approved positive dust control measures, other than water alone, that are penetrating and long lasting, such as penetrating crusting agents. These measures shall be applied as needed to maintain long-term dust control. Care shall be taken not to produce ponding of applied material on the surface.

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The Contractor shall control dust during work performance in accordance with the following requirements. These requirements are subject to change based upon provisions of the final Air Monitoring Plan, which has not yet been approved by the regulators.

Active excavation face(s) that are exposed for periods of less than 24 hours shall receive dust control measures (such as spray application of water) during excavation operations.

Excavated areas, ACL or potentially ACL materials that will be inactive for periods of greater than 24 hours shall receive positive dust control measures as stated in Requirements Documents for Materials.

Crusting agent or fixatives shall be applied to any untreated excavation, stockpiles and staging piles if the sustained overnight wind speed is predicted to exceed 8.94 m/s (20 mph) based on the Hanford Meteorological Station after the 8:00 a.m. forecast. Subject to Buyer approval, fixatives may not have to be applied when the contaminated soils are frozen, or it is raining, snowing, or other freezing precipitation is falling at the end of work operations.

The Contractor is responsible to furnish and apply fixative and dust suppressant application equipment. Upon approval by Buyer, conditions may allow use of recycled decontamination water inside the area of contamination.

#### 1.3.17 Roads

Roads within the Project Limits shall be maintained by finish grading during project occupation and remain usable after project completion. Road maintenance activities include the following requirements:

A formal remediation route plan shall be submitted showing traffic patterns for subcontract haul trucks as well as ERDF truck traffic to include entering and existing 100K and the ERDF transfer que.

The road surface shall be maintained by fine grading or similar method that results in a smooth, rut free, washboard free driving surface.

Existing pavement that becomes loose shall be removed and disposed, as appropriate. Paved roadways used or removed by the Contractor shall be restored to a condition equal to or better than the condition existing at the time of the issuance of the Notice to Proceed.

The Contractor shall furnish and maintain a sufficient number of Type II barricades (with top and bottom panels of reflective orange-white, left-right striped sheeting) for access roads.

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For reroute and road improvement/construction, roads shall be graded; the subgrade compacted, and crushed surfacing material placed to a compacted depth of 152 mm (6 in.) (Minimum of two compacted lifts). Compaction shall be achieved by a minimum of three passes with a 9 ton static weight vibratory roller with 19.5 ton dynamic force. The access road reroutes shall be 6.10 m (20 ft) wide with a maximum grade of 6% and a minimum turning radius of 18.3 m (60 ft).

The Contractor shall decontaminate roadways (as necessary) prior to project completion.

As directed by the Buyer, the Contractor shall rip the top 0.3 m (12 in.) of all haul roads that the Buyer has determined are no longer needed for future activities.

1.3.18 Container Transfer Area

Contractor shall maintain Buyer furnished CTA as usable during this contract (SOW). Contractor is responsible for all maintenance and repairs of the CTA and Survey Tent.

1.3.19 Air Monitoring Requirements

Permanent air monitors shall be in operation during normal work operations (e.g., excavating and loading radioactive contaminated material. The Contractor shall inspect all air monitors daily, prior to beginning normal work operations as identified by the Buyer, to verify operational status. This information shall be recorded on the Monthly Air Quality Data Summary Record (MAQDSR) and submitted to the Buyer monthly. Interruption of operation shall be recorded on the MAQDSR and immediately reported to the Buyer. If any air monitor is out of operation for more than 48 hours, notify the Buyer, who will make the appropriate notifications to the regulatory agencies. Maintenance and repair of the air monitors will be by others. If all downwind air monitors are out of operation during normal work operations, excavation and loading activities shall be temporarily suspended until operation of at least one downwind air monitor is restored or backup equipment is deployed. Normal work operations are not allowed if no downwind monitors are operating. The Contractor can obtain a copy of the regulatory approved Air Monitoring Plan from the Buyer.

1.3.20 Illumination Requirements

Contractor is responsible for maintaining/providing temporary lighting required in the CTA to permit delivery and pickup of containers during off-shift hours to support inventory control of containers. Contractor is responsible for all maintenance and repairs of CTA lighting.

1.3.20 Management of Secondary Waste

1.3.20.1 The Contractor shall make necessary arrangements to minimize and dispose of secondary waste. Secondary waste includes waste that becomes contaminated as a direct

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**SECTION 01010**  
**SUMMARY OF WORK**

result of remediation operations, not including contaminated soils and debris. Secondary waste that has been designated and approved for disposal at the ERDF shall be bagged and loaded into ERDF containers by the Contractor. The Contractor shall note the contents of the bag and inform the Buyer.

1.3.20.2 Contractor-generated waste that is not contaminated (e.g., miscellaneous trash, non-contaminated used oils, etc.) cannot be disposed in ERDF, and shall be managed and disposed of by the Contractor.

1.3.21 Training and Medical Requirements

1.3.21.1 The Contractor shall demonstrate through properly documented records that personnel performing work on site have completed the appropriate training and medical requirements prior to commencement of work.

1.3.22 Materials

Unless otherwise specified, the Contractor shall furnish and assume full responsibility for materials, equipment, labor, transportation, construction equipment and machinery, tools, appliances, fuel, power, light, heat, telephone, sanitary facilities, temporary structures, and other facilities and incidentals necessary for the performance of the work.

The right to inspect and test materials to verify conformance with the specification requirements shall be reserved by the Buyer. If requested, material samples shall be furnished to the Buyer at no additional cost. Materials not in conformance with the specification requirements shall be removed from the site and replaced at no additional expense to the Buyer.

1.3.22.1 Materials for surfacing the Container Transfer Area (CTA) and associated haul roads used by Environmental Restoration Disposal Facility (ERDF) vehicles shall comply with the requirements of Washington State Department of Transportation (WSDOT) M 41-10, 9 03.9(3), "Crushed Surfacing," for top course. The percent fracture requirement may be reduced to 60% from the 75% specified in the WSDOT standard specification. Minimum compacted thickness for crushed surfacing of top course for CTA construction and perimeter access and haul roads to be used by ERDF haul trucks shall be 76 mm (3 in.).

Materials for the base course of the CTA and the related haul roads shall comply with the requirements of WSDOT M 41-10, 9-03.9(3), "Crushed Surfacing," for base course. The percent fracture requirement may be reduced to 60% from the 75% specified in the WSDOT standard specification. Minimum compacted thickness for crushed surfacing of base course for CTA and haul road, and CTA perimeter access road construction shall be 76 mm (3 in.).

1.3.22.2 Soil Fixative



**SECTION 01010  
SUMMARY OF WORK**

Excessive water will not be allowed on high-contamination area materials. Soil fixative used for dust control, such as TerraBond® (trademark of TerraBond Industries, L.L.C., Lafayette, Louisiana), shall be composed of non-regulated substances suitable for spray application. Prior to initiating work, the manufacturer's literature describing product components and application instructions shall be submitted to the Buyer for approval.

At the completion of remediation excavation work at the waste site, the excavation areas may be left open over a substantial period of time while determination of site status with regulatory agencies is in progress. The Contractor shall stabilize the site with a heavy coating of a dust suppressant (soil-crusting agents/fixants). The soil stabilizing material shall be an organic polymer such as manufactured by TerraBond® or equivalent as approved by the Buyer. Open excavations shall be barricaded as necessary in accordance with 29 CFR 1926. The Contractor shall establish erosion control as necessary around open excavations.

1.3.23 Container Liners

Container liners shall be flame-resistant, low-density polyethylene/linear low-density polyethylene film that meet the specifications as shown in Table 2-1 below.

<b>Table 2-1. Specifications for Polyethylene Liners.</b>		
<b>Test Name</b>	<b>ASTM Method Number</b>	<b>Specification</b>
Dart drop impact strength	D1709	≥300 grams
Elmendorf tear strength	D4397	MD≥540 grams TD≥1080 grams
Tensile strength at break	D882.91	MD≥4300 psi TD≥3200 psi
Elongation at break	D882	MD≥430% TD≥540%
Vicat softening temperature	D1525	203 degrees Fahrenheit
Heat deflection temperature at 66 psi	D648	115 degrees Fahrenheit
1% secant modulus	D4397	MD≥31,000 psi TD≥37,000 psi

The liners shall be sized to fit inside the container, and allow a minimum of 0.7 m (2.3 ft) of overlapping closure and sealing after the liner is filled. The nominal dimensions of the roll-off containers are 6.1-m to 6.7-m long by 2.4-m wide by 1.5-m high (20-to 22-ft long by 8-ft wide by 5-ft high).

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**SECTION 01010**  
**SUMMARY OF WORK**

A single liner shall be used for payloads with less than 30 A2s of radioactive material. Per 49 NBS CFR 173.403, A2 means the maximum activity of Class 7 (radioactive) material, other than special form, Low Specific Activity or Surface Contaminated Object, permitted in a Type A package. Two liners shall be used for payloads that exceed 30 A2s of radioactive material (up to a maximum of 100 A2s). For double-liner configurations, the liner seams will be offset and spot-sealed with a heat gun.

If the waste materials have sharp edges, a layer of soft material shall be placed in the bottom of the liner to prevent damage, double liners may be used as need or directed by CHPRC.

1.3.24 Container Liquid Absorber

The liquid absorbing sock shall be at least 203 mm (8 in.) in width and 1,829 mm (6 ft) in length with a non-hazardous sodium- or potassium- polyacrylate absorbent sewn into the cells of the sock, such as "Water Works SP 400", or equivalent. The sock shall be capable of absorbing 30 liters (8 gallons) of water.

1.3.25 Access Control and Warning Signs

Contractor is responsible for maintaining the signs in a clean and like-new condition. All signs damaged by poor handling, fading, or other damage shall be replaced at no additional cost to the Buyer.

Contractor provided signs with Contractor's name or logos shall not be posted on Buyer controlled properties.

1.3.26 Equipment

Excavation and materials handling equipment shall meet safe operating requirements prescribed by OSHA and the manufacturer. Vehicles shall conform to applicable Federal and Washington State laws, including 46 Revised Code of Washington (RCW), 49 CFR 393, and U.S. Department of Transportation regulations, as a minimum. Vehicles shall include a fire extinguisher, reflector kit, first-aid kit, and backup alarm as the minimum safety equipment per Hanford Site requirements.

Prior to mobilization provide a letter of compliance stating that the equipment has been inspected and meets the requirements of this section.

Equipment brought to the site shall be maintained and operated as intended by the manufacturer; shall be in good working condition; and shall be free of residual dirt, oil, or grease. Cracked or broken glass shall be replaced. Equipment equipped with a windshield shall be operated with the windshield in place and closed. Additional protection must be added when it is anticipated that the equipment's standard protection (e.g., safety glass) is insufficient to protect the operator from injury.

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**SECTION 01010**  
**SUMMARY OF WORK**

Demolition screens must be used at all times. Safety handrails shall encompass the entire area of equipment that personnel may enter that is over 6 feet high. No modifications or additions that affect the capacity or safe operation of the equipment shall be made without the manufacturer's written approval. If such modifications or changes are made, the capacity, operation, and maintenance instruction plates, tags, or decals shall be changed accordingly.

Motor vehicles and heavy equipment shall be inspected (including functional checks) at the beginning of each shift to ensure that the equipment is in safe operating condition and free of damage or wear and tear that could cause failure while in use. The inspections shall be documented prior to using the equipment. The Contractor shall maintain an orderly file of equipment maintenance, inspection, and repair records available for Buyer review for the duration of the Contract.

The Contractor shall correct safety deficiencies immediately throughout the duration of project. The Buyer reserves the right to inspect and test the equipment and its setup for safe operation at any time.

1.3.26.1 Spill Kit

The Contractor shall furnish and maintain spill kits at the CTA while in use, fueling stations, oil/lubricant stations, and maintenance work areas. Due to the nature of remedial action work, it is imperative to have a readied and mobile spill kit to respond where needed on the project (e.g., waste site, haul road). The spill kits shall contain appropriate material (scoops, shovels, and absorbent materials) for absorbing a liquid spill of at least 38 L (10 gal). The kit shall be marked "SPILL KIT" and contained to protect the kit contents from the elements (i.e., rain, snow, wind, etc.). Kit contents must be replaced within 24 hours after use. Enough absorbent must be on site to handle a liquid spill of 380 L (100 gal).

1.4 Excluded Work: The following are not part of this SOW. The contractor shall not be required to construct a Container Transfer Area but will be required to maintain the Container Transfer Area for use throughout Contractor's waste remediation activities.

1.5 Readiness Assessment

Before receiving Notice to Proceed for excavation, the Contractor shall participate in a readiness assessment/review to demonstrate to the Buyer that all required documentation is in place and that its personnel, procedures, submittal and equipment are ready to

**SECTION 01010**  
**SUMMARY OF WORK**

commence work. Buyer will review all documents and discuss readiness with Contractors key personnel prior to issuing a Notice to Proceed.

1.6 DRAWINGS, SPECIFICATIONS, AND EXHIBITS

1.6.20 Drawings

1.6.20.1 Drawings that show Work are listed below:

H-1-25081
H-1-25594
H-1-2507
H-1-25080 SHEET 2 REV 8
H-1-23243 REV 3

END OF SECTION

**SECTION 01019**  
**ITEMS FURNISHED FOR CONSTRUCTION**  
**(CHPRC-Furnished Equipment)**

**PART 1 – GENERAL**

**1.1 REFERENCES**

1.1.1 The following documents and others referenced herein form part of Contract to extent designated in this section. Referenced documents are those current as of the date of this section unless otherwise indicated.

1.1.1.1 Code of Federal Regulations

29 CFR Part 1926, Subpart P Excavations

1.1.1.2 Department of Energy (DOE)

0334 Hanford Site Excavating, Trenching and Shoring

**1.2 ITEMS FURNISHED FOR CONSTRUCTION**

1.2.1 CHPRC will furnish the following items for incorporation into Work. To arrange transfer, notify CHPRC five (5) working days before need.

1.2.2 Contractor shall protect and handle buyer-furnished items in accordance with the Contract's General Provisions.

1.2.3 Gravel and sand are available at no cost from natural deposits at Pit 23 approximately 2.5 miles from worksite. Use of gravel and sand sites is non-exclusive; others may also enter to excavate material required for other work.

If Contractor elects to utilize available gravel and sand sites, they must furnish equipment and labor to excavate, process, load, transport, and place material. Habitation facilities will not be permitted.

Confine removal of overburden and top soil in Pit 23 to CHPRC-designated areas. After surface has been disturbed, stabilize blowing sand areas with ballast or other approved method to prevent wind erosion.

Excavate in Pit 23 shall be in accordance with DOE-0334, "Hanford Site Excavation; Trenching; and Shoring" and the Excavation Permit.

Use roads designated by CHPRC to access gravel and sand sites and to travel between gravel and sand sites and worksite. If oversize loads are utilized, comply with Section 01500 of this SOW.

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**100K Waste Sites Remediation – Contract #62378**

**SECTION 01019**  
**ITEMS FURNISHED FOR CONSTRUCTION**  
**(CHPRC-Furnished Equipment)**

Upon completion of operations, remove debris, temporary structures, and equipment. Grade excavated area, properly slope banks, and stabilize area to prevent wind erosion.

Right to use gravel and sand sites may be terminated by CHPRC for failure to meet SOW requirements and for abandonment of operations under this SOW. Right to use gravel and sand sites will be terminated without notice upon acceptance of Work under this SOW.

1.2.4 Use of Container Transfer Area (CTA) and Survey Tent. Maintenance, repair, or improvements of the CTA, Survey Tent and site roadways (such as maintaining the CTA and site roadways uniformly graded for travel and drainage, free of ruts or bumps, and sufficiently watered to prevent generation of dust) shall be the responsibility of the Contractor.

1.2.5 CHPRC will provide, on an average over a week's period of time, 40 roll-on/roll-off containers per day for waste loading and waste shipping.

**PART 2 – PRODUCTS**

Not Used

**PART 3 – EXECUTION**

Not Used

**END OF SECTION**

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**100K Waste Sites Remediation – Contract #62378**

**SECTION 01036**  
**REQUEST FOR CLARIFICATION (RCI) AND CHANGES**

**PART 1 – GENERAL**

**1.2 REFERENCES**

Not Used

**1.3 SUBMITTALS**

1.3.1 See Section 01300 for submittal procedures.

1.3.2 Approval Required: None

1.3.3 Approval Not Required: Before starting work, submit name of person responsible for receiving changes to design media in accordance with subsection 1.4.2 below.

**1.4 REQUEST FOR CLARIFICATION (RCI)**

1.4.1 This Section covers preparation of Contractor-originated Request for Clarification (RCI) (A-6004-833). RCI forms will be supplied during Preconstruction Conference (see Section 01200).

1.4.2 RCIs are used by the Contractor to receive clarification from CHPRC at any time during construction. The RCI form is **not** used to document a contract modification, engineering change, or nonconformance. CHPRC's response to an RCI does **not** constitute authorization to perform a change to the Contract.

1.4.3 The Contractor may proceed in accordance with the response only on the basis that the Contractor agrees that it is not a contract change. If the Contractor believes the response constitutes a change, the Contractor shall immediately process a Contract Change form (A-6004-820) and await receipt of additional written instruction from the Contract Specialist.

1.4.4 Limit each request to a single issue. Date each request and assign a unique reference number.

1.4.5 Provide pertinent information including Contract number, subject, Drawing numbers, Specification number and paragraph references, date by which response is requested, cost and schedule impacts, site location, descriptive text, and originator's name and signature.

1.4.6 Correspondence and inquiries from lower tier subcontractors addressed to CHPRC will be returned to originator or referred to Contractor.

1.4.7 RCIs shall be prepared in accordance with the form's instructions.

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**100K Waste Sites Remediation – Contract #62378**

**SECTION 01036**  
**REQUEST FOR CLARIFICATION (RCI) AND CHANGES**

1.5 CHANGES

1.5.1 Authorized changes to design media will be provided to the Contractor via an approved redline field change drawing, a Design Change Notice (DCN), or a contract modification.

1.5.2 Contractor shall designate a single-point-of-contact responsible for receiving changes to drawings, specifications, and other design media. The designee shall be responsible for maintaining documents and ensuring the most current revision is being used for the performance of work. Documents shall be stored in a manner that minimizes the risk of loss or damage.

PART 2 – PRODUCTS

Not Used

PART 3 – EXECUTION

Not Used

END OF SECTION

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## **SECTION 01040 COORDINATION**

### **PART 1 – GENERAL**

#### **1.1 COMMUNICATIONS**

1.1.1 Written communications between CHPRC and Contractor shall be sent to the representatives identified in the Contract. The Contractor may interface with various CHPRC (and other) organizations through the CHPRC Contract Specialist (or designee), as required.

1.1.2 Applicable interfaces, including existing facilities, systems, features, and environmental conditions that the Contractor may interact with, include the following:

- Radiological Control Technician (RCT)
- Electrical Utilities
- PRC Waste Management
- Quality Assurance
- Environmental Compliance

1.1.3 Daily construction activity shall be coordinated with CHPRC as identified in the General Provisions for Construction Services, SP-4, entitled “Technical Representative Responsibilities.”

#### **1.2 PREPARATION ACTIVITIES**

Contractor shall be responsible for the following functions, requirements, and design criteria preparatory activities:

1.2.1 Ensure equipment, materials, and personnel are ready for the execution of the applicable contract release.

1.2.2 The Contractor shall ensure that Suspect/Counterfeit items are not brought onto the Hanford Site, in accordance with Section 01400.

1.2.3 Ensure all Contractor-supplied tools and equipment are in good working order and free from obvious and known defects, malfunctions and disrepair (e.g., oil leaks, broken and/or missing parts) upon arrival at the job site.

## **SECTION 01040 COORDINATION**

### 1.3 SECURITY, BADGES, AND DOSIMETERS

1.3.1 CHPRC will arrange for issuance of security badges and dosimeters required for on-site work subject to the requirements identified in Special Provisions – On-Site Services, SP-5.

1.3.2 As soon as practical after award, the Contractor shall submit a badge request for personnel required under the various releases so that they may be scheduled for training and medical evaluation to be eligible for work onsite. A badge is required in order to obtain an HID number, which is needed before training and medical evaluations can be coordinated and scheduled. A minimum of two working days advanced notice is required for a Site badge. Contractor shall wear a CHPRC-issued security badge identifying himself/herself.

1.3.3 If required by this SOW, the Contractor shall obtain, at the Contractor's expense, a facility clearance and security clearance (e.g., Q, L) for employees prior to obtaining access to the job site.

1.3.4 Contractor employees will be required to submit to vehicle searches and not personally carry or transport prohibited articles.

### 1.4 WORK HOURS

1.4.1 Work will be performed on a 4-10 schedule. The standard workday shall consist of 10 hours of work between the core hours of 6:00 AM to 4:30 PM, Monday through Thursday. No work occurs on Facility Closure Days. If schedule alternative is required, BTR will communicate to Contractor point of contact.

1.4.2 The Contractor will have access to the job site based on the terms of the Contract.

### 1.5 WORK MANAGEMENT REQUIREMENTS

1.5.1 Performance of Work on other than regular day shift, movement of equipment, electrical system tie-ins, and equipment tie-ins require coordination and prior approval from the BTR or designee.

1.5.2 Work control requirements:

Work shall be performed in accordance with existing PRC-provided procedures, policies, and guidance documents. No work shall be performed that is out of scope of the contract. If work is determined as out of scope or questionable, work shall be stopped and the issue/concern shall be defined and evaluated. Contract revision will be prepared, as necessary.

## **SECTION 01040 COORDINATION**

The Contractor shall develop their written work instructions using the guidelines described in PRC-PRO-WKM-12115, "Work Management." The work instructions are written specifically to define work scope, identify hazards, and implement mitigating hazard controls described in this SOW and the corresponding Job Safety Analysis (JSA). The work instructions will be placed in Contractor developed work document and include the necessary permits and associated project documentation needed to safely complete the work scope at each work location.

Hazard Identification and Control Requirements will include a job hazard analysis that addresses each phase of the work and the hazards associated with the environments at each work site location in accordance with this SOW.

- 1.5.3 Work release requirements: A Work Release for Construction/Service Organizations. Contractor shall complete the work release form and provide it to the BTR on the afternoon prior to the day work is started. The typical project requires release each day prior to start of work, then again prior to the end of shift for signoff by the BTR. Activities worked each day are limited to items listed on the work release unless additions are approved by the BTR to facilitate unforeseen changes to work scope.

**NOTE: The end-of-the-day meeting may be a conference call to plan the following day's work activities at a time to be determined by the BTR.**

### PART 2 – PRODUCTS

Not Used

### PART 3 – EXECUTION

Not Used

END OF SECTION

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**100K Waste Sites Remediation – Contract #62378**

**SECTION 01050**  
**FIELD ENGINEERING**

**PART 1 – GENERAL**

**1.1 CONTROL POINTS**

1.1.1 Basic reference points, bench marks, and other survey data are shown on the Drawings.

**1.2 QUALITY CONTROL**

1.2.1 Quality Controls (e.g., inspections, tests, material identification, nonconformance control, etc.) shall be established, implemented, and documented using a graded approach to verify that design requirements are appropriately satisfied during construction. The specific controls shall be specified in Quality Assurance Plans and implemented through a combination of project procedures, drawings, specifications, and inspection/test plans. See Section 01400.

1.2.2 Structural alignment, support location, and grades: For surveying work, use of a land surveyor registered in the State of Washington is required.

1.2.3 Layout: Use personnel who are trained, skilled, and experienced in construction staking.

1.2.4 Deliverable Documentation: Deliver field notes, records and documentation for Work under this Section in accordance with Section 01720.

**1.3 PROCEDURE**

1.3.1 Before construction activity and in field, verify control points provided by this section. Verification shall include horizontal coordinates and elevations. Report discrepancies to CHPRC before proceeding with construction.

1.3.2 Using control points, establish reference points for structural alignment, support location, grades, layout and other construction activity. Record horizontal and vertical data for reference points.

1.3.3 Preserve control points, reference points, stakes and other established markers until either removal is authorized by CHPRC or Work is completed.

1.3.4 Refer to SP-4's reference clause FAR 52.256-27, "Layout of Work."

**PART 2 – PRODUCTS**

Not Used

**PART 3 – EXECUTION**

Not Used

**END OF SECTION**

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**SECTION 01065**  
**PERMITS**

PART 1 – GENERAL

1.1 REFERENCES

1.1.1 The following documents and others referenced herein form part of Contract to extent designated in this section. Referenced documents are those current as of the date of this section unless otherwise indicated.

1.1.1.1 Department of Energy (DOE)

0336	Hanford Site Lockout/Tag-out
0344	Hanford Site Excavating, Trenching and Shoring
0346	Hanford Site Fall Protection Program (HSFPP)
0359	Hanford Site Electrical Safety Program (HSESP)
0360	Hanford Site Confined Space Procedure (HSCSP)

1.1.1.2 Washington State Department of Ecology (Ecology)

State Waste Discharge Permit

1.1.1.3 National Fire Protection Association (NFPA)

1	Fire Code
70-2014	National Electrical Code (NEC)

1.2 SUBMITTALS

Submit all documents.

1.3 SUMMARY

1.3.1 Work elements requiring Hanford Site permits are identified in this section. Permits will be provided by CHPRC at no cost, unless otherwise stated.

1.3.2 Notify CHPRC five (5) working days in advance of work requiring permit (unless otherwise stated) and furnish requested information. Post permit in a conspicuous location and ensure employees' awareness of permit contents. Meet the requirements set forth in permit.

1.3.3 Permits identified in this section and other sections of the Contract may require use or approval of forms and requests that are not titled as permits but generically referred to

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**100K Waste Sites Remediation – Contract #62378**

## SECTION 01065 PERMITS

- as permits. Contractor shall comply with requirements identified on those forms and requests.
- 1.3.4 It is anticipated that Work performed under this SOW will require a Radiological Work Permit (RWP).
- 1.3.5 It is not anticipated that cultural materials or protected plants or animals will be encountered during project activities in previously disturbed areas. However, workers are to be instructed to watch for bones or possible historic artifacts, especially during excavation. If cultural materials are encountered, stop work within the immediate vicinity of the find and notify CHPRC.
- 1.3.6 Migratory birds may be present at this site and nesting activities shall not be disturbed. If field work is to be initiated during active nesting season (i.e., between mid-March through end of July), Contractor shall contact CHPRC to initiate a review of the area where the work is to be performed to make sure no nesting is occurring within the affected area). Workers are to be instructed to watch for active nests. If active nests and/or any nesting birds are encountered, or birds exhibit defensive behavior, the Contractor shall stop work in the immediate vicinity of the nest and shall contact CHPRC for additional review and required action.
- 1.3.7 Ground-disturbing activities have the potential to spread and increase noxious plants. Vehicles should stay on existing roadways, graveled areas, and bare areas to the extent possible.
- 1.4 PERMITS
- 1.4.1 Hanford Site Confined Space Hazard Identification (A-6004-724): Required to access potential confined spaces and obtain a Confined Space Entry Permit.
- 1.4.2 Hanford Confined Space Entry Permit (A-6005-717): Required prior to entry into any area determined to be classified as a Confined Space and containing conditions detrimental to employee safety in accordance with DOE-0360.
- 1.4.3 Electrical Installation Permit (A-6005-707): One permit covers new electrical installation work governed by the National Electrical Code (NFPA 70).
- NOTE:** Electrical installations require NEC compliance inspection by a qualified NEC Inspector in accordance with DOE-0359.
- 1.4.4 Energized Electrical Work Permit (A-6005-704): Required for work on existing electrical systems.

**SECTION 01065**  
**PERMITS**

- 1.4.5 Hanford Site Excavation Permit (A-7400-373): In accordance with DOE-0344. Required for excavation involving hand digging greater than 12 inches in depth, or machine digging.
- 1.4.6 Fall Protection Work Permit (A-6004-286 (Rev 6): Required when fall exposure is 6 feet or greater and the use of conventional fall protection in accordance with DOE-0346. Permit to be accessible during performance of work.
- 1.4.7 Fire Marshall Permit: Notify CHPRC in accordance with SP-4. Required when fire alarm systems, fire sprinkler systems, or fire hydrants will be taken out of service; for new construction and demolition; when using combustible chemicals, compressed gas, explosives, and flammable/combustible liquids; when performing cutting/welding or outdoor burning; and for any activity falling under the scope of NFPA 1.
- 1.4.8 Hanford Site Oversize/Overweight Permit (A-6003-609): Required for each vehicle and/or non-reducible load that exceeds the dimensions or weights shown in SP-4.
- 1.4.9 Hot Work Permit (A-6001-895.1): Required prior to performing any work which may produce a spark, arc, or flame on the Hanford Site.
- 1.4.10 Nonemergency Hydrant Tie-In Permit (A-6005-120): Required for any water being obtained through an existing hydrant. Contractor shall notify CHPRC a minimum of 2 weeks prior need, in accordance with SP-4.
- 1.4.11 Radiological Work Permit (A-6004-603): Required prior to performing any work within a radiological posted area.
- 1.4.12 Utility/System Outage Permit: This permit is required prior to Lockout/Tag-out isolation of any facility equipment, systems, and/or utilities in accordance with SP-5 and DOE-0336. Notify CHPRC 15 days prior to need date. To obtain permit issue an MSA Service Request at the following link:  
  
<http://msc.rl.gov/ServiceCatalog/page.cfm/Utilities>
- 1.4.13 State Waste Discharge Permit: CHPRC has already obtained the required permit. No discharges of water are allowed or authorized within 300 horizontal feet of any known crib, catch basin, infiltration trench, or underground disposal area.

**SECTION 01065**  
**PERMITS**

PART 2 – PRODUCTS

Not Used

PART 3 – EXECUTION

Not Used

END OF SECTION

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*At CHPRC, Safety is no accident*

**100K Waste Sites Remediation – Contract #62378**



**SECTION 01110**  
**OCCUPATIONAL SAFETY / INDUSTRIAL HYGIENE**

**PART 1 – GENERAL**

**1.1 REFERENCES**

1.1.1 The following documents and others referenced therein form part of Contract to extent designated in this section. Referenced documents are those current as of the date of this section unless otherwise indicated.

1.1.1.1 Code of Federal Regulations (CFR)

Title 29	Labor
Part 1910	Occupational Safety and Health Administration (OSHA)
Part 1926	Safety and Health Regulations for Construction

1.1.1.2 Department of Energy, Richland Operations (DOE-RL)

92-38	Hoisting and Rigging Manual
0359	Hanford Site Electrical Safety Program (HSESP)

1.1.1.3 Institute of Electrical and Electronics Engineers (IEEE)

C2	National Electrical Safety Code (NESC)
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1.1.1.4 National Fire Protection Association (NFPA)

70-2014	National Electrical Code (NEC)
70E-2009	Standard for Electrical Safety in the Workplace

**1.2 SUBMITTALS**

1.2.1 See Section 01300 for submittal procedures.

1.2.2 Approval Required

1.2.2.1 Safety and Health Program: PRC-PRO-SH-40078, *Contractor Safety Processes* Appendix F is the preapproved safety and health procedure; however, Contractor may submit, with proposal, an alternate safety program. The alternative program shall comply with federal, state, and local codes and PRC-PRO-SH-40078, Appendix F.

1.2.2.2 Designated Safety Representative: Before starting work, submit name of individual identified as the “Designated Safety Representative,” if the Contractor has more than one employee working on site in performance of this contract, in accordance with

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**SECTION 01110**  
**OCCUPATIONAL SAFETY / INDUSTRIAL HYGIENE**

- Special Provisions – On-Site Services (SP-5). Contractor shall notify the Contract Specialist if the name of the Designated Safety Representative changes.
- 1.2.2.3 Job Safety Analysis (JSA) / Job Hazard Analysis (JHA): Prior to onsite work, submit JSA/JHA identifying safety hazards as required by this Section.
- 1.3 SAFETY
- 1.3.1 Contractor shall comply with the on-site provisions identified in SP-5 of the Contract.
- 1.3.2 The Contractor shall perform work safely, in a manner that ensures adequate protection for employees, the public, and the environment, and shall be accountable for the safe performance of work. The Contractor shall comply with, and assist CHPRC in complying with all applicable laws, regulations and directives.
- 1.3.3 The Contractor and its lower-tier subcontractors shall take all reasonable precautions in the performance of the work to protect the safety and health of employees and of members of the public. Where there is a difference in regulations or requirements, the most stringent shall apply.
- 1.3.4 While working within a facility or remote area, Contractor shall participate in emergency drills. Exemptions may be requested by Contractor.
- 1.3.5 Contractor shall utilize gloves that are rated as cut/puncture-resistant for all activities that present the potential for a cut or puncture to the hand. Leather gloves are not rated as cut/puncture-resistant, and are not permitted. Contractors shall still use gloves (e.g., leather, canvas, cotton, etc. as appropriate for the work activity) to prevent and/or protect the hand from abrasions and contusions. Cut-resistant gloves come in different performance strengths; the Contractor needs to exercise the right amount of care to ensure they have selected the proper type of gloves for the hazard to be encountered. CHPRC does not specify or recommend any brand-name gloves; but does require these gloves to be rated as cut/puncture resistant.
- 1.3.6 Electrical Safety Requirements
- 1.3.6.1 Work practices and electrical safety training and qualification shall be in accordance with DOE-0359. Electrical equipment and industrial control panels delivered or brought on to the site in performance of the contract shall be labeled by an organization currently recognized by OSHA as a Nationally Recognized Testing Laboratory (NRTL). Equipment installed as part of the contract shall comply with the NEC and, where applicable, IEEE C3 (NESC).

**SECTION 01110**  
**OCCUPATIONAL SAFETY / INDUSTRIAL HYGIENE**

1.4 HAZARD IDENTIFICATION

1.4.1 Submit a JSA/JHA for general office duties performed in office facilities or ground-level observations/walkthroughs in radiological-controlled areas requiring a General (Not Specific) Radiological Work Permit (RWP) only. Observation activities only are allowed under this JSA/JHA; no hands-on work activities may be performed. Only ground-level observations are permitted; no ladder/scaffolding access is allowed.

1.4.1.1 Prior to performing any other activities, Contractor shall submit a JSA/JHA for the construction activities to be performed.

1.4.1.2 JSAs/JHAs are prepared by the Contractor to address specific work activities and hazards associated with the specific work and to identify the controls necessary to eliminate or control the hazards. The JSA/JHA shall be written in such a manner as to be understood and usable by Contractor personnel in order to aid them in the identification, control, and response of potential hazards; it is not just a compliance document. To achieve the level of coordination desired, approval of the JSA/JHA are required to ensure proper safety planning and communication prior to the start of work. The JSA/JHA shall be prepared in a format provided by CHPRC, and the Contractor shall submit a JSA/JHA for approval prior to work on each release.

1.5 MEDICAL EXAMINATIONS

1.5.1 Medical examinations and Employee Job Task Analysis (EJTA) evaluation forms may be required for Contractor personnel prior to starting work on the Hanford Site. See SP-5.

1.5.2 The Contractor shall immediately notify the BTR and the Contract Specialist of any injuries or incidents; to include damage to Contractor-owned property or equipment.

1.5.3 Contractor shall take appropriate action, up to and including stopping work, and immediately notify the CHPRC if an unplanned risk or hazard is discovered that is not covered by directions provided by CHPRC. This action includes notifying the CHPRC if the work exposes their workers to hazards that require medical monitoring.

PART 2 – PRODUCTS

Not Used

PART 3 – EXECUTION

3.1 CHPRC will provide Hanford medical facilities for emergency or life-threatening injury situations (those requiring immediate medical attention). All injuries,

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**SECTION 01110**  
**OCCUPATIONAL SAFETY / INDUSTRIAL HYGIENE**

accidents, fires, and near misses shall be reported to CHPRC, including fires that are extinguished without causing damage.

3.2 To ensure worker safety, work or portions of work may be temporarily and incrementally shut down due to high winds, lightning, or other inclement weather as determined by CHPRC. Contractor shall not be additionally compensated in terms of cost or schedule for weather-related shutdowns. CHPRC issues the following warnings via radio system, public announcement, or in person. The Contractor shall ensure that subcontractor personnel are apprised of the warnings and take the required actions as stated below.

- Sustained winds greater than 15 mph – the necessity for crane operations shall be closely scrutinized.
- Excavation of radioactive material shall cease if sustained winds exceed 20 mph. Depending on dust hazard, personnel may be relocated or directed to shelter. If sustained winds of 20 mph are predicted during the work shift, excavation of radioactive material will not be allowed to start.
- Sustained winds greater than 25 mph and/or gusts greater than 35 mph – all crane operations shall cease and be secured. No breach of radioactive systems or vessels will be allowed. All loose outdoor material shall be secured. The subcontractor’s Health and Safety representative shall review work on roofs and elevated surfaces before continuing. All personnel working outdoors are required to wear safety goggles. Depending on dust hazards, work may be stopped. Personnel may be directed to shelter. Dust masks may be required.
- Sustained winds greater than 30 mph and/or gusts greater than 45 mph – all outdoor work activities may be stopped. Personnel may be directed to shelter. Dust masks may be required.
- Sustained winds greater than 60 mph – outdoor work activities shall be curtailed and limited to those approved by CHPRC and subcontractor’s Health and Safety representative. Personnel will be directed to shelter. Site closure may be implemented and all work activities ceased.
- Thunderstorm/lightning advisory based on lightning activity within 30 mile vicinity of the Site. Subcontractor personnel shall not work on roofs or elevated surfaces. Personnel shall stay away from construction equipment such as drilling rigs, cranes, boom trucks, or elevated work platforms. These protective actions shall remain in place until CHPRC cancels the warning.

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**SECTION 01110**  
**OCCUPATIONAL SAFETY / INDUSTRIAL HYGIENE**

**NOTE:** Contractor shall provide personal protective equipment to meet the above conditions.

In addition to these warnings, CHPRC also provides the following:

- Snow and ice removal is provided on Site roads. The Contractor shall provide snow removal and ensure safe walking and transfer conditions for walkways and access points around their offices and work areas and the job-site within the project boundaries.
- In response to winter storm conditions, CHPRC may close the Site or release Contractor's employees early. If so, CHPRC will make appropriate announcements and coordinate the closure or early dismissal.
- The Contractor shall be responsible for freeze protection in all areas turned over to the Contractor by CHPRC.

END OF SECTION

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**100K Waste Sites Remediation – Contract #62378**

**SECTION 01130**  
**ENVIRONMENTAL, RADIOLOGICAL, AND NUCLEAR SAFETY**

**PART 1 – GENERAL**

**1.1 REFERENCES**

1.1.1 The following documents and others referenced therein form part of Contract to extent designated in this section. Referenced documents are those current as of the date of this section unless otherwise stated.

1.1.1.1 Code of Federal Regulations (CFR)

Title 10	Energy
Part 830	Procedural Rules for DOE Nuclear Activities
Part 830.122	Quality Assurance Criteria
Part 835	Occupational Radiation Protection
Title 29 Labor	
Part 1910	Occupational Safety and Health Administration (OSHA)
Section 1200	Hazard Communication
Part 1926	Safety and Health Regulations for Construction
Title 40	Protection of Environment
Part 82	Protection of Stratospheric Ozone
Part 112	Oil Pollution Prevention
Part 280	Technical Standards and Corrective Action Requirements for Owners and Operators of Underground Storage Tanks (UST)

1.1.1.2 Washington State Department of Ecology (Ecology)

State Waste Discharge Permit

**SECTION 01130**  
**ENVIRONMENTAL, RADIOLOGICAL, AND NUCLEAR SAFETY**

- 1.1.1.3 National Fire Protection Association (NFPA)
  - 60 Flammable and Combustible Liquids Code
- 1.1.1.4 Revised Code of Washington (RCW)
  - Title 46 Motor Vehicles
    - Chapter 46.11 Vehicle Licenses
- 1.2 SUBMITTALS
  - 1.2.1 See Section 01300 for submittal procedures.
  - 1.2.2 Approval Required
    - 1.2.2.1 Waste management information: Five work days before starting work, submit a Waste Management Plan, in accordance with the Special Provisions 4 and 5, for managing waste generated during work.
    - 1.2.2.2 Material Safety data sheets (MSDS and/or SDS): Before starting work, submit MSDS and/or SDS for hazardous chemicals (1.10.2).
    - 1.2.2.3 Chemical sources: Seven (7) work days before starting work, submit detailed information relative to any anticipated process involving the application of volatile chemicals (use of a volatile cleaning agent, application of polyurethane coating, etc.)(1.10.3).
    - 1.2.2.4 Chemical inventory: Five (5) work days before starting work, submit inventory of chemicals that will be brought to the worksite in accordance with SP-4, SP-5, and this Section.
    - 1.2.2.5 Air emissions: Five (5) work days before starting work, submit inventory of air emission sources to be used on Site (1.11).
    - 1.2.2.6 Dust control plan: Five (5) work days before starting work, submit a Dust Control Plan in accordance with the Benton Clean Air Authority (1.11.2.1).
    - 1.2.2.7 Radioactive sources: Seven (7) work days before starting work, submit a list of all radioactive sources to be brought on Site (1.8.3).
  - 1.2.3 Approval Not Required: None

**SECTION 01130**  
**ENVIRONMENTAL, RADIOLOGICAL, AND NUCLEAR SAFETY**

1.3 WASTE MINIMIZATION

1.3.1 Minimize waste in accordance with the following waste management hierarchy.

- a. Source reduction
- b. Reuse
- c. Recycling
- d. Compliant disposal

1.3.2 Source Reduction

1.3.2.1 Material substitution: Minimize number of chemicals used to perform same or similar tasks. Where practical, replace hazardous materials with non-hazardous or less hazardous substitutes. Before substitution, obtain approval in accordance with Section 01630.

1.3.2.2 Inventory reduction: Minimize product inventory to reduce accumulation of partially used and unused materials requiring disposal. Remove partially used lots and unused materials from worksite at Contract completion.

1.3.2.3 Packaging: Minimize packaging brought on worksite. Whenever feasible, return empty containers to vendor.

1.3.2.4 Waste segregation: Separate wastes to avoid creating additional wastes and mixtures that cannot be recycled, or that may be more difficult to manage.

1.3.2.5 Process modification: Streamline processes for more efficient operation and less waste generation.

1.3.2.6 Reuse/Recycling: Ensure that materials are reused, if possible, rather than discarded as waste.

1.4 DISPOSAL OF INERT/DEMOLITION AND NONHAZARDOUS WASTE

1.4.1 Handle and dispose of waste in accordance with applicable federal, state, and local laws, regulations and requirements, SP-5 and this Section. Notify CHPRC prior to shipment of inert/demolition waste for radiological survey by others if removing from contaminated area.

1.4.2 Non-hazardous: Dispose of non-hazardous debris using bins provided by Contractor.



**SECTION 01130**  
**ENVIRONMENTAL, RADIOLOGICAL, AND NUCLEAR SAFETY**

- 1.4.3 Any nonradioactive inert waste (i.e. broken asphalt, broken concrete, glass, brick, aluminum, stainless steel, wood, and overburden/spoils material such as rock and earth) may be disposed at no charge to Contractor at Pit 9 located in 200 West Area. Notify CHPRC at least 24 hours prior to need for entry.
- 1.4.4 Other waste generated on the Hanford Site such as demolition rubble, construction debris, trash, and solid waste not included in other waste categories specifically mentioned in the contract shall be dispositioned by Contractor.
- 1.5 HAZARDOUS WASTE
- 1.5.1 Hazardous materials shall be managed in accordance with SP-5. Promptly report all spills of hazardous waste.
- 1.5.2 Flammable/combustible liquid fuel storage shall and dispensed on site shall be in accordance with NFPA 30.
- a. Contractor shall supply Nationally Recognized Testing Laboratory (NRTL) approved tanks, hoses, and dispensing nozzles.
  - b. Spill containment shall be provided around the tank.
  - c. At least one approved 10 lb. multi-purpose Type ABC dry chemical fire extinguisher shall be placed outside the entry into the area on a substantial pylon or stanchion.
- 1.5.2.1 If storing or using oil involves the aggregate storage of >1320 gallons in containers with at least a 55-gallon capacity (including tanks not regulated under 40 CFR 280) in areas where spills or leaks could impact waters of the United States, construction and installation of the storage areas shall be done in accordance with 40 CFR 112. Prior to storage and use of oil, a Spill Prevention Control and Countermeasures (SPCC) Plan shall be developed, then reviewed and certified by a Registered Professional Engineer that it meets 42 CFR 112 SPCC requirements. The Plan shall be submitted for approval, and reviewed and updated as required by 40 CFR 112. The SPCC Plan shall be maintained at the job site. Oil-handling personnel shall receive adequate training in operation and maintenance of equipment to prevent discharges, and comply with applicable pollution-control laws, rules, and regulations; general facility operations; and the contents of the SPCC Plan. Discharge-prevention briefings for oil-handling personnel shall be conducted at least once a year.
- a. All flammables and liquids shall be maintained at or below the designated Maximum Allowable Quantities (MAQ) limit per NFPA 30.

**SECTION 01130**  
**ENVIRONMENTAL, RADIOLOGICAL, AND NUCLEAR SAFETY**

- b. Have a Hanford Fire Marshal permit issued when the threshold quantities of MSC-RD-8589, Appendix A are exceeded, prior to the arrival of the material on site.
- c. Maintained in NRTL approved safety cabinets when not in use,
- d. Dispensed from NRTL approved safety containers, as applicable.
- e. At least on 10 lb. capacity multi-purpose Type ABC dry chemical fire extinguisher shall be placed within 75 ft. of flammable/combustible liquid storage areas on a substantial pylon or stanchion

1.6 DISPOSAL OF ASBESTOS

- 1.6.1 Accumulate asbestos debris at the worksite, at approved locations.

1.7 DISPOSAL OF DANGEROUS AND MIXED WASTE

- 1.7.1 Handle and dispose of waste in accordance with applicable federal, state, and local laws, regulations and requirements and CHPRC procedures. Hanford-specific requirements also apply to dangerous and mixed waste generated on the Hanford Site.
- 1.7.1.1 Notify CHPRC at least five (5) days before generation of waste and immediately after spill and other unforeseen waste generation. Notification shall identify waste stream and provide an estimated quantity of waste to be generated.
- 1.7.1.2 Upon notification by Contractor, CHPRC will establish a satellite accumulation area containers or a 90-day container within worksite and select and provide labeled containers affixed with numbers. Contractor shall provide a digital fish scale or comparable weighing device at satellite accumulation area and shall ensure personnel responsible for the satellite accumulation area are properly trained.
- 1.7.2 Separately accumulate waste from each waste stream in accordance with applicable federal, state, and local laws.
- 1.7.2.1 During spill cleanup and waste accumulation, cumulatively record waste inventory on Waste Container Log (A-6004-995).
- 1.7.2.2 Containers are set up and managed by CHPRC. Contractor shall manage waste in accordance with SP-5.
- 1.7.3 CHPRC will coordinate pick up and disposal of properly sealed dangerous waste after notification by Contractor.

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**SECTION 01130**  
**ENVIRONMENTAL, RADIOLOGICAL, AND NUCLEAR SAFETY**

- 1.7.4 CHPRC will conduct bi-weekly inspection of satellite accumulation areas containers and 60-day containers.
- 1.8 RADIOLOGICAL CONTROL
- 1.8.1 If work is deemed Radiological, the Contractor shall be subject to 10 CFR 835, the CHPRC Radiological Control Manual, CHPRC-00073, and this Section.
- 1.8.2 Contractor shall not utilize vacuum trucks or HEPA-filtered vacuums, or set up enclosures with exhausters or similar emission units at any radioactively contaminated location on the Hanford Site without the express written approval of CHPRC.
- 1.8.3 The Contractor shall obtain written approval from CHPRC prior to bringing a radioactive source on site. This includes any source or equipment that contains sources (e.g. soil densitometers) that are governed under a U.S. Nuclear Regulatory Commission (NRC) license or a license by an NRC-agreement state. Densitometers shall be checked in daily at the 1262 Building in the 1100 Area.
- 1.8.4 Contractor's equipment utilized to perform radiological work shall be subject to an initial radiological baseline survey prior to use onsite. This survey is expected to take approximately one hour (per piece of equipment) to complete. The survey will be conducted by CHPRC-provided Radiological Control Technicians (RCTs) and/or Health Physics Technicians (HPTs). Contact the CHPRC to schedule the required survey upon arrival of the equipment onsite.
- 1.8.5 Contractor's equipment utilized to perform radiological work may be subject to intermittent radiological surveys approximately 2 to 3 times per work day. Radiological surveys are expected to take between 10 – 15 minutes each. Contractor shall make equipment available for intermittent radiological surveys at the request of CHPRC-provided RCT/HPT.
- 1.8.6 Removal of the following requires a contamination release survey for each removal. Contractor will not be charged for survey. CHPRC will arrange for survey upon request by Contractor. Allow 8 hours for processing request and 4 hours for survey.
- a. Material from radiological areas and radiological buffer areas shown on the Drawings
  - b. Foreign materials and discolored soil discovered during excavation
  - c. Equipment

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**SECTION 01130**  
**ENVIRONMENTAL, RADIOLOGICAL, AND NUCLEAR SAFETY**

- 1.8.7 During any work disturbing the existing ground surface, a CHPRC-provided RCT/HPT will be present to conduct intermittent radiological surveys of the excavated or disturbed material, if deemed necessary by CHPRC. The radiological surveys will be conducted on the spoils removed during any soil excavation as well as on the equipment being utilized for this excavation. These radiological surveys are not expected to significantly disrupt the Contractor's ability to perform the required work. Contractor shall provide two (2) work days prior notice to CHPRC of need for RCT/HPT coverage of any excavation or work activity that will significantly disturb the existing ground surface.
- 1.8.8 If at any point, radioactive materials above specified action levels are encountered, work shall be stopped immediately. A Radiological Work Permit will be prepared by CHPRC to cover working with radiological contaminated soils and materials.
- 1.8.9 If radiological contamination is encountered during excavation or other work activities, Contractor shall place equipment in a safe condition and remove all personnel from area as directed by the RCT/HPT. Radiological controls shall be evaluated by the Radiological Protection organization to the encountered conditions and modified as may be required. Contractor shall seek direction from the CHPRC prior to resuming work activities.
- 1.8.10 A release survey is required to be conducted by CHPRC provided RCTs/HPTs of all equipment utilized in excavation. Release survey shall be conducted prior to equipment being removed from the project site. The survey is expected to take approximately one hour per piece of equipment. Contractor shall provide two (2) work days prior Notice to CHPRC of need for RCT/HPT coverage to conduct required release surveys.
- 1.8.11 Contractor may additionally request a contamination release survey for each removal of equipment or material from a radiological buffer area. Contractor will not be charged for survey.
- 1.8.12 If survey reveals that equipment or material is not radiologically contaminated, dispose of material as planned.
- 1.8.13 If survey reveals that equipment or material is radiologically contaminated, dispose in accordance with direction from CHPRC. CHPRC will determine if release back to the Contractor is possible. If not possible, the Contractor will be compensated for items taken.

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**100K Waste Sites Remediation – Contract #62378**

**SECTION 01130**  
**ENVIRONMENTAL, RADIOLOGICAL, AND NUCLEAR SAFETY**

1.9 NUCLEAR AND CRITICALITY SAFETY

1.9.1 If work is deemed nuclear-related, the Contractor shall be subject to 10 CFR 830.122, and the enforcement actions under 10 CFR 820.

1.10 LIQUID EFFLUENTS

1.10.1 In accordance with SP-4, SP-5, and PRC-PRO-SH-40078 - Contractor Safety Processes, when the Contractor brings chemicals on site, the activity is subject to CHPRC's Chemical Management System Program. The Contractor shall fill out and keep current a Chemical Inventory Worksheet (form A-6004-750).

1.10.2 Material Safety Data Sheets (MSDS and/or SDS) for hazardous chemicals (as defined by 29 CFR 1910.1200) that will be used during the work activity shall be kept current. Contractor shall provide the list to the assigned BTR when list has been updated.

1.10.3 Contractor shall submit detailed information relative to any anticipated process involving the application of volatile chemicals (e.g., use of a volatile cleaning agent, application of polyurethane coating, etc.).

1.10.4 Concrete rinsate discharge locations require approval by CHPRC. Concrete rinsate discharge authorization forms shall be completed and approved prior to discharge.

1.10.5 Liquid discharge for hydro testing, flushing, or other construction operation other than dust control, requires pre-approval by CHPRC and shall be performed in accordance with the State Waste Discharge Permit.

- No water shall be discharged within 100 horizontal feet of any known crib, catch basin, infiltration trench, or underground disposal area.
- No discharge shall be allowed within a surface contaminated area (areas with dangerous waste and/or radioactive contaminants), unless discharge is an approved incidental release.
- Other restrictions identified in the State Waste Discharge Permit and the accompanying conditions include the need to reuse/recycle and the need to discharge to the Treated Effluent Disposal Facility; discharge rate, volume, additives, source water, contaminants, and logging are also covered in permit conditions (Pollution Prevention and Best Management Practices section).

**SECTION 01130**  
**ENVIRONMENTAL, RADIOLOGICAL, AND NUCLEAR SAFETY**

1.11 AIR EMISSIONS

1.11.1 The following emissions are regulated and shall comply with applicable federal, state, and local laws, regulations and requirements:

- a. Fugitive emissions and dust.
- b. Abrasive blasting.
- c. Ozone-depleting substances.
- d. Non-routine (unplanned) emissions.
- e. Radioactive airborne emissions (from disturbing contaminated soil).

1.11.2 Contractor shall take reasonable precautions to minimize fugitive dust during performance of this work.

1.11.2.1 A dust control plan prepared in accordance with [Benton Clean Air Authority guidelines](#) shall be submitted by the Contractor and shall be approved by the Buyer prior to commencement of work activities.

1.11.2.2 Any new work which may cause a potential for radioactive dust requires prior BTR approvals since extra measures to prevent and/or control dust may be required.

1.11.3 Contractor shall not conduct open burning without the express written approval of BTR or Construction Manager (CM).

1.11.4 Air emission sources also include non-road internal combustion engines for power generator or air compressor, loader, backhoe, welder, chain saw, etc. Licensed motor vehicles, pursuant to RCW 46.16 are exempt from the inventory. However, mounted internal combustion engines not used to propel the vehicle (e.g.; mounted generator) shall be inventoried.

1.11.5 The Contractor shall comply with PRC-PRO-SH-40078 - Contractor Safety Processes, Appendix F, Section 2.15, for controlling exposures to airborne hexavalent chromium. These requirements are specifically applicable to welding, grinding, torch-cutting, metal buffing and metal polishing, and spray painting activities.

1.12 CONTINGENCIES

1.12.1 Isolate and secure spill area in a manner that protects human health and the environment. Take direct action if nature of spilled or unforeseen waste material is known and if material can be immediately and safely absorbed, neutralized, or otherwise controlled.

1.12.2 Notify CHPRC upon occurrence or discovery of hazardous substances and non-hazardous material spills and of unforeseen dangerous waste generation. Notification shall identify waste stream if known and include identification and

**SECTION 01130**  
**ENVIRONMENTAL, RADIOLOGICAL, AND NUCLEAR SAFETY**

quantity of waste. Clean up areas contaminated by spilled material and manage spill residues in accordance with this Section.

PART 2 - PRODUCTS

Not Used

PART 3 - EXECUTION

Not Used

END OF SECTION

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*At CHPRC, Safety is no accident*

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## SECTION 01150 TRAINING AND QUALIFICATIONS

### PART 1 – GENERAL

#### 1.1 REFERENCES

1.1.1 The following documents and others referenced therein form part of Contract to extent designated in this section. Referenced documents are those current as of the date of this section unless otherwise stated.

1.1.1.1 Department of Energy, Richland Operations (DOE-RL)

92-36 Hoisting and Rigging Manual

0359 Hanford Site Electrical Safety Program (HSESP)

1.1.1.2 Washington Administrative Code (WAC)

Title 296 Department of Labor and Industries

#### 1.2 SUBMITTALS

1.2.1 See Section 01300 for submittal procedures.

1.2.2 Approval Required

1.2.2.1 Before starting work, submit documentation of successful completion of training requirements and certification that all training is current.

#### 1.3 REQUIREMENTS

1.3.1 General

1.3.1.1 Contractor shall provide appropriately trained and qualified staff to perform the type of work associate with their trade at the Hanford Site.

1.3.1.2 Task- and facility-specific training is required in this Statement of Work (SOW), the Contract Provisions, and other documents referenced herein. The training listed may not be all-inclusive of training required.

1.3.1.3 Required training shall be completed prior to related work being performed.

1.3.1.4 CHPRC will provide task- or facility-specific training required for the Hanford Site, which includes the class, instructor, and required training material. Contractor is responsible for cost of labor to complete all required training.

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**SECTION 01150  
TRAINING AND QUALIFICATIONS**

- 1.3.1.5 When **offsite** equivalent training is available, **Contractor is responsible for all training costs.** CHPRC will provide equivalent onsite training or reimbursement for any equivalent onsite/offsite training costs.
- 1.3.1.6 CHPRC will provide for on-the-job evaluations (OJE) when they are required by Contract.
- 1.3.1.7 For previous training to be acceptable for Hanford Site qualification, documented evidence shall include type and class of equipment. For qualifications not related to equipment operation, personnel shall have documented evidence of training and experience related to an activity covered under this Contract.
- 1.3.1.8 Contractor shall maintain copies of personnel training records at the jobsite.
- 1.3.2 Site-Required Training
- 1.3.2.1 CHPRC General Employee Training (CGET) or Hanford Site Orientation (HGET): Mandatory for all Contractor and sub-tier Contractor personnel performing work on the Hanford Site. Previous CGET training may be acceptable. Contact CHPRC.
- 1.3.3 Qualification Training
- 1.3.3.1 Electrical work scope shall be performed by qualified electrical workers and qualified instrument specialists in accordance with DOE-0359.
- 1.3.3.2 Hoisting and Rigging
- 1.3.3.3 Hanford Site Hoisting and Rigging Manual (DOE-RL-92-36) provides qualification for rigging operations. Contractor shall not perform Hoisting and Rigging activities.

**Contract Training Table**

Hanford Course Number	Course Title	CHPRC Documents	Off-site training acceptable (Yes / No)	Comments	Applicable to Contract (Yes / No)
000006	CHPRC-General Employee Training (CGET)	N/A	N	<ul style="list-style-type: none"> <li>• 4 hours.</li> <li>• 1 yr. retraining period.</li> <li>• All Onsite CHPRC and Contractor Employees</li> </ul>	Y
076200	100K FEHIC/Orientation (CBT)	N/A	N	<ul style="list-style-type: none"> <li>• 10 minutes</li> <li>• 1 yr. retraining period</li> </ul>	Y
<b>ASBESTOS</b>					

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**100K Waste Sites Remediation –Contract #62378**

**SECTION 01150  
TRAINING AND QUALIFICATIONS**

Hanford Course Number	Course Title	CHPRC Documents	Off-site training acceptable (Yes / No)	Comments	Applicable to Contract (Yes / No)
02006L	Asbestos Awareness	PRC-RD-SH-15097 PRC-RD-SH-15245	Y	<ul style="list-style-type: none"> <li>3 hours.</li> <li>1 yr. retraining period.</li> <li>Present certificate of completion or training record.</li> </ul>	Y
<b>CONSTRUCTION JOB SITE SAFETY INSPECTIONS</b>					
600053	CHPRC Competent Person – Construction Job Site Safety Inspection	OSHA CFR TITLE 29 PART 1926	N	<ul style="list-style-type: none"> <li>2 hours</li> <li>1 yr. Retraining</li> </ul>	Y
<b>ELECTRICAL SAFETY TRAINING</b>					
044480	Electrical Safety for Non-Electrical Workers	DOE-0359	Y	<ul style="list-style-type: none"> <li>4 hours.</li> <li>3 yr. retraining period.</li> <li>Equivalent – 044480.</li> <li>Present electrician license, journeyman card, certificate of completion or training record.</li> </ul>	Y
041680	Batteries	DOE-0359	Y	<ul style="list-style-type: none"> <li>8 hours.</li> <li>Present certificate of completion or training record.</li> </ul>	Y
044605	Equipment Operation Near Power Lines	DOE-0359	Y	<ul style="list-style-type: none"> <li>4 hours.</li> <li>Present electrician license, journeyman card, certificate of completion or training record.</li> </ul>	Y
<b>EXCAVATION WORK</b>					
600056	CHPRC Competent Person - Excavation	DOE-0344	N	<ul style="list-style-type: none"> <li>2 hours</li> <li>Prerequisite 750000</li> </ul>	Y
750000	Excavating, Trenching and Shoring Competent Person	DOE-0344	N	<ul style="list-style-type: none"> <li>16 hours.</li> <li>Equivalent – D2000 Safety: Excavation Safety: Competent. OSHA 3010: Excavation, Trenching, and Soil Mechanics. RH Welch: Excavation &amp; Trenching for Competent Person, 10/21/2010.</li> </ul>	Y
<b>FALL PROTECTION</b>					
600058	CHPRC Competent Person – Fall Protection	DOE-0346	N	<ul style="list-style-type: none"> <li>2 hours</li> <li>Prerequisites 020147 and 020440</li> </ul>	Y

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**100K Waste Sites Remediation –Contract #62378**

**SECTION 01150  
TRAINING AND QUALIFICATIONS**

Hanford Course Number	Course Title	CHPRC Documents	Off-site training acceptable (Yes / No)	Comments	Applicable to Contract (Yes / No)
020440	Fall Protection PFAS Users	DOE-0346	Y	<ul style="list-style-type: none"> <li>9 hours.</li> <li>2 yr. retraining period.</li> <li>United Brotherhood of Carpenters class accepted; MSA Letter RML46000-09-02.</li> <li>Present journeyman card, certificate of completion or training record.</li> </ul>	Y
020147	Fall Hazards Recognition and Prevention	TPD-0039 REV 2 4.1	Y	<ul style="list-style-type: none"> <li>3 hours</li> </ul>	Y
<b>GENERAL SAFETY COURSES</b>					
170500	Basic Medic First Aid/ CPR/AED	NFPA – 70E 29CRF 1910.120.151	Y	<ul style="list-style-type: none"> <li>8.5 hours.</li> <li>2 yr. retraining period.</li> <li>Labors International Union of North America class accepted; MSA Letter RML46000-09-04.</li> <li>International Union of Operating Engineers class accepted; MSA Letter RML46000-09-05.</li> <li>Present journeyman card, certificate of completion or training record.</li> </ul>	Y
020193	Heat Stress Training – CBT	PRC-PRO-SH-121	Y	<ul style="list-style-type: none"> <li>1 hour.</li> <li>2 yr. retraining period.</li> <li>Present certificate of completion or training record.</li> </ul>	Y
600023	CHPRC Spotter Safety Awareness Briefing	PRC-MP-TQ-011	N	<ul style="list-style-type: none"> <li>1 hour</li> <li>Orientation/Briefing</li> <li>Required for all vehicle and equipment operators. <b>Does not qualify for Equipment Operation Near Power Lines.</b></li> </ul>	Y
600078	CHPRC Vehicle Spotter Awareness Training	PRC-MP-TQ-011	N	<ul style="list-style-type: none"> <li>1 hour</li> <li>Computer assisted.</li> <li>Required for all vehicle and equipment operators. <b>Does not qualify for Equipment Operation Near Power Lines.</b></li> </ul>	Y
<b>HAZARDOUS WASTE WORK</b>					

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**100K Waste Sites Remediation –Contract #62378**

**SECTION 01150  
TRAINING AND QUALIFICATIONS**

Hanford Course Number	Course Title	CHPRC Documents	Off-site training acceptable (Yes / No)	Comments	Applicable to Contract (Yes / No)
031220	40-Hour Hazardous Waste Worker – Field	PRC-MP-TQ-011	Y	<ul style="list-style-type: none"> <li>40 hrs.</li> <li>1 yr. retraining period.</li> <li>Training maintains a database of accepted vendors or other DOE sites.</li> <li>Present certificate of completion or training record.</li> </ul> Provide site specific information.	Y
032020	8-Hour Hazardous Waste Refresher	PRC-MP-TQ-011	Y	<ul style="list-style-type: none"> <li>8 hrs.</li> <li>1 yr. retraining period.</li> <li>Training maintains a database of accepted vendors or other DOE sites.</li> <li>Present certificate of completion or training record.</li> <li>Provide site specific information.</li> </ul>	Y
031310	8-Hour Manager / Supervisor Hazardous Waste	PRC-MP-TQ-011	Y	<ul style="list-style-type: none"> <li>8 hrs.</li> <li>Training maintains a database of accepted vendors or other DOE sites.</li> <li>Present certificate of completion or training record.</li> </ul>	Y
<b>HEARING PROTECTION</b>					
600059	CHPRC Competent Person – Hearing Protection	29 CFR 1926.101	N	<ul style="list-style-type: none"> <li>2 hours</li> </ul>	Y
020194	Hearing Conservation - CBT	PRC-PRO-SH-40479	Y	<ul style="list-style-type: none"> <li>1 hour.</li> <li>1 yr. retraining period.</li> <li>Present certificate of completion or training record.</li> </ul>	Y
<b>FORKLIFTS</b>					
044470	Forklift Operational Safety	DOE-RL-92-36	Y	<ul style="list-style-type: none"> <li>6 hours.</li> <li>3 yr. retraining period.</li> <li>United Brotherhood of Carpenters class accepted; MSA Letter CPL600000-08-03.</li> <li>Must complete a site specific examination.</li> <li>Present journeyman card, certificate of completion or training record.</li> </ul>	Y

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**100K Waste Sites Remediation –Contract #62378**

**SECTION 01150  
TRAINING AND QUALIFICATIONS**

Hanford Course Number	Course Title	CHPRC Documents	Off-site training acceptable (Yes / No)	Comments	Applicable to Contract (Yes / No)
041890	Forklift Operator Challenge Examination	DOE-RL-92-36		<ul style="list-style-type: none"> <li>1 hour</li> <li>3 yr. retraining period.</li> </ul>	Y
04467E	Class 6 Forklift - Electric & Internal Combustion Engine (OJE)	DOE-RL-92-36	N	<ul style="list-style-type: none"> <li>3 Hours</li> <li>3 yr. Retraining</li> <li>Prerequisite 044470.</li> <li>Complete a Hanford Site specific OJE.</li> </ul>	Y
044676	Class 8 Forklift Operator Qualification (OJE)	DOE-RL-92-36	N	<ul style="list-style-type: none"> <li>3 Hours</li> <li>3 yr. Retraining</li> <li>Prerequisite 044470.</li> <li>Complete a Hanford Site specific OJE.</li> </ul>	Y
<b>AERIAL LIFTS</b>					
042720	Aerial Lift Operator Training	PRC-RD-SH-10972	Y	<ul style="list-style-type: none"> <li>4.5 hours.</li> <li>5 yr. retraining period.</li> <li>United Brotherhood of Carpenters class accepted; MSA Letter RML46000-09-01.</li> <li>Must complete a site specific examination.</li> <li>Present journeyman card, certificate of completion or training record.</li> </ul>	Y
044681	Class 1 Aerial Lift Self Propelled Boom Supported (OJE)	DOE-RL-92-36	N	<ul style="list-style-type: none"> <li>Complete a Hanford Site specific OJE.</li> </ul>	Y
04468A	Class 2 Aerial Lift Self Propelled Articulated (OJE)	DOE-RL-92-36	N	<ul style="list-style-type: none"> <li>Complete a Hanford Site specific OJE.</li> </ul>	Y
<b>LADDERS - PORTABLE</b>					
044391	Portable Ladder Safety - CBT	PRC-STD-SH-40314	Y	<ul style="list-style-type: none"> <li>1 hour.</li> <li>Present certificate of completion or training record.</li> </ul>	Y
044392	Competent Person Portable Ladder Inspection - CBT	PRC-STD-SH-40314	N	<ul style="list-style-type: none"> <li>1 hour.</li> <li>Prerequisite – 044391.</li> </ul>	Y
<b>LEAD (PB) WORK</b>					
600061	CHPRC Competent Person –Lead (PB)	PRC-PRO-SH-40498	N	<ul style="list-style-type: none"> <li>2 hours</li> </ul>	Y
020150	Lead (Pb) Worker Training	PRC-PRO-SH-40498	Y	<ul style="list-style-type: none"> <li>2.5 hours.</li> <li>1 yr. retraining period.</li> </ul>	Y
<b>LOCKOUT / TAGOUT</b>					

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**100K Waste Sites Remediation –Contract #62378**

**SECTION 01150  
 TRAINING AND QUALIFICATIONS**

Hanford Course Number	Course Title	CHPRC Documents	Off-site training acceptable (Yes / No)	Comments	Applicable to Contract (Yes / No)
00310I	Hanford Site Lockout/Tagout for Controlling Organization – Initial	DOE-0336	N	<ul style="list-style-type: none"> <li>8 hours.</li> <li>1 yr. retraining period.</li> </ul>	Y
00310R	Hanford Site Lockout/Tagout for Controlling Organization – Retraining	DOE-0336	N	<ul style="list-style-type: none"> <li>8 hours.</li> <li>1 yr. retraining period.</li> </ul>	Y
00311I	Hanford Site Lockout/Tagout for Authorized Worker - Initial	DOE-0336	N	<ul style="list-style-type: none"> <li>8 hours.</li> <li>1 yr. retraining period.</li> </ul>	Y
00311R	Hanford Site Lockout/Tagout for Authorized Worker - Retraining	DOE-0336	N	<ul style="list-style-type: none"> <li>4 hours.</li> <li>1 yr. retraining period.</li> </ul>	Y
<b>RADIOLOGICAL WORKER TRAINING</b>					
020001	Radiological Worker II - Initial	CHPRC-00073		<ul style="list-style-type: none"> <li>20 hours</li> <li>2 yr. retraining period.</li> </ul>	Y
0200A1	Radiological Worker II – Initial Accelerated	CHPRC-00073		<ul style="list-style-type: none"> <li>5 hours</li> <li>2 yr. retraining period.</li> </ul>	Y
020003	Radiological Worker II - Retraining	CHPRC-00073		<ul style="list-style-type: none"> <li>5 hours</li> <li>2 yr. retraining period.</li> </ul>	Y
<b>RESPIRATORY PROTECTION</b>					
<b>NOTE: Prerequisite for any Quantitative Respirator Fit is Course 020066 and a Respiratory Medical Clearance through HPMC</b>					
020066	Respiratory Knowledge-Based Initial	DOE-0352	Y	<ul style="list-style-type: none"> <li>8 hours.</li> <li>1 yr. retraining period.</li> <li>Present journeyman card, certificate of completion or training record.</li> </ul>	Y
020044	Quantitative Mask Fit	DOE-0352	Y	<ul style="list-style-type: none"> <li>1 hour.</li> <li>1 yr. retraining period.</li> <li>Prerequisite 020066</li> <li>Present certificate of completion or training record.</li> <li>Medical clearance through HPMC.</li> </ul>	Y
<b>SCAFFOLDING</b>					
600062	CHPRC Competent Person - Scaffold	PRC-PRO-SH-095	N	<ul style="list-style-type: none"> <li>2 hours</li> <li>Prerequisites 044371, 044372 and 044373</li> </ul>	Y

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**100K Waste Sites Remediation –Contract #62378**

**SECTION 01150  
TRAINING AND QUALIFICATIONS**

Hanford Course Number	Course Title	CHPRC Documents	Off-site training acceptable (Yes / No)	Comments	Applicable to Contract (Yes / No)
044373	Scaffold Safety Erector/Dismantle	PRC-PRO-SH-095	Y	<ul style="list-style-type: none"> <li>8 hours.</li> <li>Prerequisite – 044372.</li> <li>Equivalent – 044370, 044388.</li> <li>United Brotherhood of Carpenters/Occupational Safety and Health Association Scaffolding Training class accepted; MSA Letter CPL600000-08-01.</li> <li>Present journeyman card, certificate of completion or training record.</li> </ul>	Y
044372	Scaffold Safety for Inspectors	PRC-PRO-SH-095	Y	<ul style="list-style-type: none"> <li>9 hours.</li> <li>Equivalent – 044370, 044387.</li> <li>United Brotherhood of Carpenters/Occupational Safety and Health Association Scaffolding Training class accepted; MSA Letter CPL600000-08-01.</li> <li>Present journeyman card, certificate of completion or training record.</li> </ul>	Y
044371	Users Scaffold Safety - CBT	PRC-PRO-SH-095	Y	<ul style="list-style-type: none"> <li>1 hour.</li> <li>Equivalent – 044370, 044372, 044373, 044383, 171051, 171052.</li> <li>United Brotherhood of Carpenters/Occupational Safety and Health Association Scaffolding Training class accepted; MSA Letter CPL600000-08-01.</li> <li>Present journeyman card, certificate of completion or training record.</li> </ul>	Y
<b>TRANSPORTATION FEDERAL MOTOR CARRIER TRAINING</b>					
020083	Federal Motor Carrier Safety Regulations for Drivers	MSC-PRO-37561	N	<ul style="list-style-type: none"> <li>3 yr. retraining period.</li> <li>8 hours</li> <li>Any person who will operate a CMV</li> <li>Equivalent - 020084</li> </ul>	Y
<b>WELDING</b>					

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**100K Waste Sites Remediation –Contract #62378**

**SECTION 01150  
TRAINING AND QUALIFICATIONS**

Hanford Course Number	Course Title	CHPRC Documents	Off-site training acceptable (Yes / No)	Comments	Applicable to Contract (Yes / No)
600064	CHPRC Competent Person – Welding (Fume Exposure)	PRC-RD-WLD-23775	N	<ul style="list-style-type: none"> <li>• 2 hours</li> </ul>	Y
<b>QUALITY ASSURANCE TRAINING</b>					
170720	Suspect Counterfeit Items	PRC-PRO-QA-301	N	<ul style="list-style-type: none"> <li>• 4 hours</li> <li>• 1 yr. Retraining</li> </ul>	Y

**PART 2 – KEY PERSONNEL**

Buyer reserves the right to approve all Key Personnel. Contractor’s key personnel must be assigned full-time onsite to this Subcontract exclusively and possess the minimum qualifications listed below. Contractor shall not reassign or remove key personnel without prior written authorization of Buyer. Whenever, for any reason, one or more of these individuals are unavailable for assignment for Work under this Subcontract, any replacement key personnel shall possess the minimum qualifications and experience required for the position.

Key personnel must have adequate knowledge of the referenced codes and standards as applicable to the scope of work they are responsible to implement.

When the Buyer finds that a correlation exists or appears to exist between a documented lack of Contractor performance and a lack of Contractor employee qualification performance and/or falsification of experience requirements, the Contractor agrees to immediately replace that individual with another employee with the minimum qualifications appropriate to the work being performed as specified above at no additional cost to the Buyer.

The Buyer may also require that the Contractor be removed from the job, at no additional cost to Buyer, employees who endanger persons or property, disruptive to the workforce, or whose continued employment under this Subcontract is inconsistent with the requirements of the Subcontract and/or interests of safety or security at the Hanford Site.

The Buyer may require the Contractor to remove and replace, at no additional cost to the Buyer, any key person who fails to perform and/or comply with the subcontract requirements. Replacement key personnel shall possess the minimum qualifications and experience required for the position.

The Contractor shall provide three (3) professional references, including current contact phone numbers and addresses, so that the Buyer may verify the qualifying experience requirements.



## SECTION 01150 TRAINING AND QUALIFICATIONS

### 2.1 Title/Position

The following five key personnel/positions are required for this work. Each person/position, except as noted, is required to be at the work site 100% for the duration of the contract. One individual may perform two positions provided they meet all requirements of the positions.

#### 2.1.1 Project Manager

- 7 years General Construction Management Experience.
- 5 years at Project Management Level, of which 3 years include working with radiological contaminated materials and chemical and hazardous material handling experience.

#### 2.1.2 Craft and Equipment Supervisor

- 10 years Industrial Construction.
- 5 years Supervisory Level, which shall include labor management associated with bargaining units.
- 3 years of supervising work involving radiological contaminated materials and chemical and hazardous material handling experience.

#### 2.1.3 Site Health and Safety Officer

- Must have a Construction Health and Safety Technician Certification, or Occupational Health and Safety Technologist Certification by the Council on Certification of Health, Environmental and Safety Technologists, or be a Certified Safety Professional from the American Board of Certified Safety Professionals.
- 5 years full time experience in a safety and health position in industrial safety of which 3 years include working with radiological contaminated materials and chemical and hazardous material handling experience.
- Quality Assurance, Security, Radiological Technician does not qualify as applicable safety and health experience. Experience must include a thorough understanding and working knowledge of OSHA, NFPA 1. (latest edition), and other governing requirements associated with performance of the scope of work.

#### 2.1.4 Certified Industrial Hygienist

- Must be certified by the American Board of Industrial Hygiene (ABIH).
- Responsibilities include reviewing, approving, and signing the Respiratory Protection Program (RPP) and Site Specific Health and Safety Plans (SSHSP), and conducting weekly on-site assessments of the Contractor's compliance with the RPP and SSHSP.
- Must visit the site on a weekly basis and be available to assist the Industrial Hygiene Lead on an as required basis, e.g., change of condition situations.

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**100K Waste Sites Remediation –Contract #62378**

**SECTION 01150**  
**TRAINING AND QUALIFICATIONS**

- Shall provide a written report to the Buyer for each site visit and/or assessment.

2.1.5 Industrial Hygiene Lead

- Must have Construction Health and Safety Technician Certification or Occupational Health and Safety Technologist Certification by the Council on Certification of Health, Environmental and Safety Technologists or be a Certified Safety Professional from the American Board of Certified Safety Professionals or Certified Industrial Hygienist from the American Board of Industrial Hygienists.
- 3 years experience in industrial hygiene monitoring related to hazardous waste sites characterization or remediation.
- Experience must include a thorough understanding and working knowledge of direct reading instruments, personnel exposure monitoring/sampling procedures, and record keeping.
- Must be on-site during waste site excavation and waste handling activities.

PART 3 - EXECUTION

Not Used

END OF SECTION

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**100K Waste Sites Remediation –Contract #62378**

**SECTION 01200**  
**PROJECT MEETINGS**

**PART 1 – GENERAL**

**1.1 SUMMARY**

1.1.1 General purposes of conferences and meetings addressed in this Section are coordination, control, and direction of the Work. In addition to meetings addressed by this Section, Contractor may be required by other Sections and other Contract documents to conduct special-purpose meetings and various safety meetings and briefings.

1.1.2 CHPRC will issue meeting notices and prepare an agenda and minutes for each conference and meeting addressed in this Section. When applicable, minutes will identify action items, assigned actionees, and due dates.

**1.2 SITE LABOR CONFERENCE**

1.2.1 Before start of Work, Contractor shall conduct a conference at a time and Hanford Site location agreed upon by Contractor and the Labor Organization representatives.

1.2.2 Invited attendees shall include CHPRC, Contractor, subcontractors, Labor Organizations representing utilized crafts, and others having an interest in Hanford Site labor requirements.

1.2.3 Purpose of the conference is familiarization of project participants with Hanford Site labor requirements. Conference shall last approximately one hour and shall include a presentation by the Contractor of the proposed craft utilization and work plan.

**1.3 PRECONSTRUCTION CONFERENCE**

1.3.1 Before start of the Work, CHPRC will conduct a conference at a time and Hanford Site location agreed to by Contractor and CHPRC.

1.3.2 Invited attendees will include CHPRC, Contractor, subcontractors and others having an interest in the Work

1.3.3 Purpose of the conference is the coordination of Work startup and familiarization of project participants with the Work and worksite. The conference will last approximately two (2) hours and will include the following agenda.

- a. Certified payrolls
- b. Construction Progress Meetings
- c. Forms required by the Contract. CHPRC will provide reproducible masters

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**100K Waste Sites Remediation – Contract #62378**

**SECTION 01200**  
**PROJECT MEETINGS**

- i. Construction Daily Activity Report (A-6004-822)
  - ii. Work Release for Construction Service Organization (A-6004-967)
  - iii. CHPRC – Change Form (A-6004-820)
  - iv. Chemical Inventory Worksheet (A-6004-750)
  - v. CHPRC Contractor Document Submittal Form (A-6004-757)
  - vi. Request for Clarification or Information (RCI) (A-6004-833)
  - vii. Craft-Specific Job Safety Analysis/Position Hazard Analysis (K-1 JSA/PHA) (A-6004-783)
  - viii. Job Safety analysis/Activity Hazard Analysis (K-2 JSA/AHA) (A-6004-784)
  - ix. Task-Specific Job Safety analysis (K-3 JSA) (A-6004-785)
  - x. Significant Discharge Log (A-6002-294)
- d. Material and equipment lists
  - e. Points of contact and key personnel representing the Contractor and CHPRC. Areas covered will include safety, quality assurance and quality control, Price Anderson Amendment Act (PAAA), acceptance inspection, and construction engineering
  - f. Quality requirements
  - g. Report requirements
  - h. Safety
  - i. Schedule requirements, schedule constraints, and work limitations
  - j. Submittals

1.4 CONSTRUCTION PROGRESS MEETINGS

1.4.1 Every week CHPRC will conduct a progress meeting at time and Hanford Site location determined during the Preconstruction Conference.

1.4.2 Invited attendees will include CHPRC, Contractor, and subcontractors.

1.4.3 The purpose of the meetings is the exchange of Work-related information. Average meeting will last approximately 1 hour and will include the following agenda items:

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**100K Waste Sites Remediation – Contract #62378**

**SECTION 01200**  
**PROJECT MEETINGS**

- a. Safety
  - b. Quality Assurance
  - c. Progress
  - d. Submittal Status
  - e. Schedule, Cost and Construction Status
  - f. Requests For Information – Status
  - g. Design and Scope Changes
  - h. Material and Equipment Status
  - i. Problem Areas
- 1.4.4 Contractor to provide six (2) copies of 2-week look-ahead schedule for review during the meeting. Refer to Section 01315 for level of detail required on 2-week look-ahead schedule.
- 1.4.5 In addition, the Contractor shall provide CHPRC with a Daily Field Report identifying the work performed for the day; craft, supervision, and subcontractor manpower; problems, issues, or delays; safety, etc. Daily Field Report shall be submitted to CHPRC by 11:00 am each work day documenting the previous work day's activities.

PART 2 – PRODUCTS

Not Used

PART 3 – EXECUTION

Not Used

END OF SECTION

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**100K Waste Sites Remediation – Contract #62378**

## **SECTION 01300 SUBMITTALS**

### **PART 1 – GENERAL**

#### **1.1 SUMMARY**

This Section provides the general procedures and requirements for preparing and processing submittals. An example submittal register is shown in this Section. The submittal register may not be all-inclusive, and identifies documents required with proposal submittal, post-award / prior to Notice-To-Proceed (NTP), and post NTP.

1.1.1 Requests for substitutions are prepared in accordance with Section 01630 and processed in accordance with this Section. “Deliverable documents” differ from submittals and are processed in accordance with Section 01720. Deliverable documents are Quality Assurance documents and are required by technical sections of the Specification.

#### **1.2 CLARIFICATIONS**

1.2.1 Contract documents take precedence if a conflict exists between Contract documents and the submittal register. Immediately notify CHPRC of discrepancies in the submittal register.

1.2.2 Approval of a specific item does not constitute approval of a system or assembly of which an item is a component.

1.2.3 Materials and equipment that differ from approved submittals are subject to rejection and replacement at Contractor’s expense.

1.2.4 Delays arising from failure to provide required submittals in a timely manner will not constitute excusable delays for extension.

1.2.5 Standard processing time of submittals by CHPRC is under 1 week and is measured from date of submittal’s receipt by CHPRC to date of return mailing.

#### **1.3 SUBMITTAL BY CONTRACTOR**

1.3.1 The Contractor submittals identified herein on the submittal register shall be submitted to CHPRC Construction Document Control by the Contractor using the Contractor Document Submittal (A-6004-757). Instructions for completion of the submittal are included with the form.

1.3.2 The quantity, frequency, and type of submittal shall agree with the requirements set forth on the submittal register. The submittal number shall be entered on the submittal form by the Contractor in accordance with the submittal register. This number is used to identify each submittal.

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**SECTION 01300  
SUBMITTALS**

- 1.3.3 When any submittal is returned to the Contractor with a request to resubmit (i.e., marked as: “B-yes” “Minor Comments – Approved With Exceptions as Corrected Re-submittal Required”; or “C” “Not Approved Revise and Resubmit”) the Contractor shall resubmit all corrected documents within the time specified on the returned submittal form, or if no time is specified, within five (5) working days from the disposition date.
- 1.3.4 Contact the Contract Specialist if additional submittal numbers are required.
- 1.3.5 Changes to a Contractor’s deliverables that have not been accepted by CHPRC as complete shall be re-submitted using the submittal form and in accordance with the Contractor’s CHPRC-approved Quality Assurance Program.
- 1.4 MASTER SUBMITTAL REGISTER

A submittal register will be provided to the Contractor at the time of proposal.

PART 2 – PRODUCTS

Not Used

PART 3 – EXECUTION

Not Used

END OF SECTION

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**SECTION 01300A  
MASTER SUBMITTAL REGISTER**

MASTER SUBMITTAL REGISTER								
Contract Number/Name: 62378, Federal Engineers and Constructors								Revision: 01
Submittal No.	Type and # of Copies	Technical Submittal	Vendor Information	Description of Submittal	Submittal Date (when required)	Approval Organization	CHPRC Review Time Needed (work days)	Contract Paragraph or Requirement Reference
1	2 or E	APW		Waste Handling Plan	Prior to Work	Greg Borden WMR	2 days	SOW 01130 1.4.1
2	2 or E	APW		Medical Qualification Information	Prior to Work	Daren Schwartz Health & Safety	4 days	SOW, 01010 1.3.23.1
3	2 or E	APW		Key Personnel Resumes	Prior to Mobilization	Roger Fox BTR	2 days	SOW, 01150 Part 2
4	2 or E	APW		Material Safety Data Sheets and Chemical Inventory Worksheet	Prior to Work	Greg Borden WMR	4 days	SOW, 01010 1.3.16.3
5	2 or E	APW		Employee Training Records	Prior to Work	Cindy Hayes Training	4 days	SOW, 01150 1.2.2.1
6	2 or E	APW		Earthwork Plan	Prior to Mobilization	Scott Werry Work Management	4 days	SOW, 01010 1.3.3
7	2 or E	APW		Health and Safety Plan / JSA	Prior to Mobilization	Daren Schwartz Health & Safety	4 days	SOW, 01110 1.4.1
8	2 or E	AP		Cold Weather Protection Plan	Annually, October 1	Roger Fox BTR	2 days	SOW, 01010 1.3.16.1
9	2 or E	AP		Monthly Air Quality Data Summary Record (MAQDSR)	Monthly	Katherine Thompson ECO	2 days	SOW, 01010 1.3.19
10	2 or E	APW		Equipment Inspection	Prior to Work	Roger Fox BTR	2 days	SOW, 01010 1.3.28
11	2 or E	APW		Preventive Maintenance Program	Prior to Work	Roger Fox BTR	4 days	SOW, 01010 1.3.28
12	2 or E	APW		Route Plan	Prior to Work	Roger Fox BTR	1 day	SOW, 01010 1.3.18

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**100K Waste Sites Remediation –Contract #62378**



**SECTION 01315**  
**PROJECT SCHEDULES, PROJECT CONTROLS,**  
**AND PROJECT PERFORMANCE MILESTONES**

**PART 1 – GENERAL**

**1.1 SCHEDULES**

**1.1.1 Schedule Preparation**

1.1.1.1 Prepare schedules using commercial project planning software. Preferred software (used by CHPRC) is Primavera Project Planner (P6). Other project planning software may be used if Contractor provides software translation capability to and from Primavera.

1.1.1.2 A sample P3 Activity Code Structure and Work Breakdown Structure (WBS) will be provided to the Contractor in order to assist in the preparation of the Construction Schedule, which will enable communication and downloading of the Contractor's schedule with CHPRC IMES Schedule system.

1.1.1.3 Identify initial project schedule as Revision 0. This schedule, when approved, is the baseline project schedule.

1.1.2 See Section 01300 for submittal procedures.

**1.1.3 Approval Required**

1.1.3.1 Startup Project Schedule: five (5) days after Notice of Award, submit a schedule covering activities for the first 60 days of Contract, starting with receipt of Notice to Proceed, as specified in 1.2.

1.1.3.2 Project Schedule: 10 days after Notice of Award, submit a schedule covering activities for duration of Contract.

1.1.3.3 Weekly Work Schedules: Provide a 3-week "look ahead" schedule, updated weekly, one day prior to each scheduled Weekly Progress Meeting (1.4.1).

1.1.3.4 Revised Schedules: When required, submit revised project schedules as specified in 1.3.

1.1.3.5 Downtime/delay reports: On a daily basis or on the working day of an occurrence, submit downtime/delay reports.

**SECTION 01315**  
**PROJECT SCHEDULES, PROJECT CONTROLS,**  
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- 1.1.4 Approval Not Required
  - 1.1.4.1 Progress Reports should be submitted daily no later than close-of-business (COB). Submittal of project schedule will be once each week at schedule meeting with Project Manager and BTR. Thereafter, submit a progress report as specified in 1.5.
  - 1.1.4.2 Weekly labor cost reports: No later than the second day of the following week, submit weekly labor cost reports. Cost reports shall be budget- and quantity-based, and reflect each work element in the WBS. The cost reports shall be updated each week with the progress and variances for each work element. The weekly cost reports shall indicate names of all people charging their time to the project.
- 1.2 SCHEDULE PREPARATION
  - 1.2.1 The schedule submittal shall include a time-phased performance measurement baseline schedule (PMBS) for completing the individual construction Work.
  - 1.2.2 The schedule shall be in the form of a progress chart of suitable scale to indicate appropriately the percentage of work scheduled for completion by any given date during the contract period of performance. Identify critical path activities, including logical sequence and relationship of activities for engineering, design, submittals, procurement, fabrication, delivery, erection, installation, and testing for work covered by Contract.
  - 1.2.3 See submittal register for quantity of copies to be submitted and approval code.
- 1.3 SCHEDULE REVISIONS
  - 1.3.1 Whenever CHPRC determines that there are significant variances between actual and scheduled progress, endangering completion of the Contract Work within the scheduled time, the Contractor may be required to prepare and submit revised project schedules including corrective action plan(s).
  - 1.3.2 Make schedule revisions in accordance with the following:
    - 1.3.2.1 Show progress to date of submittal and projected completion dates for each activity.
    - 1.3.2.2 Identify activities modified since the previous submittal, major changes in scope, and other identifiable changes.
    - 1.3.2.3 Provide a narrative report defining the problem areas, anticipated delays, and schedule impacts.

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**SECTION 01315**  
**PROJECT SCHEDULES, PROJECT CONTROLS,**  
**AND PROJECT PERFORMANCE MILESTONES**

- 1.3.2.4 Describe corrective action taken, or proposed, and its effect, including changes in schedules of subcontractors.
- 1.3.3 Send copies of revised schedules to CHPRC. Notify subcontractors, suppliers, and other concerned entities, instructing them to promptly report, in writing, problems anticipated due to revisions.
- 1.3.4 Upon approval, a revised schedule becomes the new baseline.
- 1.4 **WEEKLY WORK SCHEDULE PREPARATION**
  - 1.4.1 Each week, prepare a detailed schedule of next 2-week's work. Base weekly work schedules on the activity schedule. Electronic generation of these schedules is not required. Include the following:
    - a. Work Description
    - b. Location of the Work.
    - c. Work involving outages, overtime, weekends, etc.
- 1.5 **PROGRESS REPORT PREPARATION**
  - 1.5.1 Prepare a summary progress report each reporting period, show actual progress versus scheduled progress. Scheduled progress is given by baseline project schedule. Show actual progress in the form of percentages completed for activities or resources.
  - 1.5.2 A variance analysis shall be prepared on the current month and cumulative to date, and shall include cause, impact, and corrective action. Variance analysis shall include explanations, as required, to adequately address problems.
  - 1.5.3 Develop and include a line graph ("S" curve) to show cumulative actual progress versus cumulative scheduled progress. Progress shown shall be consistent with that indicated by the reports.
  - 1.5.4 Update project schedule each reporting period, or more frequently if requested by CHPRC, when progress report is prepared. Include an updated data disk and a hard copy of updated schedule with the progress report.

**PART 2 – PRODUCTS**

Not Used

**PART 3 – EXECUTION**

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**100K Waste Sites Remediation – Contract #62378**

**SECTION 01315  
PROJECT SCHEDULES, PROJECT CONTROLS,  
AND PROJECT PERFORMANCE MILESTONES**

Not Used

END OF SECTION

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**100K Waste Sites Remediation – Contract #62378**

**SECTION 01400**  
**QUALITY ASSURANCE AND CONTROL**

**PART 1 – GENERAL**

**1.1 REFERENCES**

1.1.1 The following documents and others referenced therein form part of Contract to extent designated in this section. Referenced documents are those current as of the date of this Section unless otherwise indicated.

1.1.1.1 American Society for Quality (ASQ)

E4 Specifications and Guidelines for Quality Systems for Environmental Data Collection And Environmental Technology Programs

1.1.1.2 Code of Federal Regulations (CFR)

Title 10 Energy

Part 50 Domestic Licensing of Production and Utilization Facilities

Part 72 Licensing Requirements for the Independent Storage of Spent Nuclear Fuel and High-Level Radioactive Waste

Part 830, Subpart A Quality Assurance Requirements

Title 29 Labor

Part 1910 Occupational Safety and Health Administration (OSHA)

Part 1926 Safety and Health Regulations for Construction

1.1.1.3 Department of Energy (DOE)

Process Guide Identification and Disposition of Suspect/Counterfeit items or Defective items

DOE-0359 Hanford Site Electrical Safety Program (HSESP)

1.1.1.4 Institute of Electrical and Electronics Engineers (IEEE)

C2 National Electrical Safety Code (NESC)

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**SECTION 01400**  
**QUALITY ASSURANCE AND CONTROL**

- 1.1.1.5 National Fire Protection Association (NFPA)  
70-2014 National Electrical Code (NEC)
- 1.1.1.6 Underwriters Laboratories (UL)  
Electrical Appliance and Utilization Equipment Directory  
Electrical Construction Materials Directory
- 1.2 SUBMITTALS
  - 1.2.1 See Section 01300 for submittal procedures.
  - 1.2.2 Approval Required
    - 1.2.2.1 With proposal, submit a written statement warranting that all items supplied under Contract are genuine, new, and unused in accordance with subsection 1.4 below.
- 1.3 QUALITY ASSURANCE PROGRAM REQUIREMENTS
  - 1.3.1 Contractor is not required to have a written QA program. However, if the contractor does work to a written QA program, then a description of the basis for the program (e.g., ASME NQA-1, ISO 9000, etc.) shall be included in the proposal.
  - 1.3.2 The Contractor shall have policies and procedures in place to accomplish the following required activities:
    - 1.3.2.1 Management: Program, training/qualification, discrepancy identification, document/records.
      - a. Personnel shall be trained and qualified to ensure they are capable of performing their assigned work. Plans shall address specific training, qualification, and certification requirements. Training shall meet requirements of Section 01150.
    - 1.3.2.2 Performance: Work Processes, Design, Procurement, Inspection, and Testing  
  
Purchased items and services shall meet established requirements and perform as specified. Procurement controls shall include actions to prevent the use of suspect or counterfeit products (1.4).  
  
Perform and document inspections and testing required by the Specification.  
Documented inspections shall report the true and physical/functional condition of the

**SECTION 01400**  
**QUALITY ASSURANCE AND CONTROL**

inspection activity. As a minimum prepare daily reports when inspections and testing are performed. Reports shall provide sufficient detail to describe inspections and testing performed, with applicable requirements referenced, and results and determinations of inspections and tests shown.

Test procedures, when required, shall include the reference test objectives, prerequisites, and acceptance criteria. Test procedures shall also identify test configuration, safety instructions, instrumentation requirements, required monitoring, and environmental conditions. Test procedures form standards, codes, supplier manuals and equipment maintenance instructions may be used in lieu of specially prepared test procedures.

1.3.3 Electrical/Electronic Product Acceptability

1.3.3.1 Electrical control panels and electrical equipment (a general term to include material, fittings, devices, appliances, luminaries [fixtures], apparatus, and the like used as part of or in connection with an electrical installation) delivered or brought onto the Hanford Site in performance of this Contract shall be listed or labeled by an organization currently recognized by OSHA as a nationally recognized testing laboratory (NRTL) in accordance with DOE-0359.

1.3.3.2 Electrical equipment installed as part of this contract shall comply with the NEC and, where applicable, the NESC. CHPRC reserves the right to inspect electrical equipment and installations. Contractor shall notify CHPRC when installations are available for NEC inspection.

1.3.3.3 Electric motors shall be manufactured and testing in accordance with NEMA MG-1 as applicable, or listed by an organization currently recognized by OSHA as an NRTL. Documentation of NEMA MG-1 compliance shall be made available to CHPRC on request.

1.4 EXCLUDING SUSPECT AND MISREPRESENTED PRODUCTS

1.4.1 Contractor warrants that items provided to CHPRC are genuine and unused unless otherwise specified in writing by CHPRC. Contractor further warrants that items used during the performance of the Work include genuine, original, and new components, or are otherwise suitable for the intended purpose. The Contractor indemnifies CHPRC, its agents, and third parties for any financial loss or property damage resulting directly or indirectly from material, components, or parts that are not genuine, original, and unused, or otherwise suitable for the intended purpose. This includes materials that are defective, suspect, or counterfeit; materials that have been provided under false pretenses; and materials or items that are materially altered, damaged, deteriorated, degraded, or result in product failure.

**SECTION 01400**  
**QUALITY ASSURANCE AND CONTROL**

- 1.4.2 Types of material, parts, and components known to have been misrepresented include fasteners; hoisting, shackles, turnbuckles, cable clamps, wire rope, rigging, and lifting equipment; cranes; hoists; valves; pipe and fittings; electrical equipment and devices; plate, bar, shapes, channel members, and other heat-treated materials and structural items; welding rod and electrodes; and computer memory modules. The Contractor's warranty shall also extend to labels and trademarks or logos affixed, or designed to be affixed, to items supplied or delivered to CHPRC. In addition, because falsification of information or documentation may constitute criminal conduct, CHPRC may reject and retain such information or items, at no cost; and identify, segregate, and report such information or activities to the DOE.
- 1.4.3 Contractor shall submit a written statement that "all items furnished under this Contract are genuine (i.e., not counterfeit) and match the quality, test reports, markings, and fitness for use required by the Contract." The statement shall be on Contractor letterhead and signed by an authorized agent of Contractor.
- 1.4.4 Any materials furnished as part of this Contract that have been previously found to be suspect/counterfeit by the DOE will not be accepted. For more information about suspect/counterfeit items, refer to Process Guide for the Identification and Disposition of S/CI or defective items at the following link:  
<http://www.hss.doe.gov/sesa/corporatesafety/sci/guide.html>
- 1.5 INSPECTION AND TESTING
- 1.5.1 Inspection, testing, and documentation addressed under the Field Inspections and Test articles in this Statement of Work shall be performed by qualified CHPRC personnel. Contractor is not required to document any inspection or testing within the scope of this contract.
- 1.5.2 Inspection and testing shall be performed in accordance with this Statement of Work.
- 1.5.3 CHPRC may perform oversight and inspections to verify compliance to requirements.
- 1.6 DEFICIENCY REPORTING
- 1.6.1 Contractor shall use the CHPRC deficiency reporting system (e.g. nonconformance/deviation reports) to document deviations from requirements.
- 1.6.2 Dispositions of deficiency reports shall be documented in one of the four following categories: Use-as-is; Reject; Repair; or Rework. Definitions for these categories may be found in ASME NQA-1.
- 1.6.2.1 Clearance of deficiency tags shall be performed or delegated by the initializing organization.

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**100K Waste Sites Remediation – Contract #62378**



**SECTION 01400**  
**QUALITY ASSURANCE AND CONTROL**

PART 2 – PRODUCTS

Not Used

PART 3 – EXECUTION

Not Used

END OF SECTION

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**100K Waste Sites Remediation – Contract #62378**

**SECTION 01500**  
**CONSTRUCTION FACILITIES AND TEMPORARY CONTROLS**

**PART 1 – GENERAL**

**1.1 REFERENCES**

1.1.1 The following documents and others referenced herein form part of Contract to extent designated in this section. Referenced documents are those current as of the date of this section unless otherwise indicated.

1.1.1.1 National Fire Protection Association (NFPA)

701 Methods of Fire Tests for Flame-Resistant Textiles and Films

1.1.1.2 Washington State Department of Transportation (WSDOT)

M 41-10 Road, Bridge, and Municipal Construction

**1.2 ACCESS AND PARKING**

1.2.1 CHPRC will make available parking for a limited number of Contractor's company vehicles near the worksite, outside of any Limited Area. "No Parking" signs are posted to show fire and emergency lanes. No on-street parking will be permitted.

1.2.2 Parking for a limited number of Contractor's company vehicles will be made available near worksite, outside Limited area. "No Parking" signs are posted to show fire and emergency lanes. No on-street parking will be permitted.

a. Arrange parking at least 30 ft. from the nearest flammable liquids, hazardous chemicals, or hazardous waste areas.

b. Locate parking at least 10 ft. from Intermodal Bulk Containers (conex boxes), tents, or other relocatable structures.

c. Complete a driver "360°" safety and fire prevention walk around each vehicle before starting or moving the vehicle.

d. Complete at least monthly recorded safety and fire prevention for each commercial vehicle.

1.2.3 First Aid: Facilities for first line medical attention are available onsite and are located at the 2719WB building located in the 200 West Area of the Hanford Site. Facilities for radiological decontamination are also available onsite and are located at the 272AW building in the 200 East Area.

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**SECTION 01500**  
**CONSTRUCTION FACILITIES AND TEMPORARY CONTROLS**

1.2.4 Operation and Storage Areas: Worksite operations, including storage of materials, shall be designated by CHPRC during the preconstruction conference.

1.3 FIELD OFFICE AND PLAN OF THE DAY TRAILER

1.3.1 A Field Office shall be provided by the Contractor during the onsite Construction period. Suggest at minimum a 24'x60' double wide trailer with offices built in. Contractor-provided facility shall be meet the following minimum requirements:

1. The trailers shall meet the NFPA 101 (2009) requirements for “New Business Occupancy.”
2. NFPA 101 compliant entrance doors with exterior lights and stairs required.
3. Doors shall be a minimum of 36 inches in width and have an adjustable door closure.
4. Interior wall and ceiling finish shall be Class A, Flame spread rating of 25 and Smoke Development rating of 450, Fire retardant paint is not acceptable.
5. The units shall meet the Washington Administrative Code (WAC) 296-150F, for Factory Built Housing and Commercial Structures.
6. The units shall have a central HVAC system for both heating and cooling. The HVAC unit shall be mounted on the end wall of each module that comprises the unit and include its' own electrical disconnect. HVAC unit shall be rated for operation at both 208VAC and 240VAC.
7. Electrical service to operate the units shall be 120/208 or 120/240 VAC, single-phase. Trailers shall be suitable for service from either voltage service.
8. Panel-board loads shall be balanced evenly between the panel-board phases.
9. When specified, Contractor(s) to provide connection points, meeting International Building Code (IBC), under trailer for Buyer to “connect” water and sewer lines for trailer. (if required)
10. Contractor will be responsible to suspend delivery of Mobile units when winds exceed 25 MPH.
11. The units supplied under this order shall be fully functional (i.e. HVAC units, and etc.) and prepared to commence operation when delivered.
12. The units shall meet all appropriate OSHA, ANSI, DOT, TBC and Federal Motor Carrier Commercial Vehicle specifications and regulations for operation. Certification at time of shipment will be required. Prior to occupancy of the trailers, the buyer will complete an inspection to ensure compliance. If any trailer does not pass the inspections, the contractor shall be responsible for correcting any compliance issues and any incurred costs.

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**SECTION 01500**  
**CONSTRUCTION FACILITIES AND TEMPORARY CONTROLS**

13. The units shall have shed type roofs of 2" rise and 12' run or a Buyer approved substitution.
14. Electrical receptacles shall be GFCI as required by code.
15. The units shall be wired with Cat5e for telephone and internet connections.
16. Standard residential rain gutters will be installed on the entire roof line above the entry door sides of the building, with one down spout at each end of the gutter, to direct water away from walkways, where feasible. (Not required if the slope of the roof is away from exterior doors)
17. Exterior door hardware to be standard level lock, with the doors to each unit keyed alike. And, each entry/exit door must have adjustable door closures.
18. Fabrication and installation of stairs for all entry doors. The stairs and hand rails are to be compliant with NFPA 101, Life Safety Code for New Business.
  - a. Any portion of the stairs and /or platform for which the walking surface is in excess of 30" (inches) above grade shall be equipped with 4" (inch) guarding.
  - b. Assure the riser for each run, of exterior stair, are all within 1/4" (inch) of each other.
  - c. Platforms must be a minimum of 60" (inches) by 60" (inches).
  - d. Platforms on west side of each five-wide mobile structure must be a minimum of 10' (feet) by 36'.
19. One stair system, on each trailer, must have a swing gate type hand rail, with a hand removable device (no bolts or screws), to accommodate swing opening, to allow delivery of supplies.
20. Provide a panel schedule for the electrical distribution panel, filled in with connected loads.
21. Main electrical panels shall be accessible from the interior of the building to shut down the HVAC systems in the event of an emergency.
22. Mount exit signs over each exit door.
23. Label electrical outlets, indicating the panel and circuit number, where power originates.
24. All electrical materials and equipment (including HVAC units) shall be listed by a Nationally Recognized Testing Laboratory and installed in accordance with the listing requirements.
25. Units will have tongues removed and stored beneath mobile structures, and, be skirted with vented T111 materials (painted to match) to preclude windblown debris from accumulating under the unit.

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**100K Waste Sites Remediation – Contract #62378**

**SECTION 01500**  
**CONSTRUCTION FACILITIES AND TEMPORARY CONTROLS**

26. All exterior windows shall meet or exceed trailer manufacturer's standards.
27. Standard Mini-Blinds shall be installed on each window to fit between the window frames
28. No *Emergency Lighting* (or battery backup lighting) required.
29. Install three (3) dedicated 20Amp circuits, for the refrigerators and microwaves
30. Install outdoor perimeter lighting fixtures over doors. Lighting shall be (or equivalent); Lithonia Floodlight, 400W Metal Halide, 120v to 277v, medium pulse start (with photocell socket), die-cast aluminum, bronze color. (Reference: Granger Item #3JXA6)

1.3.2 Relocatable Structures (conex boxes)

- a. Submit construction, occupancy and general arrangement information for relocatable structures for CHPRC Fire Protection Engineering review and approval.
  - i. The placement of relocatable structures shall comply with NFPA 80A
  - ii. No combustible or hazardous materials storage shall be permitted between relocatable structures or any exposed buildings.
  - iii. If existing relocatable structures are to be used for this project, they should be inspected for condition, electrical safety, sanitation and plumbing safety, and conformance to DOE standards.
  - iv. If new relocatable structures are to be obtained for this project, the modular unit manufacturer's data sheets and associated certifications shall be submitted for review.
  - v. The Project engineer shall coordinate with CHPRC Fire Protection Engineering to arrange site surveys in advance of the installation of these units.
- b. At least one fire extinguisher shall be provided for each building, preferably located at access door.
- c. Where fire extinguishers are installed outside of buildings they shall be equipped with NRTL approved or listed weather covers.
- d. Emergency lighting is not required for NFPA 101 for unoccupied structures.
- e. The space below the relocatable structure shall be either screened or skirted to prevent the entry of combustible debris or vegetation.

1.3.3 Sufficiently anchor or tie down portable and re-locatable structures, including field offices and storage, to prevent overturning and lateral movement in 70-mph winds. Enclose or skirt under the floor area with non-combustible material to prevent the

**SECTION 01500**  
**CONSTRUCTION FACILITIES AND TEMPORARY CONTROLS**

accumulation of wind-blown debris. Complete the anchoring and enclosure within 14 days after its arrival at the worksite.

1.4 TEMPORARY UTILITIES

1.4.1 Electric Power: Available within 250 feet of facility site.

1.4.2 Sanitary Facilities: Not available. Provide and service chemical or other approved sanitary toilets for employee use. CHPRC requirements are available on request.

1.4.3 Telephone: Utilities for telephone service are not available. Contractor shall provide cellular phone for emergencies and communication with CHPRC.

1.4.4 Computers: Not available, Contractor shall provide their own Computers and WIFI connection.

1.4.5 Water: Drinking water is not available. Contractor shall provide employees with adequate drinking water that meets health and safety requirements.

1.4.6 CHPRC will make potable water sources available for use.

1.5 TEMPORARY CONTROLS

1.5.1 Dust Control: Maintain work areas to prevent hazard or nuisance to others. Accomplish dust control by sprinkling or other methods approved by CHPRC. Repeat sprinkling at necessary intervals to keep disturbed area damp at all times. Keep sufficient equipment on worksite to accomplish dust control as work proceeds and whenever dust nuisance or hazard occurs. No separate or direct payment will be made for dust control and cost shall be considered incidental to and included in the Contract price.

1.5.2 Temporary Enclosures: Plastic sheeting materials used to form enclosures shall be 6 mils minimum thickness, and have fire retardant properties in accordance with NFPA 701. Framing lumber shall have been treated with fire retardant. Structures shall be inspected and permitted by the CHPRC Fire Marshall.

1.5.3 Vehicle and equipment movement

- a. Slow moving vehicles and equipment shall not travel on the Hanford Site roads during heavy traffic periods between 6:30 and 8:00 a.m., and 3:30 and 5:30 p.m.
- b. Do not block existing roads.
- c. Do not park on roadway shoulders.

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**SECTION 01500**  
**CONSTRUCTION FACILITIES AND TEMPORARY CONTROLS**

- d. Vehicles that require a portable fire extinguisher in accordance with PRC-PRO-SH-40078, Appendix F, shall have the extinguisher secured in an approved manner (vehicle mounting bracket designed for specific extinguisher, or stowed in a secured equipment container).
- 1.5.4 Traffic Control: Temporary traffic control and barricades shall be in accordance with WSDOT M 41-10, Section 1-07.23(3).
- 1.5.5 Oversized vehicles and loads:
- a. Obtain a Hanford Site Oversize/Overweight Permit from CHPRC before movement of oversize loads. See Section 01065. Verify route suitability and limitations before applying for the permit.
  - b. Display oversize load sign on the front of the towing vehicle and on the rear of the trailing unit. Attach red flags to each corner.
  - c. Travel between 8:30 a.m. and 2:30 p.m. unless special arrangements are made. Comply with escort vehicle requirements in the permit during travel.
  - d. Electrical escort requirements: CHPRC will provide qualified electrical escorts when loads reach a height of X feet or more from the road surface, or when a clearance of at least 6 feet cannot be maintained from overhead electrical or signal lines. Notify CHPRC at least three (3) working days before need. Contractor will not be charged for electrical escorts.
- 1.5.6 Fuels and Lubricants:
- a. Oils, greases and similar materials shall be stored in non-flammable bins or buildings or in a fenced compound remote from other combustible materials as approved by CHPRC.
  - b. "No smoking" signs shall be provided by Contractor and prominently displayed in areas where flammable materials are stored. Additionally, Contractor shall provide and maintain suitable fire extinguisher in such areas.
  - c. Contractor shall provide all fuel for heating, ventilation and air conditioning of Temporary Facilities (unless these are run using free issue power).

END OF SECTION

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**100K Waste Sites Remediation – Contract #62378**

**SECTION 01610**  
**MATERIAL AND EQUIPMENT**  
**DELIVERY, STORAGE, AND HANDLING**

**PART 1 – SUMMARY**

**1.1 SUMMARY**

This section contains requirements for delivery, inspection, marking, storage, and handling. Product-unique requirements are contained in other sections. Chemicals shall be handled, stored, and tracked in accordance with Section 01130; flammable/combustible liquid storage shall be in accordance with Section 01130.

**1.2 DELIVERY**

1.2.1 Provide equipment and labor required for unloading, transporting, and handling delivered products.

1.2.2 Material Safety Data Sheets (MSDS and/or SDSs) shall be kept accessible at each jobsite where material is stored. See Section 01130.

**1.3 RECEIVING INSPECTION**

1.3.1 Arrange for immediate disposal and replacement of products found to be defective, damaged beyond repair, or in otherwise unacceptable condition.

1.3.2 Perform standard inspections and additional inspections required by this Statement of Work.

1.3.3 Dry and clean products that have become wet or have accumulated foreign substances during shipment, but have not become damaged.

1.3.4 Perform additional identification marking of products when necessary to meet requirements of this Statement of Work.

1.3.5 CHPRC may inspect products and product marking and storage methods for compliance with this Statement of Work.

**1.4 PRODUCT IDENTIFICATION AND SEGREGATION**

1.4.1 Provide identification tags or markings for products of similar appearance, or intended for similar use, procured to different specifications, or from different manufacturers. Safety Significant items shall be segregated from general services items, as well as stainless steel from carbon steel.

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**SECTION 01610**  
**MATERIAL AND EQUIPMENT**  
**DELIVERY, STORAGE, AND HANDLING**

- 1.4.2 As applicable, include following information on tags: Manufacturer's name; product brand name; specification number; product type, grade and class; and other information required by other sections of this Statement of Work.
- 1.4.3 Segregate tagged or marked products and provide separate storage for each product.
- 1.4.4 Preserve identity of bulk and lot products during storage and in-process work.
- 1.4.5 Control identification and storage of welding materials in accordance with a written filler metal control procedure. Maintain procedure at jobsite. Procedure shall specify methods for control by heat or lot number during storage and in-process work and for disposal of contaminated and partially used material.
- 1.4.6 When pipe and tube is removed from storage and prior to cutting, clearly and permanently re-mark remaining pieces with either original markings or field code identification symbols. Return pipe and tube to storage after re-marking.
- 1.4.7 On pipe and tube, use permanent marking methods such as indelible ink, crayon, paint, and paint stick. Vibratory etching equipment may be used with approval of CHPRC. Marking with steel stamps is not acceptable.
- 1.5 **STORAGE**
- 1.5.1 Store packaged products in original, unbroken packages and containers. Leave seals and labels intact.
- 1.5.2 Store rolled products in upright position.
- 1.5.3 Store products with finished surfaces in manner that prevents surface damage.
- 1.5.4 If contact between products could result in damage or reduction of utility, store products far enough apart to prevent contact. If close proximity storage is necessary, provide a barrier between products. Care shall be taken to preclude carbon and halide contamination of stainless steel products.
- 1.5.5 Keep ports, nozzles, ends, and other openings on equipment, tanks, pipe, and tube capped or plugged during storage.
- 1.5.6 Follow manufacturer's storage recommendations.
- 1.5.7 Remove, dispose of, and replace products with expired shelf-life dates. Dispose of hazardous products in accordance with Section 01130.

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**SECTION 01610  
MATERIAL AND EQUIPMENT  
DELIVERY, STORAGE, AND HANDLING**

1.6 INDOOR STORAGE

1.6.1 Provide indoor storage for products that can be damaged by, or can deteriorate from, changes in temperature and relative humidity.

1.6.2 When required by this Specification, or when recommended by product manufacturer, provide environmentally controlled storage. Maintain temperature 60 to 70°F, relative humidity below 55%, and provide ventilation.

1.7 OUTDOOR STORAGE

1.7.1 Avoid ground contact by providing skids, pallets, platforms, and other supports.

1.7.2 Provide sunshade protection for products that can be damaged by, or can deteriorate from, exposure to sunlight.

1.7.3 Provide weatherproof covers for products that can be damaged by, or can deteriorate from, contact with rain, snow, ice deposits, and blowing sand and debris.

1.7.4 Arrange stacked products so that condensation drains.

1.8 HANDLING

1.8.1 Provide handling tools and equipment, and use methods designed to prevent occurrence of following.

- a. Impact, rubbing, and other contact damage to ends and surfaces of pipe, tube, and other cylindrical products, and to edges, corners, and surfaces of panel, sheet and other flat products.
- b. Twisting, racking, and other distortion of prefabricated structures and equipment assemblies.
- c. Tearing, puncturing, and breaking of wrappings, coverings, and seals on packages and cartons.
- d. Surface contamination of stainless steel products.

END OF SECTION

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**SECTION 01630**  
**PRODUCT OPTIONS AND SUBSTITUTIONS**

PART 1 – GENERAL

1.1 SUBMITTALS

1.1.1 See Section 01300 for submittal process.

1.1.2 Approval Required

1.1.2.1 Before starting Work or material delivery to the worksite, submit a completed Substitution Approval Request to CHPRC for each requested substitution.

1.1.3 Approval Not Required: None

1.2 CONDITIONS

1.2.1 Products include those identified in this Statement of Work, in the Specifications or other contract documents, and on the Drawings. References in the Specifications to products, or to patented or proprietary processes, by trade name, make, or catalog number, shall be regarded as establishing a standard of quality, and shall not be construed as limiting competition. The following conditions and limitations apply:

1.2.1.1 Substitution requires approval of a CHPRC Change Form (A-6004-820) if any of the following apply.

- Proposed substitute is more hazardous than the specified product.
- Product callout includes the phrase “or approved substitute.”

1.2.1.2 A substitute may be provided **without approval** if each of the following apply:

- Product callout does not include the phrase “or approved substitute.”
- Product is identified in this Statement of Work by trade name, make, or catalog number.
- Substitute is equivalent in function, maintainability, reliability, durability, material content, form, and size.

1.2.1.3 Substitution shall be applied to the total quantity of the product required in the Statement of Work. Partial quantity substitutions are not acceptable.

1.2.1.4 Approval of fabrication drawings and other design media does not constitute approval of substitute products identified within the media.

1.2.1.5 Submittals required for a specified item are also required for an approved substitute.

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**SECTION 01630**  
**PRODUCT OPTIONS AND SUBSTITUTIONS**

- 1.3 CHANGE FORM PREPARATION
  - 1.3.1 Using the CHPRC Change Form, identify addressed product by the Statement of Work or Specification section and article or paragraph numbers or by the Drawing number. Provide manufacturer's name and address, trade name, and model or catalog number. List fabricators as appropriate.
  - 1.3.2 Attach descriptive information to define the operational and physical characteristics of the specified substitute product and to provide a basis for comparison. Include drawings, calculations, and data as appropriate.
  - 1.3.3 Provide an itemized comparison between the proposed substitute and the original specified product. Include the following information:
    - 1.3.3.1 Applicable Statement of Work or Specification section and article or paragraph numbers or applicable Drawing number.
    - 1.3.3.2 Quality and performance comparison. List variations.
    - 1.3.3.3 Cost data. Show the net Contract price change.
  - 1.3.4 List the availability of maintenance service and replacement materials.
  - 1.3.5 State the effect of the substitution on the schedule and identify the changes required in other work or products. Submit drawings, calculations, and vendor data to show the revisions necessary to accommodate the substitution.

PART 2 – PRODUCTS

Not Used

PART 3 – EXECUTION

Not Used

END OF SECTION

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**100K Waste Sites Remediation – Contract #62378**

**SECTION 01720**  
**PROJECT RECORDS DOCUMENTS**

**PART 1 – GENERAL**

**1.1 SUMMARY**

1.1.1 Hanford Site work requires that certain documents, defined herein, be used to record construction process and administration of the Contract. CHPRC will assemble pertinent data for final disposition.

1.1.2 Some data required for project records shall be delivered to CHPRC during the course of construction and contract administration, while other data shall be assembled after completion of construction for delivery to CHPRC.

1.1.3 Certain information for project records shall be recorded on CHPRC-provided forms. These forms are identified in Specifications sections where required. Copies will be supplied during the Preconstruction Conference (see Section 01200).

1.1.4 Project Record Documents, required by Contract, shall be prepared, preserved and delivered to CHPRC. These deliverable documents are in addition to submittals required by Section 01300.

**1.2 PROCEDURE**

1.2.1 Identification and Marking: Mark documents that will become project records before use for construction. Upon completion, identify documents by title or number.

1.2.1.1 Notes or markings added by hand shall be legible, utilizing permanent non-smearing marking media, such as ink or felt tip markers, in contrasting color.

1.2.1.2 Mark items to record actual construction, including changes to dimensions and details, manufacturer's name, catalog number and substitute products.

1.2.2 Availability: Keep copies of Project Record Documents at the Project site, and make available to CHPRC during the progress of the Work.

1.2.3 Storage: Store one (1) set at the Project site, apart from documents used in construction and maintain in a clean dry and legible condition.

1.2.4 Delivery: Record delivery of documents by retaining copies of letters of transmittal itemizing delivered items and reports delivered during the course of the Work. Retain until construction completion. An alternate means, acceptable to CHPRC, may be used.

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**SECTION 01720**  
**PROJECT RECORDS DOCUMENTS**

- 1.3 ACTIVITY AND ADMINISTRATIVE DOCUMENTS
  - 1.3.1 Deliver or retain in accordance with the following:
    - 1.3.1.1 Certified Payrolls: Deliver certified payrolls as required by the Contract Provisions to CHPRC. Progress payments will not be processed unless certified payrolls for work
    - 1.3.1.2 Construction Daily Activity Report (A-6004-822): Before noon each day, deliver to CHPRC one copy of an activity report, covering labor and supervision of Contractor and subcontractors for the previous day. The report shall include a general description of the Work performed, and a list of major items of equipment that are onsite.
    - 1.3.1.3 Weekly Manpower Reports: Prepare weekly manpower reports and deliver to CHPRC before 10 a.m. on Monday, for the previous week, during the performance of the Contract.
    - 1.3.1.4 Subcontracting Plan Reports: Deliver reports to CHPRC documenting conformance with the approved Subcontracting Plan, as required by SP-11.
    - 1.3.1.5 Pre-Job Briefing Checklist: Prepare checklist during each pre-job briefing and post-job review. Deliver checklists to CHPRC within 5 days after briefing.
    - 1.3.1.6 Trip Tickets: Deliver copies to CHPRC with each truck load of concrete and retain Contractor copies until Contract closeout. After closeout, deliver to CHPRC.
  - 1.4 CONSTRUCTION, QUALITY ASSURANCE AND SUPPORTING DOCUMENTS
    - 1.4.1 Deliver in accordance with the following, when called for in the Specification Sections:
      - 1.4.1.1 Significant Discharge Log: Log water discharged each work day and deliver discharge log (A-6002-294) to CHPRC.
      - 1.4.1.2 Flushing Records: Deliver to CHPRC one copy of records verifying acceptable completion of flushing, before testing.
      - 1.4.1.3 Leak/Pressure Testing Records: Deliver to CHPRC one copy of records verifying acceptable completion of leak and pressure testing, within five days after completion.
      - 1.4.1.4 Calibration Records: Deliver to CHPRC one copy of instrument calibration records five days after Contract completion.
  - 1.5 PRODUCT SAMPLES AND MANUFACTURER'S INSTRUCTIONS

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**SECTION 01720**  
**PROJECT RECORDS DOCUMENTS**

- 1.5.1 In addition to the submittals required in Section 01300, and the requirements of this Section, information received by Contractor (from suppliers) that document products used and how they were installed shall be delivered to CHPRC as Project Records.

PART 2 – PRODUCTS

Not Used

PART 3 – EXECUTION

Not Used

END OF SECTION

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