

## **Task Order 11-002**

### **Independent Assessment of the 618-10 Burial Ground Characterization**

The contractor shall provide the following services, as requested and as described below. The Contractor shall perform these services in accordance with Contract DE-AC06-09RL14728, C.2.5, Portfolio Management, meet milestones and delivery schedules as established by the Federal Project Director, River Corridor Closure Project and/or his designee, and comply with established criteria.

### **Statement of Work**

#### **Background**

The 618-10 and 618-11 burial grounds were operated for disposal of TRU and low-to-high activity waste generated before 1970 in support of the defense production of plutonium at the Hanford site. Although documentation of materials placed in the burial grounds is incomplete, available information indicates that fission products, plutonium, and uranium wastes were placed in the burial grounds.

The 618-10 burial ground covers approximately 2.1 hectares (5.2 acres) and lies approximately 3.62 km (2.25 miles) from the Columbia river. The burial ground operated between 1954 and 1963, receiving primarily radioactive waste in some form. The burial ground contains an estimated 38 drum equivalents (8.4 cubic meters [11 cubic yards]) of remote handled (RH) TRU waste (estimated to contain 1-2 kg of plutonium) and no recorded Contact Handled (CH) waste. The burial ground consists of 12 trenches (50-320 ft long by 40 to 70 feet wide) and 94 vertical pipe units. Approximately 5-10 ft of soil covers the waste. The vertical pipe units received RH or high-activity wastes. Each unit consisted of five 55 gallon drums welded end to end and stood vertically 15 ft in height. In a recent characterization effort cone penetrometer techniques were used to drive a shaft beside the VPU and a string of various radiation detection instrumentation was lowered into the shaft. Measurements were recorded at various depths.

#### **Task 1**

Evaluate any recent technical assessments performed on the characterization work and the characterization report issued by the prime contractor WCH or their subcontractor Northwind. Perform an independent assessment using the following criteria as a starting point:

- What was the basis for selection of the instrumentation used for nonintrusive characterization?
- Training of operators/quality of the data obtained.
- Did the WCH subcontractor (North Wind) meet the conditions specified in their contract with WCH (ref X), e.g., were the non-destructive assay (NDA) methods effective in determining whether waste was RH/CH TRU, SNF, or meets ERDF criteria?
- Review the characterization report provided by NorthWind and make a determination whether the process should be used for similar activities at the 618-11 burial ground? Make

recommendations for changes to the process that would enhance the results obtained or for portions that should be eliminated.

- Also, make a determination as to whether the data generated from the NDA characterization be used to change or guide the remediation effort.

## Task 2

Prepare an executive level presentation of the results of the independent assessment and a comprehensive final report and present to the RCCP Federal Project Director.

## Deliverables

- Executive level presentation (power-point). Due date: January 28, 2011
- Comprehensive final report meeting the criteria given in Task 1. Due date: January 28, 2011.

Period of performance will be **December 20, 2010 through January 28, 2011**. Follow-up activities may be required and will be addressed separately.