

**Pre-Qualification Questionnaire  
for  
VPU Remediation at 618-10 & 618-11 Burial Grounds**

Revised: December 15, 2011

## **INTRODUCTION**

Washington Closure Hanford, LLC (WCH) intends to transmit a Request for Proposal (RFP) and to subsequently award a Subcontract for the remediation of vertical pipe units (VPUs) at the 618-10 and 618-11 Burial Grounds located in the Hanford Site. **It is the intent of WCH to award this Subcontract as an open procurement without reserve.** The RFP will be made available only to those companies that have been pre-qualified by WCH.

WCH manages the River Corridor Closure Contract at the U.S. Department of Energy's Hanford Site in southeastern Washington State. The WCH project team is responsible for safely cleaning up and taking down hundreds of excess facilities and cleaning up waste sites and burial grounds. Two of the burial grounds, referred to as 618-10 and 618-11, are located at the 600 Area of the Hanford site as shown in the Figures 1 and 2. The 618-10 site is approximately 5.2 acres and consists of 12 trenches and 94 vertical pipe units (VPUs); the 618-11 site is approximately 8.5 acres and consists of three trenches and 50 VPUs.

The VPUs were installed as a disposal system for radioactive materials left over from laboratory and related processes. Four (4) types of VPUs were used at the 618-10 waste site: 15-ft lengths of 14-in. diameter soil pipe; 10-ft lengths of 12-in. diameter pipe; culvert pipes (these three configurations are referred to as the "older" VPUs); and 15-ft long, 22-in.-diameter VPUs constructed from 55-gal drums (referred to as the "newer" VPUs). These newer VPUs were constructed by welding five 55-gal bottomless drums together end-to-end and burying them vertically. The VPUs were then installed about 10 feet apart in trenches (the trenches are approximately 25 ft. apart) and backfilled so that only the top foot or so of the VPUs were visible at ground surface. Radioactive items were disposed down these pipe units and concrete was occasionally poured in the pipes to reduce the radiation emitted at the top.

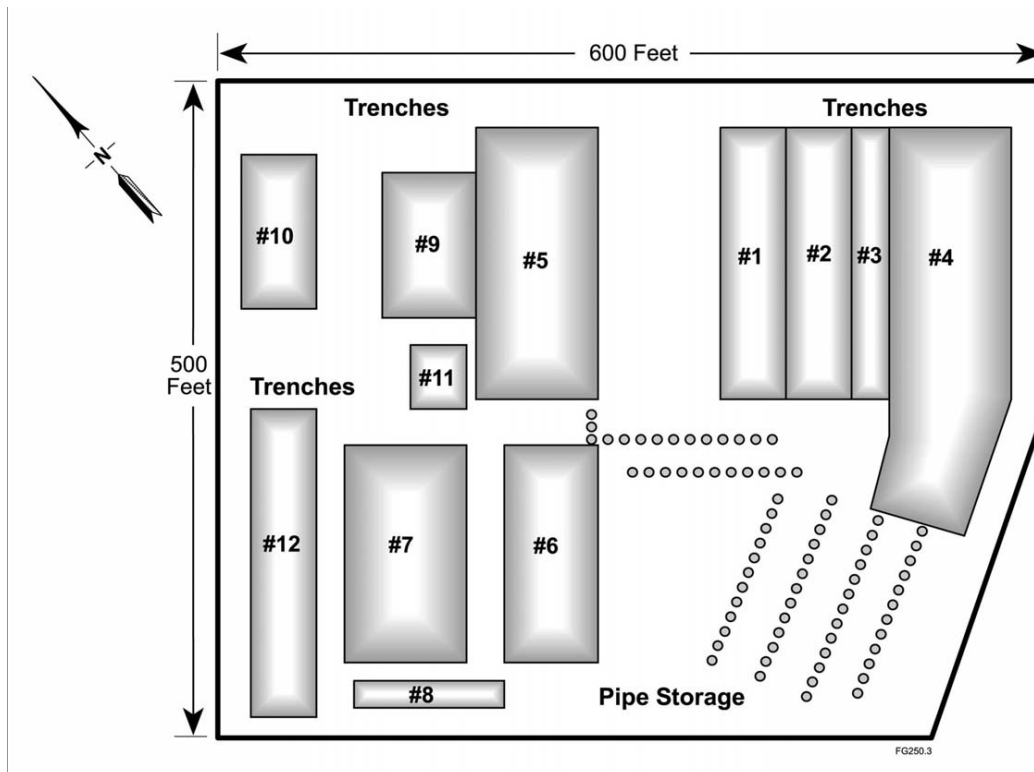
The VPUs were taken out of service in the 1960s, and approximately two feet (2') of clean fill material was placed over the top of the VPUs.

At 618-10, 24 older VPUs were installed in two (2) trenches, and 70 of the newer VPUs were installed in four (4) trenches about 150 feet away from the older VPUs (see Figure 1).

**Pre-Qualification Questionnaire  
for  
VPU Remediation at 618-10 & 618-11 Burial Grounds**

Revised: December 15, 2011

**Figure 1. The 618-10 Burial Ground**

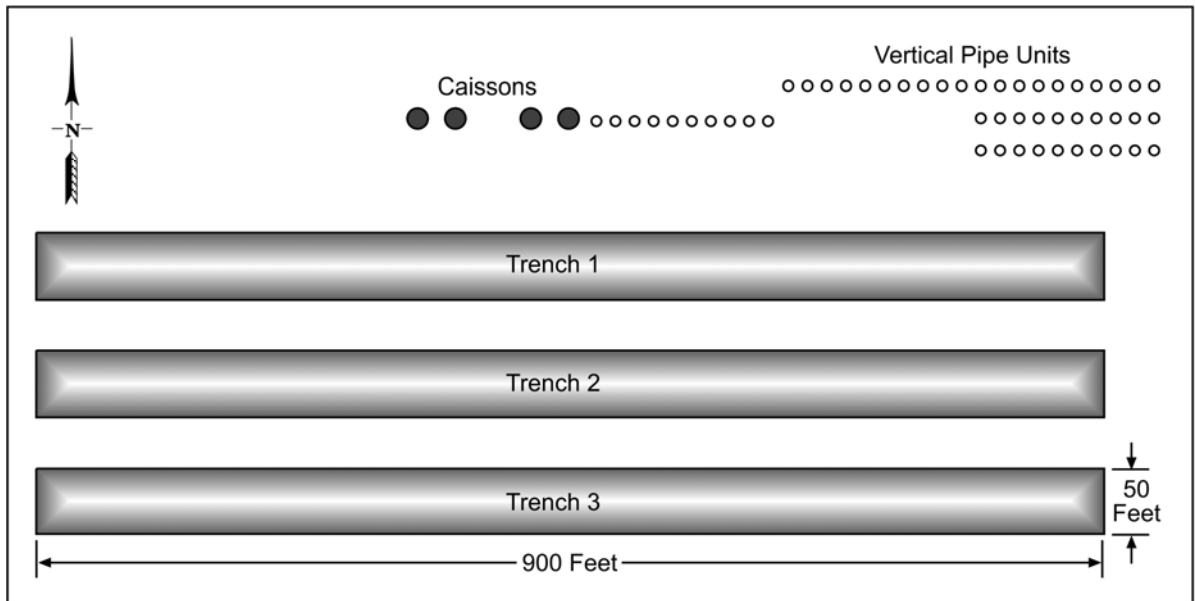


At 618-11, 50 of the newer-style VPUs were installed in four (4) trenches (see Figure 2). VPUs at both sites are thought to be covered by approximately four feet of sandy gravel.

**Pre-Qualification Questionnaire  
for  
VPU Remediation at 618-10 & 618-11 Burial Grounds**

Revised: December 15, 2011

**Figure 2. The 618-11 Burial Ground**



E1108077\_1

Remediation of the VPUs is expected to be performed by either of two (2) processes: 1) monolith formation and retrieval, or 2) material retrieval. The general approach for both processes will begin by installing a 48” steel casing around a VPU (surrounding the VPU and creating an annulus of native material), followed by “processing” the material within the casing by an auger slightly smaller than the inside of the casing advanced slowly down through the material in the casing. The primary objectives of this processing are 1) breach all containers and ensure that no free liquids are present, and 2) mix material within the steel casing to reduce “hot spots”.

**VPU Monoliths**

Under the monolith alternative, the VPU will be grouted, either during processing or as a separate step following processing, and extracted after the concreted material has developed sufficient strength. Monolith extraction must be done using either oscillation or rotation; vibratory extraction will not be allowed. Following extraction, the monoliths will be surveyed, shielded as necessary, and prepared for shipment to the Environmental Restoration Disposal Facility (ERDF) at Hanford.

**Pre-Qualification Questionnaire  
for  
VPU Remediation at 618-10 & 618-11 Burial Grounds**

Revised: December 15, 2011

**VPU Incremental Material Retrieval**

For the incremental material retrieval alternative, the processed VPU will not be grouted and the material will be removed in small batches (approximately 50 gallons or less) and disposed of in 55 gallon drums. WCH is designing an enclosure that will be placed over a VPU during the extraction process. Operations for removing material from the VPU will be performed in this enclosure which will be maintained under negative pressure to prevent radioactive material from escaping to the environment.

**SCOPE SUMMARY**

**Equipment, Labor, Supervision & Material**

The Subcontractor will provide the equipment, labor, supervision, materials and supplies necessary to complete all aspects of the work scope. No electrical power is available at the VPU field; the Subcontractor will provide necessary utilities, including portable power and water supply/delivery.

**Site Preparation**

The VPU field at each site will be reasonably flat, level, and covered with approximately one foot (1') of crushed rock prior to Subcontractor mobilization. The Subcontractor will provide equipment matting and other site preparation required to perform the work. Space for equipment and material staging and lay-down will be provided at each site by WCH.

**Casing Installation**

Both remediation alternatives include advancing a 48" casing around the VPU. Casing installation options include vibratory hammer, oscillation, rotation or other approved method.

**VPU Processing**

Remediation alternatives include processing the contents of the 48" casing, including the VPU contents and surrounding soil contained in the annulus between the VPU and the interior wall of the casing. A "Proof-of-Concept Demonstration" was conducted successfully (all containers were destroyed

**Pre-Qualification Questionnaire  
for  
VPU Remediation at 618-10 & 618-11 Burial Grounds**

Revised: December 15, 2011

and contents were sufficiently mixed) using a spiral rock auger advanced at a very slow rate (approximately 1” per minute). WCH will provide the design for one (1) or more augers for use by the Subcontractor; alternative auger designs will be considered.

**VPU Grouting**

The monolith alternative will require solidifying the processed material within the casing to achieve a concreted matrix with sufficient strength to be extracted intact from the surface. Grouting can be done during initial processing or as a separate step. The 48” casing will be installed with sufficient above-ground volume to accommodate the grout material, but all material must be contained within the casing; any spill of material out of the casing will be considered as a major infraction with significant potential consequences, including termination for cause.

**VPU Removal & Transport**

Monoliths will be extracted using a casing oscillator, rotator or approved method; no vibratory extraction will be allowed. Extracted monoliths will be transported to a staging area adjacent to the site to be prepared for transport to disposal.

If incremental material retrieval is required, the Subcontractor will provide the equipment and labor necessary to extract material from a processed over-casing in <50 gallon volumes, releasing each extracted batch within the retrieval enclosure system to be provided by WCH. Subcontractor personnel will perform work through loading drums on a trailer for transport to disposal, including mixing and stabilizing the contents of drums to form a homogeneous concreted waste form.

**Related Requirements**

**1. Training**

All Subcontractor personnel must have current training for Hanford. Field and supervisory personnel must be participants of the Beryllium Workers Program.

**Pre-Qualification Questionnaire  
for  
VPU Remediation at 618-10 & 618-11 Burial Grounds**

Revised: December 15, 2011

**2. Project Team**

The Subcontractor will provide a project management team capable of effectively scheduling, controlling, and reporting on project work. The Subcontractor's project management team will coordinate closely with WCH project management to ensure that milestones are met, that potential problems are identified early, and that corrective measures are developed and implemented in a timely manner.

**3. Capabilities**

The Subcontractor must be capable of, and ideally will have experience with, working in the tightly-controlled environment at Hanford or at other, similar DOE / DOD projects. Work on this project will be performed under comprehensive radiological controls, detailed procedures, extensive technical and management reviews, and other requirements related to performing work at a Department of Energy nuclear cleanup site. The Subcontractor must have a management team that can support and work within this environment, and it must be prepared for production rates that are much lower than those typically expected in a standard commercial environment.

**4. Safety Culture**

The Subcontractor must have a demonstrable and substantive safety culture with an explicit goal of zero injuries.

**5. Hanford Site Stabilization Agreement**

All craft work is subject to the Hanford Site Stabilization Agreement.

**Work to be performed by WCH**

The following will be provided by WCH with Subcontractor support as required:

**1. Integrated Work Control Program**

Integrated Work Control Program (IWCP) documents, including such documents as work packages and technical procedures. The purpose of IWCP documents is to clearly define each step of work and to provide a measurable means of ensuring that work is performed according to procedure. WCH will

**Pre-Qualification Questionnaire  
for  
VPU Remediation at 618-10 & 618-11 Burial Grounds**

Revised: December 15, 2011

prepare IWCP documents, and the Subcontractor will work with WCH planners and other staff to define specific procedures and processes necessary to perform their work.

**2. Radiation Monitoring & Control**

WCH will provide staff and equipment necessary to monitor radiological conditions and will establish the extent and type of radiation boundaries at all work locations.

**3. Shipping & Waste Disposal**

VPU and related materials shipping and waste disposal. WCH will provide staff, management, and systems required to comply with shipping and waste disposal requirements.

**4. Water Supply**

A source of water for filling Subcontractor-provided water trucks will be available at each Project site.

**5. Staging Area**

A staging and lay-down area will be provided for Subcontractor equipment and materials.

**6. Transport to Disposal**

WCH will provide the transport equipment and labor to move the monoliths and/or drums from the site to disposal.

**7. Retrieval Enclosure System**

WCH will provide the material retrieval enclosure and related equipment necessary to operate it.

**Pre-Qualification Questionnaire  
for  
VPU Remediation at 618-10 & 618-11 Burial Grounds**

Revised: December 15, 2011

**Anticipated Schedule**

WCH anticipates issuing a Request for Proposals to pre-qualified teams in 1<sup>st</sup> Quarter 2012 and to award the Subcontract in 2<sup>nd</sup> Quarter 2012. Following approval of submittals and subsequent mobilization, field work will begin with a series of demonstrations on “practice” VPUs installed by WCH just outside the current 618-10 site boundary. Actual remediation of VPUs at 618-10 is expected to begin in 4<sup>th</sup> Quarter 2012 and must be completed by November, 2013. Following completion of work at 618-10, the Subcontractor will move to 618-11 and begin work there in December, 2013.

**PRE-QUALIFICATION CRITERIA**

To be deemed pre-qualified to receive an RFP, Respondents must demonstrate and submit supporting documentation that supports the following minimum pre-qualification requirements:

**1. Experience with Similar Work**

Describe Respondent's overall ability and experience in performing geotechnical construction and other work similar to that described in "Scope Definition" above. Respondent must submit supporting documentation substantiating this experience. As a minimum this shall include a description of proposed team, past experience, and how that past experience will apply to responsibilities proposed on this subcontract. Additional information should include previous experience with innovative applications of geotechnical construction and other examples demonstrating the Respondents ability to perform in a non-standard environment.

**2. Self-Perform vs. Teaming Arrangements**

Respondent shall describe their approach to the project including project personnel by discipline, outside consultants, associates, or teaming arrangements. If Respondent foresees performing the work described in "Scope Definition" above as a joint venture or teaming arrangement, Respondent shall provide full and complete information on each of the participating firms, including the proposed working organization / relationship, division of responsibility with particular emphasis placed on the ability of the team to satisfy the evaluation criteria and meet the requirements of the work described above.

**Pre-Qualification Questionnaire  
for  
VPU Remediation at 618-10 & 618-11 Burial Grounds**

Revised: December 15, 2011

**3. Equipment Capability & Capacity**

Describe the type and capacity of equipment the Respondent has available for use in performing the scope of work. Equipment descriptions should include the range of equipment available, the approximate age and condition of the equipment, and other information as necessary to demonstrate that the Respondent has the appropriate equipment that will be required to complete the scope of work.

**4. Procurement / Subcontract Requirements**

Respondent shall describe their approach to the Project including project personnel by discipline, outside consultants, associates, or teaming arrangements. If Respondent foresees performing the work described in "Scope Definition" above as a teaming arrangement, Respondent shall provide information on each of the team members, including the proposed working organization, their relationship to each other including division of responsibilities.

WCH is dedicated to support the use of small business in all procurements. Due to the complexity of the scope of work and the large anticipated value of this Subcontract, this procurement is intended to be awarded without reserve to specific business classification. However, respondents are requested to provide their North American Industry Classification System (NAICS) code and business size representations (i.e. Small, Small Disadvantaged, Women-Owned, Veteran-Owned, Service-Disabled Veteran-Owned, HUB Zone Small) for both themselves and their team members if a teaming arrangement is being given consideration.

Respondent must list the highest value for a Miller Act performance bonding your company has obtained during the last thirty-six (36) months and what is the highest value for a Miller Act Bond would your organization be capable of providing.

Respondents must be capable of providing the following minimum insurance coverage:

- Workers' Compensation shall be maintained as required by any applicable law;
- Liability shall be not less than \$500,000 each accident;
- Professional Liability Insurance not less than \$1,000,000;

**Pre-Qualification Questionnaire  
for  
VPU Remediation at 618-10 & 618-11 Burial Grounds**

Revised: December 15, 2011

- Commercial General Liability with combined single limits of liability for bodily Injury, property damage and personal injury shall be not less than: \$500,000 Each Occurrence Limit; \$500,000 Personal Injury Limit; \$1,000,000 Products-Completed Operations Aggregate Limit; \$1,000,000 General Annual Aggregate Limit; and
- Automobile Liability with combined single limits of liability for bodily injury or property damage shall be not less than: \$500,000, any one occurrence.

Respondents shall affirm that their company is not listed on the U.S. Government's List of Parties Excluded from Federal Procurement and confirm that they are not aware of any current action which would preclude their company for participating in this project.

**5. Quality Assurance Requirements**

Respondents shall describe their capabilities and understanding to meet the requirements of DOE Order 414.1B.

**6. Safety & Health Program Requirements**

Respondents shall describe their capabilities and understanding to develop and execute safe operating procedures.

Respondent shall submit supporting documentation on Respondent's Experience Modification Rate (EMR) evidencing that Respondent's EMR does not exceed 1.0, has been maintained for the previous three (3) years, and shows an improving trend in safety performance. Obtain from your insurance agent / broker / carrier, your intrastate EMRs for the last three (3) rating periods. If you do not have an intrastate rating, obtain your interstate EMRs.

Safe operating procedures are of specific importance and WCH requests Respondents describe their understanding and knowledge supporting this effort.

Respondents shall submit an uncontrolled copy (electronic copy acceptable) their Safety & Health Program demonstrating their ability to meet these requirements.

Respondent are reminded that any lower-tier Subcontractors are subject to these same requirements.

**Pre-Qualification Questionnaire  
for  
VPU Remediation at 618-10 & 618-11 Burial Grounds**

Revised: December 15, 2011

**7. Past Performance & Experience**

Respondent shall describe similar projects, providing a minimum of three (3) examples for projects of a similar nature completed within the last five (5) years. The descriptions provided shall include, at a minimum:

- Reference Name, Address, Contact Name & Telephone Number
- Period of Performance (start to finish dates)
- Subcontract Type (i.e., lump sum, unit rate, cost reimbursable)
- Subcontract Value at Award and Completion
- Claims Processed (description, value and impact to schedule)

**8. DOE & Federal Government Experience**

Respondent shall demonstrate experience and interface with the Department of Energy or other Federal Government entities. Respondent is requested to briefly describe the work and durations current or previously performed for Federal or State Agencies.

**9. Local, State & Federal Regulations**

Respondent shall demonstrate experience in working with all local, state and federal regulations / permits required to execute this project.