CATEGORICAL EXCLUSION (CX) FOR SITE CHARACTERIZATION, INVESTIGATION, AND ENVIRONMENTAL MONITORING ACTIVITIES CX-GEN-004

The DOE Oak Ridge Operations Office (ORO) proposes to conduct site characterization and monitoring, air and stack effluent monitoring, plant and animal sampling, surface water sampling, and actions that would include but not be limited to geological, geophysical, geochemical, engineering surveys, and mapping. Also, the proposed actions would be used to assess the soil and subsurface conditions in proposed construction projects, monitor and characterize groundwater flow, obtain data on aquifers, assess active and inactive waste management areas, and assess subsurface contaminated facilities that are potential sources of release to the environment.

The proposed actions would take place at DOE-owned facilities on the DOE Oak Ridge Reservation (ORR) at Oak Ridge, Tennessee; the Portsmouth Gaseous Diffusion Plant near Piketon, Ohio; the Paducah Gaseous Diffusion Plant near Paducah, Kentucky; the Weldon Spring Remedial Action Project near Weldon Spring, Missouri; and the Thomas Jefferson National Accelerator Facility at Newport News, Virginia. In addition, these actions might take place at other DOE-ORO–operated facilities (e.g., Formerly Utilized Site Remedial Action Program sites) and ancillary areas associated with these sites, programs, and projects.

As required by agreements among DOE, the Environmental Protection Agency, and the affected states, a variety of characterization actions would be performed to determine the presence or nature and extent of environmental contamination at the referenced locations. Characterization under these agreements would be done in accordance with applicable regulatory drivers, such as the Resource Conservation Recovery Act (RCRA), the Atomic Energy Act, and/or state laws. These laws require monitoring and investigation of all environmental media that might have been affected by waste that was either treated, stored, or disposed of at the sites.

A variety of investigation/characterization actions would be performed to obtain geological, geophysical, and geochemical data and to determine the presence or nature and extent of environmental contamination. Actions would include collection and analysis of samples and interpretation of the data. Samples would be analyzed for site-specific parameters including (but not limited to) pH, conductivity, dissolved oxygen, metals, mercury, lead, volatile organics, semivolatile organics, polychlorinated biphenyls, asbestos, uranium, and various other radiological analyses of concern. Specific actions might include (but would not be limited to) the following:

1. Drilling of boreholes to obtain subsurface core samples. Core materials might be characterized in the field, archived for later analysis, or sampled for contamination.

2. Collection and analysis of surface soil samples.

3. Installation and development of long-term or short-term groundwater monitoring wells. Groundwater wells and temporary piezometers would be installed to monitor and characterize groundwater flow. Well installation would include soil and bedrock coring and sampling, well drilling, construction, and development of groundwater investigation and monitoring of wells (including vadose zone wells and installation). Construction and development would include (1) emplacement of well casings, screens, and annular seals and (2) construction of the concrete pad of the well, protective posts, and access road, if needed. Groundwater monitoring wells would be constructed in accordance with RCRA-quality requirements and would include seals to prevent

infiltration of surface water and mixing of groundwater. Temporary piezometers (simple well screens without filter packs and seals) could be used for some characterization. Piezometers would be used only in shallow formations where mixing of groundwater due to penetration of the borehole would be of no concern. Wells and piezometers would be periodically purged and sampled for groundwater contamination. Aquifer testing would be conducted at some wells.

4. Well plugging and abandonment (including inspection and sampling of wells to verify location, method of construction, and current conditions) and purging water, as required. Well plugging and abandonment would take place using a variety of methods such as casing removal, overdrilling, grout filling, etc. Minor excavation around wellheads might be required prior to commencement of plugging and abandonment actions.

5. Well plugging and abandonment that would include (1) decommissioning groundwater investigation or monitoring wells that have been damaged or destroyed or (2) wells that are a hindrance to construction activities or environmental restoration projects.

6. Installation of water-level monitoring equipment at wells and surface water stations. The latter might require construction of flumes/gaging stations within stream channels.

7. Surface and groundwater sampling and analysis. Some surface water sampling sites would require installation of temporary, removable devices for measurement of surface water flow rates. Actions would include dye tracer studies.

8. Aquifer testing that would include slug, hydraulic packer, and pump testing to characterize hydraulic properties of aquifers. This would include installation of water-level recording devices into characterization, monitoring, and/or piezometric wells to determine vertical and horizontal groundwater flow directions.

9. Installation/relocation of Surface Water Hydrological Information Support Systems houses to surface water monitoring locations.

10. Geophysical exploration including electromagnetic profiling, seismic reflection/refraction, wireline geophysics, and ground penetrating radar.

11. Installation of shallow (< 1-foot–deep) soil gas monitors or insertion of soil gas withdrawal tubes.

12. Installation of rain gauges, evaporative pans, anemometers, or other meteorological monitoring equipment.

13. Construction and use of air monitoring stations to determine ambient air quality or potential air quality impacts during assessment actions.

14. Routine decontamination of equipment.

15. Sampling of solid waste streams including soil cuttings, personal protective equipment, and process equipment and process waste streams.

16. Sampling of nonendangered plant and animal species.

17. Sampling of stack effluent emissions.

18. Establishment of staging areas for purposes of conducting characterization work. Staging areas would be used for material and equipment laydown and as temporary satellite accumulation areas for wastes (in drums, tanks, or other containers) generated by characterization actions (e.g., drill cuttings and decontamination wastes). Staging areas would be operated and maintained in compliance with site waste management procedures for the duration of their operation and during setup of decontamination trailers/change houses. Staging areas would be established in previously disturbed areas (or in areas that would require minimal grading) and would be covered with gravel or gravel and geotextile material. Temporary access roadways (or temporary extensions of existing roadways) might also be constructed, as necessary. Clearing of low brush or removal of trees and shrubs with the goal of minimization of clearing might also occur.

19. Installation and operation of field instruments, such as flow-measuring devices.

20. Maintenance and modification of existing wells and structures (i.e., painting, minor surface grading/sloping, cleaning, tagging, etc.).

The proposed action would be evaluated by Pollution Prevention personnel for action options to reduce or eliminate generation of waste materials. Environmental samples would be analyzed in on-site or off-site laboratories. The analysis procedures often consume the sample. Should the sample not be consumed, the remaining sample would be acceptable for disposal in existing permitted/approved facilities in accordance with laboratory operating procedures. Any wastes generated would be acceptable for disposal in existing permitted/approved or exempt facilities.

The proposed actions that would take place on the ORR have been reviewed in accordance with the *Programmatic Agreement Among the Department of Energy Oak Ridge Operations Office, the Tennessee State Historic Preservation Officer, and the Advisory Council on Historic Preservation Concerning Management of Historical and Cultural Properties at the Oak Ridge Reservation* (PA) and found to be addressed in the PA under Section IV, Item R, Environmental Monitoring. If the proposed ORR actions would have an adverse effect on properties constructed before 1960 or properties included or eligible for inclusion in the National Register of Historic Places, DOE-ORO would consult with the State Historic Preservation Officer (SHPO) and initiate actions specified in procedures set forth in the Council's regulations beginning at 36 CFR Part 800.5(e)–800.6.

For sites other than the ORR, DOE-ORO would complete Section 106 reviews consistent with the ORR PA, as discussed above, until PAs are ratified for the respective sites. At such time, the sites would conduct Section 106 reviews under provisions of the site-specific PA.

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Should the proposed site characterization, investigation, and environmental monitoring actions involve ground disturbances at locations where an archeological survey had not been conducted or take place at previously disturbed locations where the potential exists to exceed the depth of previous ground disturbances, DOE-ORO would consult with the SHPO to determine whether an archeological survey would be warranted prior to initiating the proposed actions.

To ensure that sensitive resources are protected, existing maps, surveys and studies on threatened and/or endangered (T/E) species, wetlands and floodplains, and historically sensitive areas would be used to locate these areas. In addition, personnel responsible for identifying these resources would be consulted and, if warranted, additional surveys and walkovers would be conducted to confirm or update available information.

No known extraordinary circumstances would be associated with these actions that might affect the significance of the environmental effects of the proposed action based on past similar actions. These actions would not be connected to other actions with potentially significant impacts or related to other proposed actions with cumulatively significant impacts; they would meet the conditions that are integral elements of the classes of actions which may be categorically excluded from further National Environmental Policy Act (NEPA) documentation. Should the action not meet the conditions for CX consideration, a separate NEPA document would be prepared and submitted to DOE-ORO for review and approval.

Although an action might fall under the category of "site characterization, investigation, and environmental monitoring," a separate NEPA review would be performed and documented should the action or relocation/ cumulative effect of the action have the potential to result in an unusual or significant impact to the environment.

B3.1 is the applicable CX that covers the proposed action in DOE NEPA Implementing Procedures, 10 CFR 1021, Subpart D, Appendix B.

Based on my review of the above description, I have determined that the above actions are categorically excluded from further NEPA review and documentation. The DOE Contracting Officer Representative is responsible for oversight of the application of this determination.

David R. Allen
Oak Ridge Operations Office (ORO) Acting NEPA Compliance Officer

10-2-97
Date