

**CATEGORICAL EXCLUSION FOR THE SIDEWALL CORING  
OF SINGLE-SHELL TANK 241-A-106, 200 EAST AREA,  
HANFORD SITE, RICHLAND, WASHINGTON**

**Proposed Action**

The U.S. Department of Energy, (DOE) Office of River Protection (ORP) and the Richland Operations Office (RL) propose to perform a sidewall coring study on single-shell tank (SST) 241-A-106, in FY 2010 to 2011.

**Location of Action**

The work will take place at SST 241-A-106, located within the 200 East Area, Hanford Site, Richland, Washington.

**Description of Proposed Action**

Concrete coring of the sidewall of a SST is necessary to gain valuable data regarding the current structural integrity. SST 241-A-106 will be sidewall cored. This tank has been selected because of its thermal history. The work has been split up into the following three phases:

Phase I: preliminary sidewall coring activities will consist of developing a plan which will include, but is not limited to:

1. Identification of the desired location of the SST for sidewall coring.
2. Identification of core size (diameter) to be removed from the SST (comply with ASTM C 42 and restrictions resulting from concrete wall thickness and rebar spacing/location)
3. Selection of drilling technique used for removing the concrete core samples.
4. Determination of appropriate access needed to perform SST sidewall coring.
5. Determination of all necessary personnel to complete sidewall coring activities.
6. Determination of preliminary cost estimates for completion of SST sidewall activities.
7. Determination of a schedule for detailed sidewall coring activities.

Phase II: detailed planning which will include, but is not limited to:

1. A demonstration phase of sidewall coring activities (water control, control of drilling angle, and drilling depth)
2. Construction drawings for excavation and drilling activities.
3. Construction specifications for sidewall coring activities, which will include, but are not limited to:
  - a. Information to accompany drawings for construction.
  - b. Methodology for tracking core samples with respect to depth of sidewall.
  - c. Proper handling of possibly contaminated samples.

- d. Stop-work conditions and resolutions for multiple conditions adverse to safety and quality. These conditions will include consideration of inadvertent cutting of sidewall rebar.

Phase III: the actual sidewall coring work will include, but is not limited to:

1. The sidewall coring will be performed through the haunch (dome-wall intersection), down the full height of the SST sidewall and into, but not through the wall foundation.
2. The sidewall coring, as much as can be practically allowed, will not drill through or cut any rebar in the SST sidewall, particularly horizontal (hoop) rebar.
3. The sidewall of SST 241-A-106 will be cored to secure concrete specimens which will be subsequently tested to determine desired mechanical properties (e.g. compressive strength, elastic modulus, Poisson's ratio, etc) of the SST concrete.
4. In addition to the concrete testing, a non-destructive evaluation (NDE) of the samples will occur both before and after destructive testing.
  - a. NDE of the samples will include, but is not limited to visual inspection.

### **Categorical Exclusions to be Applied**

The following categorical exclusions (CXs) are listed in 10 CFR 1021, "National Environmental Policy Act Implementing Procedure," Subpart D, Appendix B, published in the Tuesday, July 9, 1996, 61 Federal Register 36222:

- A9 Information gathering (including, but not limited to, literature surveys, inventories, audits), data analysis (including computer modeling), document preparation (such as conceptual design or feasibility studies, analytical energy supply and demand studies), and dissemination (including, but not limited to, document mailings, publication, and distribution; and classroom training and informational programs), but not including site characterization or environmental monitoring. (Also see B3.1.)
- B3.1 Onsite and offsite site characterization and environmental monitoring, including siting, construction (or modification), operation, and dismantlement or closing (abandonment) of characterization and monitoring devices and siting, construction, and associated operations of a small-scale laboratory building or renovation of a room in an existing building for sample analysis. Activities covered include, but are not limited to, site characterization and environmental monitoring under CERCLA and RCRA. Specific activities include, but are not limited to:
- (a) Geological, geophysical (such as gravity, magnetic, electrical, seismic, and radar), geochemical, and engineering surveys and mapping, including the establishment of survey marks;
  - (b) Installation and operation of field instruments, such as stream-gauging stations or flow-measuring devices, telemetry systems, geochemical monitoring tools, and geophysical exploration tools;

- (c) Drilling of wells for sampling or monitoring of groundwater or the vadose (unsaturated) zone, well logging, and installation of water-level recording devices in wells;
- (d) Aquifer response testing;
- (e) Installation and operation of ambient air monitoring equipment;
- (f) Sampling and characterization of water, soil, rock, or contaminants;
- (g) Sampling and characterization of water effluents, air emissions, or solid waste streams;
- (h) Installation and operation of meteorological towers and associated activities, including assessment of potential wind energy resources;
- (i) Sampling of flora or fauna; and
- (j) Archeological, historic, and cultural resource identification in compliance with 36 CFR part 800 and 43 CFR part 7.

B3.11 Outdoor tests and experiments for the development, quality assurance, or reliability of materials and equipment (including, but not limited to, weapon system components), under controlled conditions that would not involve source, special nuclear, or byproduct materials. Covered activities may include, but are not limited to, burn tests (such as tests of electric cable fire resistance or the combustion characteristics of fuels), impact tests (such as pneumatic ejector tests using earthen embankments or concrete slabs designated and routinely used for that purpose), or drop, puncture, water-immersion, or thermal tests.

### Eligibility Criteria

Since no extraordinary circumstances that may affect the significance of the environmental effects of the proposal have been identified, the proposed activity meets the eligibility criteria of 10 CFR 1021.410(b), as shown in the following table. The proposed activity is not “connected” to other actions with potentially significant impacts [40 CFR 1508.25(a)(1)], or with cumulatively significant impacts [40 CFR 1508.25(a)(2)], and is not precluded by 10 CFR 1021.211.


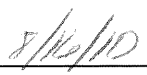
The “Integral Elements” of 10 CFR 1021 are satisfied as discussed below.

<b>INTEGRAL ELEMENTS, 10 CFR 1021, SUBPART D, APPENDIX B</b>	
<b>Would the Proposed Action</b>	<b>Comment or Explanation</b>
Threaten a violation of applicable statutory, regulatory, or permit requirements for environmental, safety, and health, including requirements of DOE and/or Executive Orders?	No applicable laws, regulations, or orders would be violated by the proposed actions.
Require siting and construction or major expansion of waste storage, disposal, recovery or treatment facilities (including incinerators)? The proposal may include categorically excluded waste storage, disposal, recovery or treatment actions.	Action does not require siting and construction of waste storage, disposal, recovery or treatment facilities.
Disturb hazardous substances, pollutants, contaminants, or CERCLA-excluded petroleum and natural gas products that pre-exist in the environment such that there would be uncontrolled or unpermitted releases?	There will be no uncontrolled or unpermitted releases associated with the proposed actions.

<b>INTEGRAL ELEMENTS, 10 CFR 1021, SUBPART D, APPENDIX B</b>	
<b>Would the Proposed Action</b>	<b>Comment or Explanation</b>
Adversely affect environmentally sensitive resources including but not limited to: <ul style="list-style-type: none"> <li>(i) Property (e.g., sites, buildings, structures, objects) of historic, archeological, or architectural significance designated by Federal, state, or local governments or property eligible for listing on the National Register of Historic Places.</li> <li>(ii) Federally-listed threatened or endangered species or their habitat (including critical habitat), Federally proposed or candidate species or their habitat or state-listed endangered or threatened species or their habitat.</li> <li>(iii) Wetlands regulated under the Clean Water Act (33 USC 1344) and floodplains.</li> <li>(iv) Federally- and state-designated wilderness areas, national parks, national natural landmarks, wild and scenic rivers, state and Federal wildlife refuges, and marine sanctuaries.</li> <li>(v) Prime agricultural lands.</li> <li>(vi) Special sources of water (such as sole-source aquifers, wellhead protection areas, and other water sources that are vital in a region).</li> <li>(vii) Tundra, coral reefs, or rainforests?</li> </ul>	None of the environmentally sensitive resources listed (i through vii) will be adversely affected by the proposed actions. <ul style="list-style-type: none"> <li>(i) Proposed action does not adversely affect historical/cultural resources</li> <li>(ii) Proposed action does not adversely affect ecological resources</li> <li>(iii) N/A</li> <li>(iv) N/A</li> <li>(v) N/A</li> <li>(vi) N/A</li> <li>(vii) N/A</li> </ul>

Documentation for each use of the categorical exclusions would be maintained according to contractor procedures and DOE requirements.

Compliance Action: I have determined that the proposed action meets the requirements for the referenced Categorical Exclusions. Therefore, using the authority delegated to me by DOE Order 451.1B, Change 1, I have determined that the proposed activities may be categorically excluded from further NEPA review and documentation.

Signature/Date:    
 R. W. Russell III  
 Hanford NEPA Compliance Officer