

**CATEGORICAL EXCLUSION FOR  
SITE CHARACTERIZATION AND ENVIRONMENTAL MONITORING,  
HANFORD SITE, RICHLAND, WASHINGTON**

**Proposed Action:** The U.S. Department of Energy (DOE), Richland Operations Office (RL) proposes to perform site characterization and environmental monitoring activities.

**Location of Action:** On and off the Hanford Site, Richland, Washington

**Description of Proposed Action:** The proposed action consists of both intrusive and non-intrusive site characterization and environmental monitoring activities on and off the Hanford Site. Intrusive activities include the installation and monitoring of groundwater and vadose zone wells, groundwater tracer tests, and the excavation and sampling of test pits on the Hanford Site. Non-intrusive activities consist primarily of site surveying techniques and collection of environmental media.

Groundwater and vadose zone wells and test pits would be installed as needed, in and near Resource Conservation and Recovery Act (RCRA) and Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) facilities, operable units, and waste management facilities, in compliance with DOE Order 5480.4, Federal Regulations (e.g., Title 40 Code of Federal Regulations [CFR] 264 and 265, Subpart F) and Washington Administrative Code (WAC) 173-160. The monitoring wells and test pits would detect contaminant releases to the groundwater and vadose zone, facilitate the remediation and closure phases of each site, and ensure that remediation is effective.

The proposed activities include well drilling, test pit excavation, construction, development, subsequent sampling and analysis, and final closure. Drilling, constructing, and monitoring would be performed in accordance with approved and appropriate procedures. Drilling methods would primarily be standard cable tool, auger, cone penetrometer, sonic drilling, or rotary drilling technologies. When the wells are determined to be no longer necessary, wells would be abandoned in accordance with WAC 173-160.

Wells and test pits would not be sited on environmentally sensitive areas, such as: 100-year floodplains, jurisdictional wetlands (based in part on the National Wetlands Inventory compiled by the U.S. Department of the Interior), special sources of water, archaeological sites, critical habitats, property listed or eligible for listing on the National Register of Historic Places, or areas having a special environmental designation such as wild and scenic rivers, wildlife refuges, or national natural landmarks without additional National Environmental Policy Act (NEPA) documentation.

Site characterization and environmental monitoring activities that are either non-intrusive or would involve minimal small-scale intrusion would also be included in this action. These activities would include general geophysical, radiological and chemical, meteorological, cultural and biological surveys, sampling, transport of samples, and analytical techniques, including the following:

- Geophysical techniques would include, but not be limited to, methods such as electro-magnetic surveys, site surveying and mapping, soil sampling,

ground penetrating radar surveys, seismic monitoring, telemetry, and borehole spectral gamma logging techniques.

- Radiological and chemical techniques would include, but not be limited to, methods such as gamma scintillation, thermo-luminescent dosimetry, groundwater tracer studies, soil gas surveys, x-ray fluorescence, radiological surveys, and sampling, transport, and laboratory analysis of environmental samples from existing well and borehole networks.
- Meteorological data gathering techniques would include, but not be limited to, air emissions monitoring, installation of weather stations, and other climatological monitoring.
- Site characterization for archaeological and historical resources would be in compliance with 36 CFR part 800, Protection of Historic and Cultural Properties and 43 CFR part 7, Protection of Archaeological Resources or any programmatic agreement. This would include activities such as facility inspections, ground surveys, inventory of archaeological resources, exploratory test pits and trenches, core and auger tests.
- Biological characterization and environmental monitoring would include, but not be limited to, activities such as field surveys and biotic sampling (agricultural products, flora, and fauna). Wildlife and other biotic sampling would be conducted under applicable state and federal permits. Environmental monitoring would include river stage monitoring, transects, flow measurements, surface water and sediment sampling.

All contaminated materials (e.g., drill rig, equipment and tools, drill cuttings, personal protective equipment, decontamination fluids) would be dispositioned in a manner consistent with applicable regulations. Contaminated materials from well drilling activity either would be stored within a designated onsite storage area until cleanup of the operable unit, or removed from the well site and disposed or decontaminated in accordance with regulatory requirements. Final disposal of waste would likely be in the Hanford Site Central Waste Complex or other appropriate disposal unit. The activities addressed in this CX would not occur on other DOE Complex sites without obtaining appropriate NEPA documentation from the applicable DOE Field Office.

#### Categorical Exclusion to be Applied:

The following Categorical Exclusion (CX) is listed in 10 CFR 1021, "National Environmental Policy Act Implementing Procedures," Subpart D, Appendix B, published in the Tuesday, July 9, 1996, 61 *Federal Register* 36222:

- 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 operation 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."

#### ELIGIBILITY CRITERIA

Since there are no extraordinary circumstances that may affect the significance of the environmental effects of the proposal, 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:

**INTEGRAL ELEMENTS 10 CFR 1021, SUBPART D, APPENDIX B**

**Would the Proposed Action:**

**Comment or explanation:**

Threaten a violation of applicable statutory, regulatory, or permit requirements for environment, 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.

No, the proposed action would not require the siting construction or major expansion of waste storage, disposal, recovery or treatment facilities.

Disturb hazardous substances, pollutants, contaminants, or CERCLA-excluded petroleum and natural gas products that preexist in the environment such that there would be uncontrolled or unpermitted releases?

No preexisting hazardous substances, pollutants, contaminants, or CERCLA-excluded petroleum and natural gas products would be disturbed in a manner that would result in an uncontrolled or unpermitted release.

Adversely affect environmentally sensitive resources including but not limited to:

No environmentally sensitive resources will be adversely affected. When appropriate, a sensitive resources review would be performed (e.g. cultural, archeological, and biological) to ensure that sensitive resources are not adversely affected.

(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

(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

(iii) Wetlands regulated under the Clean Water Act (33 U.S.C. 1344) and floodplains

(iv) Federally- and state-designated wilderness areas, national parks, national natural landmarks, wild and scenic rivers, state and Federal wildlife refuges, and marine sanctuaries

(v) Prime agricultural lands

(vi) Special sources of water (such as sole-source aquifers, wellhead protection areas, and other water sources that are vital in a region)

(vii) Tundra, coral reefs, or rainforests?

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

Signature/Date: Paul F. X. Dunigan, Jr. 4/17/87  
Paul F. X. Dunigan, Jr.  
RL NEPA Compliance Officer

Attachments:  
Checklist Summarizing Environmental Impacts

Distribution w/attach:  
B. D. Dixon, DYN  
S. Herres, SID  
D. W. Lloyd, EAP  
L. A. Mihalik, CHI  
R. C. Phillips, PNNL  
F. A. Ruck, FDH  
K. M. Thompson, RP  
A. G. Weiner, RUST

## Checklist to Attachment 1

The following checklist summarizes environmental impacts that were considered:

### IMPACT TO AIR

Would the proposed action:		YES	NO
1	Result in more than minor and temporary gaseous discharges to the environment?		X
2	Release other than nominal and temporary particulates or drops to the atmosphere?		X
3	Result in more than minor thermal discharges?		X
4	Increase offsite radiation dose to >0.1 mrem (40 CFR 61 Subpart H)?		X

### IMPACT TO WATER

Would the proposed action:		YES	NO
5	Discharge any liquids to the environment?	X	
6	Discharge heat to surface or subsurface water?		X
7	Release soluble solids to natural waters?		X
8	Provide interconnection between aquifers?	X	
9	Require installation of wells?	X	
10	Require a Spill Prevention Control and Countermeasures Plan? (40 CFR 112.1 & 761)		X
11	Violate water quality standards (WAC-173-200, Table 1)?		X

### IMPACT TO LAND

Would the proposed action:		YES	NO
12	Conflict with existing zoning or land use?		X
13	Involve hazardous, radioactive, PCB, or asbestos waste?	X	
14	Cause erosion?		X
15	Require an excavation permit?	X	
16	Disturb an undeveloped area?	X	

### GENERAL

Would the proposed action:		YES	NO
17	Cause other than a minor or temporary increase in noise level?		X
18	Make a long-term commitment of large quantities of nonrenewable resources?		X
19	Require new utilities or modifications to utilities?	X	
20	Use pesticides, carcinogens, or toxic chemicals?	X	
21	Require radiation work permit?	X	
22	Occur on Arid Lands Ecology Reserve or Wahluke Slope?		X

The items marked "yes" in the Environmental Impact Checklist located above, are addressed in the following paragraphs:

5. Well development and sampling would require purging of groundwater. Depending upon the location of the well, purgewater would be discharged to the ground or contained in compliance with the Strategy for Handling and Disposing of Purgewater at the Hanford Site, Washington.

8. Well development in cased wells drilled deeper than unconfined aquifer has the potential for interconnection.
9. Groundwater and vadose zone wells and test pits might be installed as needed in accordance with state and federal regulations to detect contaminant releases to the environment, facilitate the remediation and closure phases of each site, and ensure that remediation is effective.
13. Small quantities of hazardous and nonhazardous solid waste, radioactive, Polychlorinated Biphenyls, and/or asbestos waste might be created by these actions. All waste would be handled and disposed of in accordance with contractor procedures and standards, federal and state regulations, and DOE orders and guidance. Waste would be dispositioned in existing Hanford Site waste management units, or approved permitted offsite facilities.
15. An excavation permit prior to starting work would be required which addresses biological and cultural resources for each instance in which the ground would be disturbed.
16. Intrusive characterization efforts such as groundwater monitoring wells or test pits might be located in undeveloped areas, if determined necessary for reasons such as to determine regulatory compliance or to confirm modeled groundwater contaminant flows.
19. Laboratory and field operations may require minor alterations of existing utilities.
20. Some characterization, testing, and laboratory actions may involve the use of toxic chemicals. Standard laboratory safety practices would be followed.
21. In the event that work would occur in areas where radiation work permits would be required, workers would be properly trained and would follow all applicable regulations and safety requirements. Work would be governed by the As Low As Reasonably Achievable principles, applicable state and federal regulations, DOE Orders, and contractor guidelines.

#### SENSITIVE RESOURCES REVIEWS

Cultural, Biological, Historical, Archeological, Wetlands and Floodplains Resource Reviews would be conducted for each use of the CX as appropriate wherever the work might impact such resources. Documentation for each use of the CX would be maintained according to contractor procedures and DOE requirements.