EM U.S. Department of Energy
Office Of Environmental Management

Rev.2 (8/19/97)

COMPLIANCE AGREEMENT
BETWEEN
THE UNITED STATES DEPARTMENT OF ENERGY
AND
THE UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 4

TOXIC SUBSTANCES CONTROL ACT

IN RE: OAK RIDGE RESERVATION
OAK RIDGE, TENNESSEE

ALSO KNOWN AS
THE OAK RIDGE RESERVATION POLYCHLORINATED BIPHENYL
FEDERAL FACILITIES COMPLIANCE AGREEMENT
(ORR-PCB-FFCA)

Rev. 2 (8/19/97)

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Rev. 0 (10/28/96)

Acronyms

AEA	Atomic Energy Act of 1954
ANSI	American National Standards Institute
CERCLA	Comprehensive Environmental Response Compensation and Liability Act
CFR	Code of Federal Regulations
D&D	Decontamination and Decommissioning
DNR	Date Determined Not to be Radioactive
DOE	Department of Energy
DOE-HQ	Department of Energy - Headquarters
DOT	Department of Transportation
DRC	Dispute Resolution Committee
DRS	Date Removed From Service for Disposal
EPA	Environmental Protection Agency Region 4
EPA-HQ	Environmental Protection Agency-Headquarters
FFA	Federal Facility Agreement
FFCA	Federal Facilities Compliance Agreement
FR	Federal Register
GDP	Gaseous Diffusion Process
ORISE	Oak Ridge Institute for Science and Education

ORNL	Oak Ridge National Laboratory
ORO	Oak Ridge Operations
ORR	Oak Ridge Reservation
ORR-PCB-FFCA	Oak Ridge Reservation Polychlorinated Biphenyl Federal Facilities Compliance Agreement
OSHA	Occupational Safety and Health Act
PCB	Polychlorinated Biphenyl
ppm	parts per million
R&D	Research and Development
RCRA	Resource Conservation and Recovery Act
RMMA	Radioactive Materials Management Area
SEC	Senior Executive Committee
TSCA	Toxic Substances Control Act
UE-TSCA-FFCA	Uranium Enrichment Toxic Substances Control Act Federal Facilities Compliance Agreement
USC	United States Code

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I. Scope and Background

1. The United States Environmental Protection Agency (EPA), Region 4 and the United States Department of Energy (DOE) Oak Ridge Field Office (ORO), Oak Ridge, Tennessee, are the parties to this Oak Ridge Reservation Polychlorinated Biphenyl Federal Facility Compliance Agreement (ORR-PCB-FFCA or Agreement), entered into pursuant to Executive Order 12088, October 13, 1978 (43 FR 47707), and the Toxic Substances Control Act (TSCA), as amended, 15 U.S.C. § 2601 et seq. The Office of Management and Budget will be notified of this Agreement pursuant to its duty under Executive Order 12088 to assure compliance at federal facilities with the environmental laws.

2. This Agreement is entered into by the parties for the purpose of bringing DOE's Oak Ridge Reservation (ORR) into compliance with TSCA and its implementing regulations at 40 CFR Part 761, "Polychlorinated Biphenyls (PCBs) Manufacturing, Processing, Distribution in Commerce, and Use Prohibitions." This Agreement shall apply to and be binding upon EPA and DOE. This Agreement supplants the requirements established for the K-25 Site under the DOE-Headquarters (HQ)/EPA-HQ TSCA Federal Facility Compliance Agreement dated February 20, 1992, which addressed uranium enrichment operations at DOE's gaseous diffusion process (GDP) facilities in Portsmouth, Ohio; Paducah, Kentucky; and at the K-25 Site in Oak Ridge, Tennessee (UE-TSCA-FFCA). Nothing in this Agreement modifies the requirements for the Portsmouth and Paducah GDP facilities under the UE-TSCA-FFCA. This Agreement also supplants the requirements established for the K-25 Site, Y-12 Plant, and Oak Ridge National Laboratory (ORNL) under the DOE-HQ/EPA-HQ TSCA Federal Facilities Compliance Agreement which became effective August 8, 1996 (National Agreement). This Agreement transfers to EPA, Region 4, responsibility for the oversight of the TSCA compliance program for ORR outlined hereunder.

3. DOE shall take all reasonable and appropriate measures to ensure that third parties performing work required by this Agreement act in a manner consistent with the terms of this Agreement and in compliance with the requirements of TSCA and its implementing regulations.

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II. Jurisdiction

4. Executive Order 12088 was promulgated to ensure federal compliance with applicable pollution control standards. This Agreement constitutes a "plan" as described in Section 1-601 of Executive Order 12088 to achieve and maintain compliance at ORR with applicable requirements under TSCA, its implementing regulations, and Executive Order 12088. DOE is a department, agency or instrumentality of the executive branch of the federal government, and as such, DOE is included in the definition of a "person" within the meaning of 40 CFR § 761.3. DOE recognizes its obligation to comply with TSCA Section 6(e) and its implementing regulations as set forth in 40 CFR Part 761.

5. DOE consents to jurisdiction for purposes of entry and enforcement by EPA, as set forth in this Agreement, and for EPA responses to emergency situations regarding matters covered by this Agreement. DOE specifically reserves the right to contest any determinations, allegations, findings of fact, and conclusions of law in any proceeding other than actions brought by EPA to enter or enforce this Agreement. Nothing shall prevent any person from using for any purpose independent evidence that verifies the statement of facts contained herein.

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III. Definitions

6. Except as provided below or otherwise explicitly stated herein, the definitions provided in TSCA and its implementing regulations shall apply to the terms used in this Agreement.

7. Additional work shall mean work that is not described or scheduled in this document or its attachments.

8. Agreement shall mean this document and shall include all Attachments to this document referred to herein. All such Attachments shall be enforceable parts of this Agreement.

9. Date Determined Not To Be Radioactive (DNR) shall mean the date on which a PCB/radioactive waste is determined not to be radioactive as provided in Attachment I.

10. Date Removed From Service (DRS) shall mean the date a PCB item or PCB material was removed from service for disposal. For an authorized use, the date the item/material was determined to be no longer useful or serviceable will be the DRS. The DRS shall be considered equivalent to the date placed into storage as used in 40 CFR Part 761.

11. Days shall mean calendar days, except where otherwise specified. Any submittal or written statement of dispute that under the terms of this Agreement would be due on a Saturday, Sunday, or legal holiday shall be due the following business day.

12. Disposal shall be defined by 40 CFR § 761.3. Disposal by means of the K-25 Site TSCA Incinerator shall be in accordance with the requirements of 40 CFR § 761.70 and the K-25 Site TSCA Incinerator Approval to Dispose of PCBs.

13. DOE shall mean the United States Department of Energy, including its Oak Ridge Operations Office (DOE-ORO) and its authorized representatives.

14. DOE ORR-PCB-FFCA Coordinator shall mean the person designated by DOE to represent DOE in the implementation of this Agreement.

15. EPA shall mean the United States Environmental Protection Agency, including Region 4 and its authorized representatives.

16. EPA ORR-PCB-FFCA Coordinator shall mean the person designated by EPA to represent EPA Region 4 in the implementation of this Agreement.

17. Facility shall for purposes of R&D mean the K-25 Site, Y-12 Plant, Oak Ridge National Laboratory (ORNL), or other DOE ORR site with an individual EPA identification number.

18. Federal Facility Agreement (FFA) shall mean the "Federal Facility Agreement for the Oak Ridge Reservation" effective January 1, 1992 between EPA, DOE, and Tennessee Department of Environment and Conservation.

19. Fissionable Material shall mean radioactive material containing nuclides capable of sustaining a neutron induced fission (fission potentially produced by any energy neutron) chain reaction (criticality).

20. Liquid PCBs shall mean a homogeneous flowable material containing PCBs and no more than 0.5 percent by weight non- dissolved material.

21. Major Modification shall mean modifications to the obligations of this Agreement or its Attachments that change the fundamental obligations of any party in a significant manner, as shall be determined by EPA. Major modifications shall require written agreement between the EPA Region 4 and DOE-ORO signatories to this Agreement and the determination of whether a modification is a Major Modification shall be subject to the dispute resolution provisions of this Agreement.

22. Minor Modification shall mean a modification to the obligations in this Agreement or its Attachments that is not a Major Modification.

23. National Agreement shall mean the agreement between EPA-HQ and DOE-HQ effective August 8, 1996, regarding the one year storage for disposal requirement for PCBs.

24. Non-Liquid PCB Wastes shall mean PCB wastes that by visual inspection have no flowing liquids associated with them or that contain no liquids which pass through the filter when using the paint filter test method (EPA Method 9095 in "Test Methods for Evaluating Solid Waste" (SW-846)).

25. Oak Ridge Operations (ORO) shall mean DOE Operations that fall under the authority of the manager of Oak Ridge Operations, including, but not limited to, the K-25 Site, Y-12 Plant, Oak Ridge National Laboratory (ORNL), and the Portsmouth and Paducah GDP facilities.

26. Oak Ridge Reservation (ORR) shall mean the K-25 Site, Y-12 Plant, ORNL, Oak Ridge Institute for Science and Education (ORISE), the American Museum of Science and Energy, and the surrounding lands of the aforementioned facilities belonging to the United States under the jurisdiction of the DOE.

27. Oak Ridge Reservation Polychlorinated Biphenyl Federal Facilities Compliance Agreement (ORR-PCB-FFCA) shall mean the agreement concerning PCB compliance between EPA Region 4 and DOE-ORO (i.e., this Agreement).

28. Parties shall mean EPA and DOE.

29. PCB Annual Document shall mean the annual document log required to be maintained under 40 CFR § 761.180.

30. PCB/Radioactive Waste shall mean waste PCBs or PCB items mixed with radioactive materials and managed as a radioactive waste. PCB/radioactive/RCRA waste shall mean PCB/radioactive waste which may also be a hazardous waste under RCRA.

31. Radioactive Material shall mean material containing radionuclides classified as byproduct, source, or special nuclear materials (as defined by the Atomic Energy Act [AEA] of 1954, as amended) or naturally-occurring radioactive materials, residual radioactive materials, accelerator produced radioactive materials, or any material managed as (or made) radioactive.

32. Radioactive Materials Management Area (RMMA) shall mean an area in which the potential exists for contamination due to the presence of unencapsulated or unconfined radioactive material or an area that is exposed to beams or other sources of particles (neutrons, protons, etc.), capable of causing activation.

33. Remediation shall mean those activities performed pursuant to the ORR FFA under CERCLA authority, including, but not limited to: interim and final remedial actions, removal actions and decontamination and decommissioning.

34. Uranium Enrichment Toxic Substances Control Act Federal Facilities Compliance Agreement (UE-TSCA-FFCA) shall mean the agreement between EPA-HQ and DOE-HQ signed February 20, 1992.

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IV. Statement of Facts

35. The ORR is situated within the corporate limits of the city of Oak Ridge, in Anderson and Roane Counties, Tennessee, approximately 25 miles west of Knoxville, Tennessee. It covers approximately 34,516 acres.

36. ORR was established by the United States Atomic Energy Commission and has three major operating facilities: the Oak Ridge Y-12 Plant, Oak Ridge National Laboratory (ORNL), and the Oak Ridge K-25 Site. In addition, the Oak Ridge Institute for Science and Education (ORISE), formerly the Oak Ridge Associated Universities (ORAU), conducts research, training, and education programs on the ORR. Activities at ORR include research in the fields of energy, the environment, and basic science, fabrication of nuclear weapon components, manufacturing support for DOE weapons design laboratories, weapons dismantlement, processing of source and special nuclear material, highly enriched uranium storage and support for other DOE facilities, and other government and non-governmental entities. In addition, environmental restoration, facility decontamination and decommissioning, waste management, and waste disposal are major activities at ORR. DOE also owns the American Museum of Science and Energy in the City of Oak Ridge.

37. ORR is owned by DOE. The K-25 Site, Y-12 Plant, and ORNL are managed by contractors to DOE.

38. The K-25 Site GDP ventilation systems in buildings K-29, K-31, and K-33 were constructed in the 1940s and 1950s. Flanges between sections of the sheet metal ductwork were sealed using a PCB impregnated felt gasket material. The concentration of the PCBs in the gasket material was in excess of 3,000 ppm. The ventilation systems consist of an air supply portion (or supply side) and a motor exhaust side (exhaust side). The supply side brought cooler air to motors in the GDP buildings. The motor exhaust removed heat from the process motors through the motor exhaust side of the ventilation system. Over time, motor lubrication oil vaporized and was drawn into the motor exhaust side of the ventilation ducts. This lubrication oil condensed in the motor exhaust ductwork and saturated the felt gaskets between the flanges. Upon saturation, PCBs would leach from the gaskets and leak (drip) onto the GDP building floors, structures, and other infrastructure (such as electric cable trays) and various other equipment. Supply side gaskets are not typically prone to leak. On rare occasions, supply side gaskets near the juncture of the motor exhaust side of the system have leaked.

39. There are approximately 11,700 gaskets in over 12 miles of ventilation ductwork in the K-29, K-31, and K-33 GDP buildings, hereinafter referred to as the GDP buildings, at the K-25 Site. Gaskets on the motor exhaust side which have been found to leak have had troughs installed to catch drips and collect the oil in collection tubes (also known as a drip leg). When the GDP shut down in 1985, oil ceased to be supplied to the motors and thus no additional oil condenses in the ductwork. Portions of the ventilation systems are still operational and are still used on a routine basis to move air throughout the buildings.

40. The shut down of the GDP combined with the installation of troughs has reduced the incidence of drips to a very low number (18 in 1995). Other PCB spills from light ballasts also occasionally occur, but are also of limited volume. Inspection for new gasket leaks, maintenance of the troughing system, and clean up of PCB spills in the GDP buildings is provided in the troughing maintenance program. Air sampling required under the UE-TSCA-FFCA since 1992 has shown no results of 0.5 micrograms/m3 or greater of PCBs in any of the three GDP buildings. The low incidence of and volume of PCB spills and limited access to the buildings constitute a low potential for exposure to workers, the public, or release to the environment.

41. The K-29, K-31, and K-33 GDP buildings are maintained in a condition to safely facilitate current and future: D&D activities, storage and retrieval of spare parts/equipment for the Portsmouth and Paducah GDPs, and storage of various radioactive, RCRA, and PCB wastes. A project is underway to re- roof the K-31 building. Significant leaks have developed in this roof due to age and severe weather damage sustained during early 1993. Interim measures have been taken to prevent rainwater from reaching the ventilation system gaskets.

42. EPA and DOE have agreed that for the K-25 Site GDP buildings, removal of the PCB impregnated gaskets and decontamination of the ductwork may be delayed until remediation of the GDP buildings. The management and scheduling of remediation of the PCB impregnated gaskets and ductwork will be addressed through the environmental restoration program under the FFA.

43. DOE has notified EPA that PCB impregnated gaskets have been identified at the Y-12 Plant in a hood vent line in Building 9202, room 130. These gaskets are made of a rubber type material and contain greater than 50 ppm PCBs. The potential exists for similar gaskets to be present in other areas at the Y-12 Plant. These gaskets are not subject to oil saturation as noted in the K-25 Site GDP ventilation systems and have not been found to leach or leak PCBs.

44. DOE has notified EPA that PCB impregnated gaskets in excess of 50 ppm have been identified in Buildings 3001, 3042, and 3091 at ORNL. The potential exists for similar gaskets to be present in other areas at ORNL. These gaskets are not subject to oil saturation as noted in the K-25 Site GDP ventilation systems and generally have not been found to leach or leak PCBs. Other than the K-25 Site GDP ventilation system gaskets there have only been two instances of gasket leaks. These two leaks were in Building 3042 at ORNL and consisted of several drops of oil of approximately 100 ppm PCBs.

45. The K-25 Site has identified nine additional buildings which contain gaskets impregnated with PCBs at concentrations in excess of 50 ppm. These buildings are the K-25, K-631, K-633, K-704, K-731, K-761, K-1002, K-1303, and K-1401 buildings. The potential exists for similar gaskets to be present in other areas at the K-25 Site. These gaskets are not subject to oil saturation as noted in the K-25 Site GDP ventilation systems and have not been found to leach or leak PCBs.

46. DOE has notified EPA that lubricants historically used and still existing in supply fan bearings and motor operated valves located in the shutdown GDP buildings at the K-25 Site contain PCB concentrations in excess of 50 ppm. A few of the supply fans are still operating and contain historical lubricants with PCB concentrations in excess of 50 ppm. The potential exists for other equipment containing such lubricants from historical use to be present in other areas at the ORR facilities. New lubricants currently used to maintain equipment at the ORR do not contain PCB concentrations in excess of 50 ppm.

47. DOE has notified EPA that lubricants historically used and still existing in a 1956 vintage electric overhead traveling crane (30 ton capacity) in Building 7503 at ORNL contain PCB concentrations in excess of 50 ppm. The crane is used in the Molten Salt Reactor Experiment (MSRE). Building 7503 was constructed around the crane. The crane continues to be periodically used to support reactor functions. The crane is essential to the continued safe storage and subsequent handling of the spent nuclear fuel. Releases of lubricating greases from

the overhead crane probably have occurred over time, and were identified in March 1994. At that time, analyses of the lubricating grease on the interior walls and perimeter of the floor revealed PCB concentrations ranging from 342 ppm to 711 ppm. Personnel access to Building 7503 is strictly controlled due to radiological concerns.

48. DOE has notified EPA that an out of service hydraulic unit with PCB contamination greater than 50 ppm is being stored in Building 3012 ORNL. The unit has a built in containment system used to collect fluids for recirculation during the operation of the unit. The external contamination is a result of the design of the unit.

49. On April 1, 1993, DOE notified EPA-HQ that a heat transfer system weighing approximately 50,000 pounds located in Building K-1200 had been found to contain fluid with greater than 500 ppm PCBs. The system has a working capacity of approximately 650 gallons, and also has a 750 gallon capacity expansion reservoir tank. This heat transfer system has been drained and flushed twice with a solvent in which PCBs were soluble to at least five percent by weight. The drained system currently contains only residual PCBs at a concentration of less than 50 ppm (approximately 29 ppm) and is being stored in its original indoor location but without secondary containment. A second smaller heat transfer system located in Building K-1004-T had been found to contain fluid with a PCB concentration greater than 50 ppm. The smaller system has also been drained and flushed twice with a solvent in which PCBs were soluble to at least five percent by weight. It is currently being stored in its original location and contains only residual fluid with a concentration of less than 2 ppm PCB. EPA concurs that these systems are no longer to be considered regulated under 40 CFR Part 761.

50. When EPA first promulgated the current TSCA regulations, it did not contemplate the use of PCB impregnated gaskets. In December 1994 (59 FR 62788, December 6, 1994), EPA proposed to authorize the continued use of existing PCB gaskets and other pre-1978 uses of PCBs (historic uses). This proposed rule was not final at the time of this Agreement.

51. DOE has notified EPA that PCB waste items including articles, article containers, containers, bulk PCB liquid, and bulk PCB solids are stored in a number of locations at the ORR facilities. The locations include but are not limited to 30 primary storage areas at the K-25 Site, 12 storage areas at the Y-12 Plant, and 2 storage areas at ORNL. These areas meet the requirements of 40 CFR § 761.65 unless or except as superseded by nuclear criticality safety requirements or EPA approved exceptions. The exact number and location of these storage areas are fairly constant, but do change from time to time with changing waste management needs. Complete inventories of PCB wastes are maintained and recorded each year in the respective facility's Annual PCB Document as prescribed in 40 CFR § 761.180. Many of these wastes have been stored for over one year at ORR.

52. Large, drained PCB transformers are stored in-place within the K-33 Building at the K-25 Site. The PCB fluids from these transformers have been properly disposed pursuant to 40 CFR § 761.60. Secondary containment has been constructed around the drained transformers to contain 10 percent of the nameplate volume (volume prior to draining).

53. The items and wastes described in the above paragraphs are or have the potential to be mixed with radioactive materials and are managed as PCB/radioactive waste. Some of the PCB/radioactive wastes are also RCRA wastes. The wastes which are also RCRA wastes may be or may become subject to other federal and state regulations, agreements, orders, or decrees.

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V. Conclusions of Law

54. Regulations promulgated under TSCA in 1978 (40 CFR § 761.20) provide that "[n]o person may use any PCB, or any PCB item, regardless of concentration, in any manner other than in a totally enclosed manner within the United States unless authorized under § 761.30." Except as defined as an excluded product, the use of PCBs at any concentration in non-enclosed ventilation duct gaskets, the use of lubricants containing PCBs at any concentration, and the use of heat transfer and hydraulic fluids (after July 1, 1984) containing PCBs at concentrations of 50 ppm or greater are not currently authorized uses under 40 CFR § 761.30. The use of PCBs in ventilation gaskets and lubricants containing PCBs at the ORR facilities is therefore not in compliance with 40 CFR § 761.20. The spill of lubricating grease in Building 7503 and the PCB contamination on the exterior of the hydraulic unit in Building 3012 at ORNL is disposal as defined by 40 CFR § 761.3 and § 761.60(d)(1). The disposal of the lubricating grease in Building 7503 and the PCB contamination on the exterior of the hydraulic unit in Building 3012 at ORNL is therefore not in compliance with the disposal regulations at 40 CFR § 761.60(a)

55. "Storage for Disposal" is defined by 40 CFR § 761.3 as "temporary storage of PCBs that have been designated for disposal." PCB Articles and PCB Containers stored for disposal are required by 40 CFR § 761.65(a) to be removed from storage and disposed of within one year from the date when they are first placed into storage. PCB storage facilities must comply with requirements specified in 40 CFR § 761.65(b)(1).

56. The items and wastes stored for disposal described in the above paragraphs are not in compliance with 40 CFR § 761.65(a). The hydraulic system and large, drained PCB transformers discussed above are also not in compliance with 40 CFR § 761.65(b).

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VI. Applicability

57. No change in ownership of the facilities which are subject to this Agreement will in any way alter DOE's obligations under this Agreement, unless otherwise provided by law.

58. DOE shall give notice of this Agreement within a reasonable time to any subsequent owner of any facility subject to this Agreement before any such change in ownership. DOE shall also notify EPA of any change in ownership within a reasonable time, not to exceed 30 days after such change in ownership.

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VII. Covered Matters

59. This Agreement addresses the requirements of TSCA as specifically set forth in Paragraphs 34 - 52 and the PCB Regulations at 40 CFR Part 761 applicable to: the unauthorized use of PCBs in ventilation ducts and gaskets, lubricants, hydraulic systems, heat transfer systems, and other

unauthorized uses; storage for disposal; disposal; cleanup, and/or decontamination of PCBs and PCB items including PCBs mixed with radioactive materials; and records and reporting requirements at ORR, as set forth herein.

60. This Agreement does not affect the rights of EPA to address any violations which exist or may exist at ORR which are not specifically covered by this Agreement.

61. Nothing in this Agreement shall be considered an admission by any party with respect to any unrelated claims by a party or with respect to any claims or actions by persons not a party to this Agreement, except that DOE agrees not to challenge the Findings of Fact or Conclusions of Law contained herein in an action by EPA to enforce the terms of this Agreement.

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VIII. Compliance Schedule

62. In order to bring the ORR into compliance with TSCA as expeditiously as practical, pursuant to Section 1-601 of Executive Order 12088, a remedial implementation plan has been developed. This remedial implementation plan is set forth in Attachment I, which is attached to and is an enforceable part of this Agreement. The remedial implementation plan was developed pursuant to consultation between EPA and DOE and provides requirements for performance of the tasks required hereunder. This plan provides for the development and implementation of a schedule or schedules under which DOE will ultimately achieve full compliance with TSCA for matters addressed herein. Whenever reasonably possible, DOE shall expedite the work schedule provided in the remedial implementation plan.

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IX. Reporting

63. EPA and DOE shall hold an Agreement Progress Meeting no less than annually to review progress, to make minor modifications to the Agreement or to provide clarification or interpretation and intent. Minutes of the meeting shall be prepared by a person mutually agreed upon by the EPA and DOE. Draft minutes will be made available for comment to both the EPA and DOE within 30 days following the meeting.

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X. Notification

64. All documents, reports, approvals, and other correspondence between DOE and EPA, concerning the activities performed pursuant to the terms and conditions of this Agreement shall be directed to the representatives listed below or their designees, unless otherwise provided herein.

    For EPA:

    Director
    Air, Pesticides and Toxics Management Division

U.S. EPA, Region 4
Atlanta Federal Center
100 Alabama Street S.W.
Atlanta, Georgia 30303-3104

For DOE:

Director
Environmental Protection Division
U.S. Department of Energy
P.O. Box 2001
Oak Ridge, Tennessee 37831-8510

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XI. Extensions

65. DOE shall implement this Agreement in accordance with the deadlines set forth in Attachment I to this Agreement. DOE shall also adopt reasonable measures to avoid or minimize any delays in the implementation of this Agreement. In the event DOE determines it will be unable to meet a deadline under this Agreement, such deadline shall be extended by EPA upon its receipt of a timely request for an extension and when good cause exists for the requested extension. Good cause exists for an extension when sought in regard to:

    a. An event of force majeure;
    b. A delay caused by another party's failure to meet any requirements of this Agreement;
    c. A delay caused by the good faith invocation of dispute resolution;
    d. A delay caused, or which is likely to be caused, by the grant of an extension in regard to another timetable and deadline or schedule;
    e. A delay caused by additional work required pursuant to this Agreement;
    f. A delay caused by insufficient availability of funds in accordance with Section XV (Funding);
    g. A delay caused by compliance with applicable laws and regulations in accordance with Section XVI (Other Applicable Laws); and
    h. Any other event or series of events mutually agreed to by the parties as constituting good cause.

66. Absent agreement of the parties with respect to the existence of good cause, the parties may seek and obtain a determination through the dispute resolution process of whether or not good cause exists. Any request by DOE for an extension of a scheduled obligation for 30 days or more shall be made in writing and received by EPA 15 days prior to the scheduled deliverable date.

67. For extension requests by EPA, if DOE does not invoke dispute resolution within 14 days after DOE's receipt of written notice of the requested extension, the extension shall be deemed approved.

68. An extension that fits the definition of major modification shall be granted only in accordance with the procedures of this Agreement for making major modifications. EPA shall notify DOE if it determines that a requested extension would constitute a major modification.

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XII. Force Majeure

69. In the event of an unforeseeable or unexpected event or circumstance which is beyond the control of DOE or its contractors and subcontractors, which could not be overcome by due diligence, and which necessitates modification of an obligation contained in this Agreement (hereinafter referred to as a "force majeure"), the parties agree to review and modify the obligation, as appropriate. Force majeure events may include, but are not limited to, unforeseen and unavoidable delays caused by labor strikes, adverse weather conditions, natural disasters, or other circumstances beyond the control of DOE.

70. If DOE becomes aware of an event which DOE believes constitutes a force majeure event, DOE shall notify EPA in writing within 21 days of the time that DOE reasonably knew that a force majeure had occurred or would occur. The notification shall, at a minimum, state the precise cause of the delay, the anticipated length of the delay, the time required for DOE to take appropriate measures to minimize the delay, and include a description of the measures taken.

71. If EPA determines that the delay or anticipated delay has been or will be caused by a force majeure event, EPA shall review and modify the associated deadlines or obligations, as necessary, to conform with the delay.

72. If EPA determines that the delay or anticipated delay has neither been nor will be caused by a force majeure event, the existing deadlines shall remain in force. EPA shall notify DOE of its determination in writing within 21 days of receiving DOE's notification. In the event that EPA determines that any extension of a deadline or obligation under this Agreement due to force majeure constitutes a major modification, EPA shall so notify DOE. Upon receipt of EPA's notification, DOE shall submit a proposal for a major modification in accordance with Section XIII (Modification). The associated deadlines and/or obligations will be extended until a determination is made as to whether to grant the major modification.

73. DOE may invoke dispute resolution in accordance with Section XIV (Dispute Resolution) within 21 days of receipt of EPA's decision on whether an event constitutes force majeure. If DOE fails to invoke dispute resolution within the 21 day period, DOE will be deemed to accept EPA's determination.

74. DOE shall have the burden of proving that any delays are caused by a force majeure event.

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XIII. Modification

75. The provisions of this Paragraph shall govern major modifications. Major modifications may be requested by EPA or DOE. All major modifications shall be by written agreement of the

EPA Region 4 and DOE-ORO signatories to this Agreement. Any proposal for a major modification shall be made in writing by the proposing party to the other party. The written proposal for modification shall set forth the proposed modification, provide a statement of the reason(s) for the modification and include an agreement with signature blocks for the EPA and DOE signatories. If the other party agrees with the proposed modification, it shall sign and return the agreement statement to the proposing party. The modification will be effective as of the date the last party signs the written agreement, unless otherwise expressly provided in writing. In the event the other party opposes a proposed modification, it shall so notify the proposing party in writing within 30 days of receipt of the modification proposal and include a statement of the reason(s) for its opposition. The proposing party may then invoke dispute resolution in accordance with the provisions of Section XIV (Dispute Resolution) of this Agreement.

76. The parties recognize that in the course of implementing this Agreement, the need for minor modifications to this Agreement may arise. The provisions of this paragraph shall govern such minor modifications. Either party may propose a Minor Modification to this Agreement at any time. Any proposal for a minor modification shall be made in writing by the proposing party's ORR-PCB-FFCA Coordinator. The written proposal for modification shall set forth the proposed modification along with a statement of the reason(s) for the proposal. If the other party's Coordinator agrees that the proposed modification is minor and does not object to the modification, he shall so notify the proposing party's ORR-PCB-FFCA Coordinator in writing. Upon receipt of the other party's written notification of agreement to the proposed modification, the proposing party shall prepare the agreed upon modification and forward it to the other party via certified mail. The modification shall be effective upon the other party's receipt of the written modification. In the event the other party's Coordinator either disagrees that the modification is minor or objects to the proposed modification, then that Coordinator shall so notify the proposing party's Coordinator within 30 days of receipt of the modification proposal and include a statement of the reason(s) for its objection. The proposing party may then seek to modify the Agreement in accordance with the preceding paragraph.

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XIV. Dispute Resolution

77. Except as specifically set forth elsewhere in this Agreement, if a dispute arises among the parties to this Agreement the procedures of this shall apply.

78. If a dispute arises, the parties shall first attempt to resolve the dispute through informal discussions between the authorized points of contact at EPA and DOE or their immediate supervisors prior to submitting a formal notice of dispute as provided below. EPA and DOE shall use their best efforts to resolve a dispute informally within 30 days after the event which forms the basis of the dispute.

79. If within 30 days after any event which leads to or generates a dispute EPA and DOE have failed to resolve the dispute informally, the disputing party shall within 15 days, submit to the other party a written statement of dispute setting forth the nature of the dispute, the work affected by the dispute, the disputing party's position with respect to the dispute and documentation of the information upon which the disputing party is relying to support its position.

80. The disputing party shall submit the written statement of dispute to the Dispute Resolution Committee (DRC), as described below, for resolution. Upon submission of a dispute to the DRC, the other party shall, within 14 days after receipt of the disputing party's submission to the DRC, submit a written statement of its position on the dispute, along with documentation of its position.

81. The DRC shall be composed of the Director of the Air, Pesticides and Toxic Management Division of EPA Region 4 and DOE's Oak Ridge Operations Office Assistant Manager for Environment, Safety, and Quality Assurance. If any delegation of this responsibility is made by a designated DRC representative during an active dispute, notification of such delegation shall be supplied to the other party.

82. Following submission of a notice of dispute to the DRC, the DRC shall have 21 days after receiving the parties' submissions to unanimously resolve the dispute and issue a written position. If the DRC is unable to unanimously resolve the dispute within this 21-day period, the EPA DRC representative shall issue a written position on the dispute by the 28th day following submittal. Within 14 days after receipt of the EPA DRC representative's written position, DOE may submit a written notice of dispute to the Senior Executive Committee (SEC) described below for resolution. In the event that the dispute is not escalated to the SEC within the designated 14-day escalation period, DOE shall be deemed to have accepted the EPA DRC representative's position with respect to the dispute.

83. The SEC shall serve as the forum for resolution of disputes which are elevated pursuant to the procedures set out in this Section, and shall be composed of a representative from EPA and from DOE. EPA's representative on the SEC shall be the Regional Administrator of EPA Region 4. DOE's representative shall be the Manager of the ORO Office. The SEC members shall meet, confer, and make their best efforts to resolve the dispute and issue a written decision. If unanimous resolution of the dispute is not reached within 21 days, the Regional Administrator shall issue a written position on the dispute within 14 days following the 21-day resolution process.

84. DOE may, within 14 days of receipt of the Regional Administrator's written position above, issue a written notice elevating the dispute to the Administrator of EPA for resolution in accordance with all applicable laws and procedures. If DOE does not elevate the dispute to the Administrator of EPA within the time frame designated, DOE shall be deemed to have accepted the Regional Administrator's written position with respect to the dispute.

85. Upon escalation of a dispute to the EPA Administrator pursuant to this Section, the Administrator will review and resolve the dispute within 21 days. Upon request, and prior to resolving the dispute, the EPA Administrator shall meet and confer with the Secretary of Energy to discuss the issues under dispute. Upon resolution, the Administrator shall provide DOE with a written final decision setting forth resolution of the dispute.

86. The pendency of any dispute under this Section shall not affect the parties' obligation to timely perform their respective responsibilities pursuant to this Agreement, except that the time period for completion of work affected by such disputes shall be extended for a period of time not to exceed the actual time in good faith taken to resolve any dispute in accordance with the procedures specified herein. All work required by this Agreement which is not affected by the

dispute shall continue and be completed in accordance with the applicable schedule. The work, submittals or actions that are affected by the dispute shall be determined by EPA pending final resolution of the dispute.

87. During the pendency of dispute resolution, any work being performed to fulfill DOE's obligations under this Agreement will be immediately discontinued if the EPA DRC representative requests, in writing, that work related to the dispute be stopped because, in EPA's opinion, such work is inadequate or defective, and such inadequacy or defect is likely to yield an adverse effect on human health or the environment. To the extent possible, EPA shall give DOE prior notification that a stop-work request is forthcoming. If DOE believes that the stop-work request is inappropriate or may have potential significant adverse impacts, DOE may meet with the EPA DRC representative to discuss the stop-work request. Following this meeting, and further consideration of the issues, the EPA DRC representative will issue, in writing, a final decision with respect to the stop-work request within 14 days. The final written decision of the EPA DRC representative may immediately be subject to formal dispute resolution. Such dispute resolution may be brought directly to either the DRC or the SEC, at the discretion of DOE.

88. Within 30 days following the resolution of a dispute pursuant to the procedures specified in this Section, DOE shall, when applicable, incorporate the resolution and final determination into the appropriate plan, schedule or procedures and proceed to implement this Agreement according to the amended plan, schedule or procedures.

89. Resolution of a dispute pursuant to this Section of the Agreement shall be in accordance with all applicable laws, regulations and requirements and constitutes a final resolution of any dispute arising under this Agreement. The parties shall abide by the terms and conditions of any final resolution of dispute obtained pursuant to this of the Agreement.

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XV. Funding

90. It is the expectation of the parties that all obligations and commitments established by the Agreement will be fully funded by DOE. DOE shall take all necessary steps and use its best efforts to obtain timely and sufficient funding to meet its obligations and commitments under this Agreement, including, but not limited to submission of timely budget requests. Nothing herein shall affect DOE's authority over its budget and funding level submissions. Section 1-5 of Executive Order 12088 states that "[t]he head of each agency shall ensure that sufficient funds for compliance with applicable pollution control standards are requested in the agency budget." Any requirement for the payment or obligation of funds by DOE established by the terms of this Agreement shall be subject to the availability of appropriated funds, and no provision herein shall be interpreted to require the obligation or payment of funds in violation of the Anti-Deficiency Act, 31 U.S.C. 1341, as amended. In cases where payment or obligation of funds would constitute a violation of the Anti-Deficiency Act, the dates established requiring the payment or obligation of such funds shall be appropriately adjusted, and this Agreement shall be modified pursuant to Section XIII (Modifications).

91. Failure to obtain adequate funds or appropriations from Congress does not in any way release DOE from its ultimate obligation to comply with TSCA. Subject to the terms of this

Agreement, if appropriated funds are not available to fulfill DOE's obligations under this Agreement, EPA may exercise any or all of its applicable statutory and regulatory authority.

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XVI. Other Applicable Laws

92. All actions required to be taken pursuant to this Agreement shall be undertaken in accordance with the requirements of all applicable local, state, and federal laws and regulations. DOE shall obtain or cause its representatives to obtain all permits and approvals necessary under such laws and regulations.

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XVII. Other Claims

93. Nothing in this Agreement shall constitute or be construed as a release from any other claim, cause of action or demand in law or equity against any person, firm, partnership, or corporation for any liability it may have arising out of or relating in any way to the release of any pollutants or contaminants from the ORR.

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XVIII. Access/Data/Document Availability

94. EPA will be permitted to enter at reasonable times and with adequate notice all areas of ORR which are contaminated with PCBs, or which contain information referred to in this Section. EPA will be permitted to inspect records, logs, and other documents relevant to implementation of this Agreement; verify compliance by DOE with this Agreement; review the progress of DOE, its contractors, and lessees in carrying out the activities under this Agreement; conduct tests which EPA deems necessary; and verify data submitted to EPA by DOE. DOE shall honor all requests for access to ORR made by EPA, so long as the provisions of this are fulfilled. When on-site, EPA shall comply with OSHA rules, where applicable, and DOE site health and safety requirements. EPA access shall be subject to the applicable requirements of the Atomic Energy Act, 42 U.S.C. § 2011 et seq., and Executive Orders concerning the handling of unclassified controlled nuclear information, restricted data, and national security information.

95. Information, records, or other documents produced under the terms of this Agreement by EPA and DOE shall be available to the public upon request except (a) those identified to EPA by DOE as classified, or unclassified but controlled, within the meaning of and in accordance with the Atomic Energy Act; (b) those that could otherwise be withheld pursuant to the Freedom of Information Act or the Privacy Act, unless expressly authorized for release by the originating agency; (c) those still considered to be in draft or unfinished form; (d) those containing attorney work-product or attorney-client privileged material; or (e) those subject to business confidentiality claims. Documents or information so identified shall be handled in accordance with applicable regulations. No document marked draft may be made available to the public without prior written approval of the generating party. Unless otherwise restricted by (a), (b) and (d) of this paragraph, if the document is draft final (pending public review) or final and no

confidentiality claim under (e) accompanies information which is submitted to any party, then the information may be made available to the public without further notice to the originating party. Each party reserves its right to seek to otherwise obtain access to such information or facilities in accordance with applicable law.

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XIX. Civil Enforcement Actions and Reservation of Rights

96. The previously described ORR facilities currently use, and will continue to use PCBs in ventilation ducts and gaskets, lubricants, hydraulic systems, heat transfer systems, and other pre-1978 uses (historic uses) of PCBs which are not authorized under 40 CFR Part 761.

97. The facilities are currently storing, and will continue to store, PCB/radioactive/RCRA waste. DOE operates an incinerator at the K-25 Site permitted to dispose of PCB/radioactive/RCRA waste. It is not anticipated that this incinerator will be able to dispose of all the PCB/radioactive/RCRA waste because: 1) the annual generation and the backlog of waste may exceed the incinerator's annual capacity, and 2) some wastes are not suitable for incineration. DOE is actively involved in the development of alternative methods of disposal for various types of wastes which may be applicable to PCB/radioactive/RCRA wastes in accordance with 40 CFR § 761.60(e). Due to the volume of PCB/radioactive/RCRA wastes at the ORR, disposal capacities of both DOE operated disposal facilities and commercial disposal facilities could be exceeded. DOE reserves the right under this Agreement to request a waiver of the one year storage for disposal requirement (40 CFR § 761.65(a)) due to capacity limitations pursuant to regulations in effect at the time of the request. If such a waiver is granted, the provisions of this Agreement will be modified accordingly.

98. DOE has entered into this Agreement to address the use of PCBs in ventilation ductwork and gaskets, lubricants, hydraulic systems, heat transfer systems, other unauthorized uses, and the management for storage, disposal cleanup and/or decontamination of PCBs and PCB Items at ORR, as set forth herein.

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XX. No-Action Assurance

99. Based on the facts and circumstances known to EPA as of the effective date of this Agreement, EPA hereby agrees not to initiate any civil administrative enforcement action or to refer a civil judicial enforcement action under TSCA to the Department of Justice for covered matters defined in Section VII (Covered Matters) herein at ORR for so long as this Agreement is in effect and for so long as DOE is in compliance with the requirements of this Agreement.

100. However, in the event that DOE is substantially delayed in fulfilling its obligations as set forth in this Agreement, and the Parties are unable to agree to an extension of schedules as provided for in Section XV (Funding), subject to Section XI (Extensions), Section XII (Force Majeure), Section XIV (Dispute Resolution), and Section XIII (Modifications), the covenant not to sue set forth above shall terminate.

101. Further, nothing herein shall preclude any actions by EPA to enforce the terms of this

Agreement, or to address or bring any available legal or equitable claims for: (1) any pre-existing, current, or future violations or conditions at the ORR not specifically covered by this Agreement; (2) any emergency condition or imminent hazard which may exist or arise at the ORR; or (3) any cleanup action pursuant to any available authority.

102. The provisions of this Agreement shall constitute requirements which are enforceable in accordance with the applicable citizen suit provisions of TSCA Section 20, 15 U.S.C. § 2619.

103. Further, except as otherwise specifically provided herein, the Parties reserve all other rights they may have under law with respect to any other person.

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XXI. Severability

104. If any provision or authority of this Agreement or the application of this Agreement to any party or circumstance is held by any judicial or administrative authority to be invalid, the application of such provisions to other parties or circumstances and the remainder of the Agreement shall remain in force and shall not be affected thereby.

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XXII. Additional Work

105. EPA may at any time request additional work, including modifications, investigatory work, or engineering evaluations, which they determine necessary to accomplish the purposes of this Agreement. Such requests shall be in writing to DOE. DOE agrees to give full consideration to all such requests. DOE may either accept or reject any such requests and shall do so in writing, together with a statement of reasons, within 45 days of receipt of any such requests. If EPA and DOE do not agree concerning such matters, then EPA may invoke dispute resolution to compel such additional work or modification.

106. Should additional work be required pursuant to this Section, deadlines and schedules for implementation of any activity shall be proposed by DOE and, if approved by EPA, shall be included as an appendix to this Agreement. Any such additional work shall be subject to the funding and prioritization provisions of this Agreement. Any disputes shall be subject to Section XIV (Dispute Resolution).

107. The discovery of previously unknown facts or conditions related to PCB contamination at ORR may be addressed as additional work under this Section, or by other means as EPA in its discretion determines.

108. Any additional work or modifications to work proposed by DOE shall be proposed in writing, and DOE shall not initiate such work prior to review and approval by EPA.

109. Any additional work or modification to work agreed to or required under this Section shall be completed in accordance with the standards, specifications, and schedules determined by Dispute Resolution or approved by EPA and shall be governed by the provisions of this Agreement.

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XXIII. Sanctions

110. In the event that DOE fails to bring the ORR into full compliance with the regulatory requirements as specified in this Agreement within the time periods indicated herein, subject to the terms of this Agreement, including but not limited to, Funding, Modification, Extensions and Dispute Resolution sections of this Agreement, or in the event that DOE withdraws from this Agreement, EPA reserves the right to pursue any remedies that it may have pursuant to federal law. DOE reserves the right to assert any defenses it may have in any enforcement proceedings.

111. In the event that DOE fails to comply with the schedules set forth herein, subject to the terms of this Agreement, including but not limited to Funding, Modification, Extensions and Dispute Resolution sections of this Agreement, the parties agree that EPA shall have the right to terminate this Agreement by written notice to DOE. Termination shall be effective 45 days after notice by EPA.

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XXIV. Termination and Satisfaction

112. Upon completion of all requirements of this Agreement, DOE will provide EPA with a certification that all conditions and terms of this Agreement have been completed.

113. Within 30 calendar days of receipt of DOE's certification, EPA will acknowledge in writing the receipt of the certification. EPA will respond to DOE's certification within 180 calendar days from the receipt of DOE's certification. EPA's response will indicate whether DOE has completed the requirements and milestones required by the Agreement to EPA's satisfaction and state the reasons for its conclusions. If EPA is not satisfied that DOE has completed all conditions and terms of this Agreement, EPA shall provide a written statement including detailed explanations of EPA's reasons for its dissatisfaction. DOE then shall either continue performance of the conditions and terms of this Agreement until such time as EPA is satisfied that DOE has completed all conditions and terms of this Agreement, or in the alternative, DOE shall prepare and submit a plan setting forth a schedule for completion of all conditions and terms of this Agreement. Provided, however, in the event that DOE disagrees with EPA's determination that DOE has not completed all conditions and terms of this Agreement, in accordance with Section XIV (Dispute Resolution) of this Agreement, DOE may immediately elevate the issue to formal dispute resolution. Upon issuance of EPA's final determination that DOE has completed the requirements and milestones required by the Agreement to EPA's satisfaction, the requirements of this Agreement shall be considered satisfied and this Agreement shall be considered terminated.

114. In addition to EPA's general inspection authorities under TSCA and under Section XVIII (Access/Data/Document Availability) herein, EPA specifically reserves the option of conducting a verifying inspection after DOE has provided EPA with the final notification of completion as provided in this Agreement. If EPA elects this option, the verifying inspection will be conducted within 120 calendar days of EPA's receipt of DOE's certification.

115. In the event DOE fails to comply with the requirements set forth in this Agreement, subject to Section XI (Extensions), Section XII (Force Majeure), Section XIII (Modifications) and/or Section XV (Funding), EPA may, within its discretion, terminate this Agreement by written notice to DOE as set forth in paragraph 111 of this Agreement.

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XXV. Effective Date

116. This Agreement shall become effective upon execution by the undersigned authorized representatives of EPA and DOE. In the event that authorized representatives of EPA and DOE do not execute the Agreement on the same day, the Agreement shall be effective as of the date which the last party affixes its signature to the Agreement.

IT IS SO AGREED:

12/9/96
Date

James C. Hall
Manager
Oak Ridge Operations Office
U.S. Department of Energy

12/16/96
Date

John H. Hankinson, Jr.
Regional Administrator
U.S. Environmental Protection Agency, Region 4

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Attachment I

OAK RIDGE RESERVATION
TSCA FEDERAL FACILITY COMPLIANCE AGREEMENT
REMEDIAL IMPLEMENTATION PLAN

(A) Spill Cleanup

1. General Requirements: The EPA PCB Spill Cleanup Policy codified at 40 CFR 761 Subpart G will generally apply to all PCB spills to which it is applicable at the ORR except as provided in this or other compliance agreements or orders. Nothing in this Agreement precludes the right of ORO to propose alternative cleanup methods or alternate criteria under this Agreement for specific spills. EPA shall retain the right to require additional cleanup and the flexibility to allow less stringent or alternative cleanup for specific spills. Spills of PCBs of 500 ppm or greater and spills of < 500 ppm PCBs involving one pound or more PCBs by weight shall be cleaned up either to 10 µg PCB/100 cm2 or to 100 µg PCB/100 cm2, followed by application of an appropriate sealant, such as a 2-layered epoxy type paint. The statistical sampling approach set forth in Attachment II shall be used within the spill area to verify cleanup to appropriate levels.

2. Historic Spills: For purposes of this Agreement, historic spills are those spill locations, both

indoor and outdoor as typically evidenced by staining, which are or can reasonably be determined to be a result of past operations or practices and are by definition excluded from the EPA Spill Cleanup Policy, (i.e. May 4, 1987, ref. 40 CFR § 761.120(a)). Historic spills can also include locations identified after the effective date of the Agreement but which are determined to have resulted from past operations or practices. Historic spills, at both indoor and outdoor locations will be evaluated for inclusion in the FFA, for further investigation and possible remediation unless such locations are part of a facility or location which is already identified as "Area(s) of Concern" in Appendix C of the FFA. Spills in areas determined not to be eligible for inclusion in the FFA will be addressed pursuant to paragraph (A) 1, of this Attachment.

3. New PCB Spills Which Occur in or on Historic Spill Locations: When new PCB spills occur in or on historic spill locations as described above, solid surfaces will be cleaned by using the double wash/rinse method as defined in 40 CFR § 761.123 and for outdoor spills, all soil within the spill area shall be excavated and the ground surface shall be restored to its original configuration by backfilling with clean soil. Such new spills will not be required to be followed by post-cleanup sampling. Some residual stains and liquids from both new spills in historic locations and historic spills in buildings may be present or continue to occur on building ceilings, structural components, and suspended equipment such as electric cable trays, overhead crane structures, and shutdown equipment in restricted access areas (i.e. low contact industrial surfaces as defined in 40 CFR § 761.123). These residual stains and liquids confined to a low contact industrial surface are not required to be cleaned as a new spill, but are allowed to remain in place and will be managed as historic spills in accordance with paragraph (A) 2, above. Any new PCB spills (including free liquids which migrate from historic spill sources) to building floors or ground equipment which are normally accessible (i.e., a high contact industrial surface as defined in 40 CFR § 761.123), will be cleaned in accordance with the requirements of paragraph (A) 1, of this Attachment.

4. Work Schedule: For historic PCB spills included in Appendix C of the FFA, to be determined in accordance with Section XXVIII *SCOPING WORK PRIORITIES* and Section XXIX *TIMETABLES AND DEADLINES* of the FFA; otherwise to be determined pursuant to paragraph (A) 1, of this Attachment.

5. Documentation Required: New PCB spills will be documented according to the requirements of EPA PCB Spill Cleanup Policy codified at 40 CFR Part 761 Subpart G except that the sampling conditions of paragraph (A) 1, of this Attachment will replace the sampling requirements of the PCB Spill Cleanup Policy.

   New PCB spills which occur in or on historic spill locations will be documented according to the requirements of 40 CFR § 761.125(b)(3)(i)-(vi).

   Spill cleanup documentation will be available for inspection by EPA or may be provided upon request.

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(B) Hydraulic, Heat Transfer, and Oil Lubricated Systems

In-service hydraulic and lubrication systems containing PCBs shall be managed in accordance with

40 CFR § 761.30(e) and shall not contain PCB levels above 50 ppm. For purposes of achieving compliance with TSCA, in-service hydraulic and lubrication systems discovered to contain 50 ppm PCBs or greater after July 1, 1984, will comply with the following requirements:

1. The systems will be retrofilled within six months of discovery that the systems contain 50 ppm or greater PCBs.

2. A verification sample for each system shall be taken at least 90 days after the most recent retrofill of the system.

3. Fluids initially drained from the PCB system to be retrofilled as well as any flushing fluids used during the retrofill process shall be disposed of as PCB waste.

4. Hydraulic systems or oil lubrication systems may be removed from service in lieu of retrofilling under the following conditions:

   a. Hydraulic systems, heat transfer, or oil lubrication systems containing 50 ppm PCB or greater will be evaluated for inclusion in the FFA, for further investigation and possible remediation unless such systems are part of a facility which is already identified as an "Area (s) of Concern" in Appendix C of the FFA. Such systems may be stored in place provided that the facility provides adequate protection (e.g., roof, walls, floor) to prevent a release of PCBs to the environment.
   b. The system shall be marked with the large PCB mark, and documentation or labeling shall be available or in place to clearly show the status and responsible person /organization for the system.
   c. Access to the system shall be limited.
   d. The fluid, as much as practicable, shall be drained from the system and disposed of in accordance with this Attachment. Systems will be inspected monthly until drained. Any leaks or spills will be cleaned up in accordance with Section (A) "Spill Cleanup" of this Attachment.

5. Work Schedule: For systems in shut down facilities included in Appendix C of the FFA, to be determined in accordance with Section XXVIII *SCOPING WORK PRIORITIES* and Section XXIX *TIMETABLES AND DEADLINES* of the FFA; otherwise as to be determined under paragraphs 1, 2, and 3 of this Section (B), or Section (F) "Disposal" of this Attachment.

6. Documentation to be Provided to EPA: DOE shall provide EPA with information at the annual Agreement Progress Meeting on hydraulic, heat transfer, and oil lubricated systems. This information shall be documented in minutes of the meeting and shall include: locations of systems, whether or not the systems are in use, the status and PCB concentration of the systems undergoing retrofilling, the status and priority of remediation under the FFA, and confirmation that the systems are non-leaking or that leaks are being addressed in accordance with Section (A) "Spill Cleanup" of this Attachment.

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(C) Storage

Except as specifically set forth herein, all PCB waste storage areas shall meet the storage area requirements of 40 CFR § 761.65.

1. Container Specifications: DOE may use alternative containers for storage of PCB wastes which meet United States Department of Transportation (DOT) performance based packaging standards; however, PCB wastes currently packaged in old DOT specification containers as cited in 40 CFR § 761.65(c)(6) will not have to be repackaged for storage to meet new DOT performance based packaging standards until the waste is shipped and then only if the existing container does not meet DOT requirements in effect at the time of shipment. Pressure relief devices may be utilized as appropriate for containers used to store PCB wastes to prevent the buildup of pressure.

2. Fissionable PCB/Radioactive Waste: DOE may store fissionable PCB/radioactive waste under the following conditions:

   a. Containers other than those meeting DOT performance standards and secondary containment configurations alternative to that provided in 40 CFR § 761.65(b) may be used for fissionable PCB/radioactive waste provided: the containers are non-leaking, the containers are stored in an area and manner which provides protection from a release of PCBs to the environment and which conforms with nuclear criticality safety requirements specified in ANSI Standard No. 8.1, Criticality Safety in Operations with Fissionable Materials Outside Reactors, and the volumetric secondary containment requirements of 40 CFR § 761.65(b)(1)(ii) are met except that solids may be stored without secondary containment according to sub-section 4 of this Section.

3. Gaseous Diffusion Process Building/PCB Transformers: These transformers have been removed from service for disposal and may be stored in their present location under the following conditions:

   a. The K-33 Building is maintained in a sufficient condition to provide protection from the weather.
   b. Waste PCB Transformers in the K-33 Building will be inspected quarterly for leaks; PCB Transformers are only required to be inspected quarterly for leaks when in service.
   c. Secondary containment has been constructed around each transformer. The secondary containment provides a volume of 10% of the nameplate volume of the transformer. The transformers have been drained.
   d. Continued maintenance of secondary containment for these transformers will not be required.

4. ORNL Blaw Knox Hydraulic Unit; This unit has been removed from service for disposal and has been drained of its original fluid. The disposition of this unit will be addressed Section (F) "Disposal" of this Attachment. Until final disposition, this unit may be stored in its present location in building 3012 under the following conditions:

a. Building 3012 is maintained in sufficient condition to provide protection from the weather.
b. The unit will be inspected quarterly for leaks and inspections documented.
c. The unit will be roped off and posted with the PCB Mark as defined in 40 CFR § 761.45(a), in a prominent location on or near the unit as a warning of the presence of PCBs."

5. Non-liquid PCB Wastes and Empty PCB Containers: These items may be stored without secondary containment provided that all other criteria of 40 CFR § 761.65(b)(1) are met. Empty PCB containers may be dedicated to the management of PCBs and reused. Containers used for the management or storage of PCBs may be decontaminated according to 40 CFR § 761.79 and/or any amendments thereto, or in accordance with the provisions of Section (J) "Decontamination and Reuse of PCB Dedicated Tools/Equipment/ Containers" of this Attachment. Alternatively, containers may be disposed of in accordance with Section (F) "Disposal" of this Attachment.

6. PCB Articles in Containers: For purposes of this Agreement, the 40 CFR § 761.65(b)(1)(ii) secondary containment volume requirement for PCB Article Containers will be interpreted to be the same as for PCB Articles.

7. Protection From Weather: DOE utilizes existing buildings to store PCB wastes. Many of these buildings date back to the 1940s or 1950s. As a result, maintenance is a constant

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vigil. Additionally, some of these buildings are extremely large structures (as much as 33 acres under roof) and have large doors. During periods of severe weather and extreme fluctuations in weather, minor roof leaks may develop in these buildings. These leaks can be extremely difficult to locate and repair, partially due to sheer size of the buildings, and also due to the worker protection requirements necessary to protect workers repairing these roofs (radiation, asbestos, and break-through are all serious concerns). Additionally, condensation may form within large buildings, and flash thunderstorms may blow rainwater through doorways before they can be closed.

PCB waste storage areas are inspected pursuant to the terms of this Attachment. Corrective measures will be taken to prevent water which accumulates in PCB storage facilities from coming in contact with stored PCB waste. Interim measures (e.g., covering the waste with plastic sheeting, absorbent booms or dams, etc.), will be used as necessary. Repairs to facilities will be completed as quickly as feasible. Corrective action plans or description of corrective measures will be available for review to show a good faith effort to comply with 40 CFR § 761.65(b)(1)(i). PCB storage areas will be considered in compliance with this Agreement and the intent of 40 CFR § 761.65(b)(1)(i) provided these measures are taken.

8. Documentation to be Provided to EPA: Information on PCB waste inventories and waste management activity will be provided to EPA pursuant to Section IX (Reporting) of this Agreement. The Annual PCB Document Log for each DOE facility will be available for inspection as required by 40 CFR § 761.180(a).

9. Remote Handled and Class III/IV PCB Waste: As an alternative to direct visual inspection of

remote handled and Class III/IV PCB waste DOE may utilized monitoring for radionuclides as a means of leak detection. Monitoring for radiological release will consist of the following:

a. health physics (HP) checks throughout any container transfer activities;
b. smear sampling of walls, floors, etc., in open storage vaults every 30 days;
c. sampling of atmosphere of sealed vaults every 30 days;
d. monitoring for presence and radiological testing of nay liquids collected in storage facility sumps.

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(D) Gasket and Ventilation Duct Management

1. This Section of the Remedial Implementation Plan addresses buildings in various functional areas at K-25, Y-12, and ORNL which contain ventilation duct work that has been contaminated with PCBs originating from duct gaskets impregnated with PCBs.

2. For PCB impregnated gaskets in the K-29, K-31, and K-33 GDP buildings, DOE has implemented a troughing system and leak monitoring program that provides for containment of PCB drips. The GDP buildings provide protection of the ventilation systems from the weather. Since the K-25 Site GDP is permanently shut down, the supply of lubrication oil causing PCBs to leach from the gaskets has been eliminated, thereby greatly reducing the number of PCB spills (drips) from the ventilation system. In consideration of these facts and the limited access to the buildings, EPA and DOE have agreed that the risk to human health

and the environment is reduced sufficiently to warrant renegotiation of the removal schedule (originally scheduled to begin in August 1991). The GDP buildings will be maintained to provide protection of the ventilation systems from the weather and the troughing systems will be maintained to limit the number of PCB spills to building floors.

3. PCB impregnated gaskets and ductwork contaminated with PCBs at the ORR facilities other than those in the GDP buildings are allowed to remain in service for the remainder of their useful life. Out of service PCB gaskets and ductwork in shut down buildings will be evaluated for inclusion in the FFA for further investigation and possible remediation, unless such facilities or buildings are already identified as "Area(s) of Concern" in Appendix C of the FFA.

4. During remediation, motor ventilation duct gaskets impregnated with PCBs and co-contaminated with hazardous waste, asbestos, and/or radioactive materials from the process buildings shall be removed in accordance with applicable requirements for worker safety, and other applicable requirements (including National Emissions Standards for Hazardous Air Pollutants) for asbestos removal, and shall be stored and/or disposed of in accordance with TSCA and RCRA requirements, except as otherwise provided pursuant to this Agreement. Because of the large volumes of contaminated duct work and the limited storage space available, EPA agrees that, during the ventilation duct work and gasket removal, processing, and decontamination, DOE may store ductwork in accordance with the terms for storage of non-liquid PCB waste pursuant to Section (C) "Storage" of this Attachment.

5. Following waste characterization, segregation, and processing, all resulting waste shall be stored for disposal in accordance with applicable requirements of TSCA and RCRA. Motor ventilation ducts (and associated flanges) contaminated with PCBs shall be decontaminated pursuant to Section (J) "Decontamination and Reuse of PCB Dedicated Tools/Equipment/Containers" of this Attachment. Alternatively, PCB gaskets and ductwork may be disposed of as required by Section F "Disposal" of this Attachment.

6. Work Schedule for the K-29, K-31, and K-33 GDP Ventilation System Gaskets: To be determined in accordance with Section XXVIII *SCOPING WORK PRIORITIES* and Section XXIX *TIMETABLES AND DEADLINES* of the FFA.

7. Work Schedule for Other Out of Service PCB Impregnated Gaskets: For PCB gaskets and ductwork in shut down facilities included in Appendix C of the FFA, to be determined in accordance with Section XXVIII *SCOPING WORK PRIORITIES* and Section XXIX *TIMETABLES AND DEADLINES* of the FFA; otherwise as to be determined under this Agreement.

8. Documentation to be Provided to EPA: DOE shall provide EPA with information at the annual Agreement Progress Meeting on ventilation systems with PCB impregnated gaskets. This information shall be documented in minutes of the meeting and shall include: locations of systems with PCB gaskets, approximate size of the system (e.g., cubic or linear feet, number of PCB gaskets or similar information), whether the systems are in use or are not, the status and priority of remediation under the FFA, confirmation that the systems are non-leaking (except for K-25 GDP ventilation systems), and confirmation that the systems are protected from the weather. For the K-25 Site GDP ventilation systems, information shall also include the status of the troughing, and number of PCB spills resulting from the GDP ventilation system or its troughing in the K-29, K-31, and K-33 buildings.

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(E) Other Pre-TSCA Uses of PCBs

Non-liquid materials that contain PCBs at any concentration not otherwise authorized for use under 40 CFR § 761.30 or otherwise addressed in this Agreement (including, but not limited to, gaskets, plastics, plasticizers, fluorescent light ballast potting material, electrical cable/wire [except oil-filled cable as described in 40 CFR § 761.30(m)], dried paints and other coatings, small rubber parts, roofing and siding materials, insulation, caulking, waterproofing compounds, ceiling tile coatings, adhesive tape, grease and other lubricants) in use prior to July 2, 1979, are allowed for use provided they remain intact and in place in their existing application and location for the remainder of their useful life, subject to the conditions of this Agreement.

1. Use Conditions: DOE shall:

a. Provide a written notification within 30 days of discovery, to the EPA, that a pre-TSCA PCB use has been discovered. Each notification shall include the location of the material, a description of the use, an estimate of the amount of material in use (e.g., number, square footage, pounds), PCB concentration, expected useful life of the material, condition of the material (e.g., potential for exposure) and any additional information that may be useful. Evidence that establishes the historical use of such materials shall also be included in the notification.

b. Post the *Mark* M_L, as defined in 40 CFR § 761.45(a), in a prominent location on or near the PCB-containing material as a warning of the presence and location of PCBs.

c. Make available to any potentially exposed employee or, upon request, to any other potentially exposed individual, information concerning the identity of the PCBs and any health risk associated therewith.

2. At the end of the useful life of the item or material, or upon a change in their existing application and location, items/materials described in the introductory paragraph of this Section will be disposed or decontaminated in accordance with the terms of Section (F) "Disposal" or Section (J) "Decontamination and Reuse of PCB Dedicated Tools/Equipment/Containers" of this Attachment. Such items that are characterized and found to contain less than 50 ppm PCBs shall be managed as an excluded PCB product under 40 CFR § 761.20. Alternatively, facilities or buildings containing such PCB items/materials will be evaluated for inclusion in the FFA, for further investigation and possible remediation unless such facilities are already identified as "Area(s) of Concern" in Appendix C of the FFA.

3. Documentation to be Provided to EPA: DOE shall provide EPA with information at the annual Agreement Progress Meeting on items/materials for which notification has been made pursuant to paragraph 1 of this Section. This information shall be documented in minutes of the meeting and shall include: whether the systems remain in use or not; the status and priority of remediation under paragraph 2 of this Section or the FFA, as applicable; and whether the systems are non-leaking and are protected from the weather.

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(F) Disposal

1. All wastes generated from or stored in a radioactive materials management area (RMMA) shall be considered to be radioactive unless determined otherwise under the criteria outlined below.

2. PCB waste will be determined not to be radioactive by criteria in DOE Order 5400.5 and the DOE-HQ "Performance Objective for Certification of Non-Radioactive Hazardous Waste," February 17, 1995, or such applicable criteria or regulation as may be issued.

3. Unless otherwise specified in this Agreement, the "date removed from service" and the "date determined not to be radioactive" will be read as defined in Section III (Definitions) of this Agreement.

4. All PCB wastes and PCB/radioactive wastes which are also contaminated with hazardous waste and/or asbestos shall be disposed of in accordance with all other applicable Federal and

State laws and/or alternative disposal methods approved by EPA.

5. PCB waste determined not to be radioactive that is stored for disposal shall be removed from storage and decontaminated or disposed of according to 40 CFR § 761.60 as it may be amended, within one year of the date determined not to be radioactive (DNR), except as provided in this Agreement or other agreement(s) with EPA.

6. PCB/radioactive waste stored for disposal shall be removed from storage and decontaminated or disposed of according to 40 CFR § 761.60 as it may be amended, and/or other applicable federal and state laws, as disposal capacity and capability for the PCB/radioactive waste becomes available, as provided in this Agreement or other compliance orders or agreements linked to this Agreement.

7. Among the options DOE will consider to enhance its disposal capacity and capability are: utilization of commercial disposal services; development of additional DOE disposal capacity; or further waste evaluation and characterization to document reclassification of PCB/radioactive waste as non- radioactive/PCB waste, as radioactive/non-PCB waste, or non-radioactive/non-PCB waste.

8. The goal of the "storage to disposal" compliance strategy set forth herein, is to reach the point at which DOE is able to comply with the storage and disposal restrictions found in 40 CFR Part 761. The compliance strategy shall consist of four sequential, interdependent phases. Concurrence from EPA is required for each phase. The description and schedule for each phase deliverable is described below.

   a. Phase I - PCB/Radioactive Waste Inventory

      DOE shall prepare and submit to EPA an inventory of PCB waste stored on the ORR as of December 31, 1994. The inventory will be separated into three tables and will be reported in waste groupings.

      Table A will list by waste grouping all ORR PCB wastes covered under other compliance orders or agreements as of the effective date of this Agreement such as the Commissioner's Order pursuant to the Federal Facility Compliance Act and the Federal Facilities Agreement. Disposal technology selection and schedules for Table A wastes will be deferred to other identified compliance orders or agreements. For Table A wastes, DOE shall be considered in compliance with this agreement so long as DOE remains in compliance with the referenced compliance order or agreement. DOE shall notify EPA in writing within 30 days if a compliance order/agreement or any portion of such order/agreement containing requirements for Table A wastes is terminated. Any modifications to this Agreement due to termination of a linked order/agreement or portion thereof affecting Table A wastes will be handled according to Section XIII, (Modifications) of this Agreement.

      Table B will consist of those ORR PCB wastes not covered under other compliance orders or agreements which can reasonably be expected to be disposed of at the K-25 TSCA Incinerator.

      Table C will consist of the ORR PCB wastes not covered by other compliance orders or

agreements and which are not targeted for disposal at the K-25 TSCA Incinerator. Each Table shall include the waste grouping name, waste form, amount in storage, anticipated generation rate, number of waste items in the grouping, and a unique identifier for each grouping. Tables may be revised as necessary based on further characterization of wastes, refinement of waste groupings, changes in orders, agreements, or regulations, etc. Minor revisions may be made by DOE as necessary and reported at the Annual Progress Meeting. DOE shall report major revisions to EPA in writing within 30 days of the revision.

The Phase I inventory shall be provided to EPA for review and written concurrence not later than six months from the effective date of this agreement.

b. Phase II - Identification of Treatment/Disposal Options for Table C Wastes

DOE shall prepare and submit to EPA, a report containing a list and description of all feasible treatment/disposal options to be considered for each waste grouping in Table C.

The Phase II report shall be provided to EPA for review and written concurrence not later than eight months from the date of receipt of written EPA concurrence with the Phase I inventory.

c. Phase III - Evaluation and Selection of Preferred Options for Table C Wastes

DOE shall prepare and submit to EPA, a Phase III report which provides an analysis of treatment/disposal options listed in the Phase II report and identifies a preferred option for each waste grouping. This analysis will include, but will not be limited to cost, availability of commercial capacity vs. the feasibility of DOE technology development, feasibility of meeting the performance objective for off-site shipment, prioritization of waste groupings, etc. Phase III may require R&D for some waste groupings pursuant to sub-section 12 of this Section.

0 The Phase III report shall be provided to EPA for review and written concurrence not later than fifteen months after the date of receipt of written EPA concurrence of Phase II.

d. Phase IV - Waste Management Plan and Schedules

DOE shall prepare and submit to EPA, a Phase IV waste management plan which will identify and describe critical activities leading to "start-up" of each preferred treatment/disposal option identified in the Phase III report. Along with the waste management plan, DOE shall submit a set of waste grouping disposal schedules in a time line format. The disposal schedules will include both Table B and Table C waste groupings. As described below in sub-section 9 of this Section, the disposal schedules for Table C wastes will be updated annually by means of a rolling milestone process. The disposal schedules for Table B waste groupings will be updated annually by means of supplying EPA with the Burn Plan for the K-25 TSCA Incinerator for the fiscal year. The disposal schedule for Table C wastes shall include non-enforceable target dates for completion of critical actions leading to attainment of new disposal capacity or disposal capability.

The disposal schedules shall also include annual inventory reduction goals by waste grouping, to cover the time period after a preferred disposal option becomes available until the non-compliant inventory backlog is eliminated.

The Phase IV waste management plan and first annual disposal schedules shall be provided to EPA for review and written concurrence no later than eight months after the date of receipt of written EPA concurrence on Phase III. The waste management plan will be updated as necessary, by mutual agreement of the parties. The annual updates to the disposal schedules shall be submitted to EPA no later than October 1. Updates to the plan shall be made according to Section XIII (Modifications) of this Agreement.

Each fiscal year the K-25 Site TSCA Incinerator Burn Plan is revised to show the waste scheduled for incineration for the next fiscal year. Prior to the time DOE submits the initial Phase IV Table B wastes disposal schedule(s), the Burn Plan will be discussed at the Annual Progress Meeting with EPA as the method of demonstrating progress for Table B wastes.

9. DOE shall utilize a rolling milestone process in preparing the Phase IV Table C waste disposal schedules and annual updates as follows:

   a. In preparing the initial Phase IV disposal schedules, DOE will propose milestone completion dates and inventory reduction goals for the current fiscal year (FY) and the two year budget planning cycle covering FY + 1, and FY + 2. DOE will also propose non-enforceable target dates and inventory reduction quotas for FY + 3 and beyond.
   b. In formulating and adjusting milestones and inventory reduction goals, funding availability, including the amount provided to the DOE-ORO in its Approved Funding Program for the current fiscal year for environmental management activities for the ORR, and the anticipated appropriation for the next fiscal year (FY + 1), the Internal Review Budget for FY + 2, and the associated out-year funding targets for DOE-ORR, site priorities, cost estimates, new or emerging technologies, and other new information shall be considered by the parties. Additionally, currently available disposal capacity may be considered, as appropriate, in formulating and adjusting milestones and inventory reduction goals.
   c. Once disposal schedules are approved by EPA, the milestone completion dates and inventory reduction goals for the current FY, FY + 1, and FY + 2 shall become enforceable commitments. As the disposal schedules are updated each year, what were previously FY + 2 commitments will become FY + 1 commitments and the former FY + 1 commitments will become current FY commitments unless otherwise proposed by DOE and approved by EPA. At the same time, DOE will propose additional commitments for the new FY + 2. Funding availability, including the amount provided to the DOE-ORO in its Approved Funding Program for the current fiscal year for environmental management activities for the ORR, and the anticipated appropriation for the next fiscal year (FY + 1), the internal Review Budget for FY + 2, and the associated out-year funding targets for DOE-ORR, site priorities, cost estimates, new or emerging technologies, and other new information, shall be considered by the parties in evaluating updates and adjustments to disposal schedules, milestones, and inventory reduction goals.
   d. Nothing in this Section precludes DOE or EPA from proposing or requesting changes to commitments at other times. Proposed changes to commitments shall be subject to Section IX (Extensions), Section XII, (Force Majeure), Section XIII, (Modifications) and/or Section XV (Funding) of this Agreement.

10. EPA shall review and respond to documents submitted by DOE for concurrence under this

Section within 60 days of receipt, otherwise EPA shall notify DOE in writing that additional review and response time is required. If EPA requests revisions to a document, DOE shall have 30 days to either make the changes needed for EPA concurrence or initiate the dispute resolution procedures in Section XIV (Dispute Resolution), of this Agreement.

11. Aqueous PCB wastes may be disposed of in accordance with EPA Policy 6-PCB-2 dated August 16, 1983. The organic phase separated from an aqueous PCB waste and any filter media used to separate the organic portion from the aqueous portion will be disposed of in accordance the provisions of this Attachment. Aqueous portions will be managed on an actual concentration basis after separation of the organic portion from the waste.

12. Research and Development (R&D) for PCB disposal conducted at ORR in accordance with the following conditions shall be considered EPA-approved:

    a. DOE shall notify EPA in writing at least 30 days prior to the commencement of any R&D for PCB disposal activity conducted under this Section. Each notification shall include the EPA identification number of the site where the R&D for PCB disposal activities will be conducted, the quantity of PCBs to be treated, the type of R&D technology to be used, the general physical and chemical properties of material being treated, and an estimate of the duration of the PCB activity.
    b. Unless otherwise agreed to by EPA, the amount of material containing PCBs treated annually by the facility during R&D for PCB disposal activities shall not exceed 500 gallons of liquid or 70 cubic feet of non-liquid PCBs and shall not exceed a maximum concentration of 10,000 ppm PCBs.
    c. Unless otherwise agreed to by EPA, no more than 1 kilogram total of pure PCBs per year shall be disposed of in all R&D for PCB disposal activities at each facility.
    d. Unless otherwise agreed to by EPA, each R&D for PCB disposal activity under this Section shall be limited to no more than one calendar year.
    e. All PCB wastes (treated and untreated PCB materials, testing samples, spent laboratory samples, residuals, untreated samples, contaminated media or instrumentation, clothing, etc.), shall be stored in accordance with the storage requirements of Section (C) "Storage" of this Attachment and shall be disposed of according to concentration of PCBs prior to treatment. PCB materials not treated in the R&D for PCB disposal activity may be returned to the site of generation.
    f. Manifests shall be used for all R&D PCB wastes being transported from the R&D for PCB disposal facility to an approved commercial PCB storage or disposal facility.
    g. Material limitations set out in paragraphs b, and c, of this sub-section shall not be exceeded without prior written approval from EPA. Each request shall specify the quantity or concentration requested for disposal and include a justification for each increase. The time duration limitation set out in paragraph d, of this sub-section may be extended by written notification to EPA at least 30 days prior to the expiration date of the original request or last extension. Extension requests will be for no more than one year. Extension requests shall also include information on the accomplishments and progress of the previously authorized R&D for PCB disposal activity for which the extension is sought. Extensions will be granted unless and until EPA denies or places a hold on the R&D activity. Minor modifications other than material limitations and not to include a change in the basic technology, may be made to the R&D activity by DOE notification to EPA pursuant to the notification requirements for an extension of the time limit.

h. At any time, EPA may make the determination that a formal application for an R&D PCB disposal approval is required to conduct or continue to conduct a specific R&D PCB disposal activity to ensure that any R&D for PCB disposal activity does not present an unreasonable risk of injury to health or the environment. If such a determination is made DOE will halt the activity and apply for an approval.

13. Wastes containing less than 50 ppm PCBs and assumed by DOE to be regulated under 40 CFR § 761.60 solely due to the anti-dilution provision of 40 CFR § 761.1(b) may be disposed of based on the actual PCB concentration of the wastes provided that:

a. the disposal facility shall have applicable federal, state, and/or local permits, registrations, or licenses to accept wastes of less than 50 ppm PCBs;

b. DOE shall request in writing prior written approval from EPA. The request shall include at a minimum the following information:

i). the type, physical characteristics, PCB analysis, any other characterization data or analysis necessary for hazardous or radiological characteristics;

ii.) the process by which the waste was generated, the date and location of generation, reason the material is thought to be subject to 40 CFR § 761.60, the location of the waste, and the type of container it is stored in;

iii.) the reason DOE proposes to dispose of this waste by an alternative method (to 40 CFR 761 Subpart D);

iv.) information regarding the proposed alternate disposal process/facility including: the method, name, address, EPA or State ID number (if applicable), permits/approvals of the owner/operator of the disposal process; location of disposal, method of transportation, permit conditions or restrictions, waste acceptance criteria of the disposal process/facility; a process/facility review (inspection) report by DOE. For any residuals resulting from disposal of the wastes, the same information in the above paragraphs shall be included in the request.

c. EPA may reject the proposal and require disposal according to the other requirements of this Section, may require any additional information, or impose conditions or restrictions on approval.

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(G) PCB Disposal Records

1. Information on PCB waste inventories and waste management activity will be provided to EPA pursuant to Section IX (Reporting) of the Agreement. Exception Reports required in 40 CFR § 761.215 will not be required of the ORR facilities. Instead, information will be provided at the Annual Progress Meeting on disposal of PCB wastes.

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(H) Worker Safety Measures

All persons entering active PCB spill areas shall be provided worker safety training, and shall use suitable personal protective clothing and equipment sufficient to prevent unreasonable risk to human

health posed by PCBs and any other hazardous material used or reasonably anticipated to be encountered during compliance with this Agreement, all in accordance with applicable worker protection standards and other applicable regulations.

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(I) Baseline Air Sampling

The baseline air sampling was primarily a worker protection concern in the active GDP facilities in buildings where motor exhaust ventilation systems are located. Air sampling results in the K-25 Site K-29, K-31, and K-33 process buildings since 1991 have shown no results of 0.5 micrograms/m^n or greater. DOE believes these results show that no unreasonable risk to human health from airborne PCBs exists in these buildings. Air sampling in these buildings will be discontinued until active remediation work resumes (e.g., ventilation duct removal, etc.).

DOE will notify EPA when active work resumes. The need for air sampling will be re-evaluated at that time.

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(J) Decontamination and Reuse of PCB Dedicated Tools/Equipment/Containers

Decontamination may be accomplished by flushing, soaking, wiping, or swabbing with a suitable solvent or other material provided the performance standards of this Section are met. Any wastes generated from decontamination shall be disposed of in accordance with the requirements of Section (F) "Disposal" of this Attachment.

1. Equipment/Tools:

   a. Equipment/tools dedicated to PCB management activities will be labeled, maintained, and/or stored in such a manner to prevent inadvertent use for non-PCB related activities and to prevent a release to the environment.
   b. Equipment shall remain dedicated to PCB related activities until it is declared a PCB waste or PCB levels are reduced to 10 µg/100 cm^2 or less, as verified by wipe sampling. Equipment or tools which have internal or other surfaces inaccessible or not conducive to wipe sampling may be decontaminated in accordance with the procedures described in Attachment III of this Agreement.
   c. Flushing solvents shall be a material in which PCBs are at least 5% soluble and may be either organic or aqueous based detergent solution. Flushing solvents may be re-used until their concentration reaches 50 ppm. All flushing solvents shall be disposed of in accordance with the requirements of Section (F) "Disposal" of this Attachment.

2. Containers:

a. Decontamination of containers shall be in accordance with 40 CFR § 761.79 unless otherwise specified in this Attachment.
b. Containers may be decontaminated by steam cleaning or high-pressure wash provided that the PCB levels on internal surfaces are reduced to 10 µg/100 cm^2 or less, as verified by wipe sampling and the waste water is collected and disposed of in accordance with Section (F) "Disposal" of this Attachment.
c. Containers used to store aqueous PCB waste may be decontaminated in accordance with 40 CFR § 761.79 using

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water as the flushing solvent. Wastewater from decontamination of PCB containers will be disposed of in accordance with Section (F) "Disposal" of this Attachment.
d. As an alternative to decontamination, PCB containers may be disposed of in accordance with Section (F) "Disposal" of this Attachment.

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(K) PCB Management in the Laboratory

1. Portions of samples from which PCBs have been extracted for purposes of analysis will be considered unregulated for purposes of PCB disposal. Extracted portions of samples will be disposed of in accordance with other applicable federal, state, and local requirements.

2. Aqueous wastes resulting from samples containing PCBs of concentrations of 50 ppm or greater may be disposed of in accordance with Section (F) "Disposal" of this Attachment.

3. Acids and elemental mercury used in the cleanup of sample extracts which contain less than 2 ppm PCBs will be considered unregulated for purposes of PCB disposal. This standard will be applied to acids and/or mercury waste generated prior to and after the effective date of this Agreement.

4. Samples from known sources of PCBs of concentrations of 50 ppm or greater will be marked with the PCB M_L or M_S as appropriate. Samples which are not known to contain PCBs at 50 ppm or greater when received at an ORR laboratory, will be marked upon identification as containing PCBs at concentrations of 50 ppm or greater. Once a sample has been identified as containing PCBs, all resulting wastes from analysis of the sample will be managed as PCB in accordance with the terms of this Agreement. Samples containing PCBs at concentrations of 50 ppm or greater will be considered "in use" until full characterization for any desired constituent has been completed and no future analytical use is identified. The date removed from service for these samples will be the date the sample has no further analytical use. The date removed from service for any resultant wastes from these samples will be the date the waste is generated.

5. Analytical Instruments used for the analysis of samples containing concentrations of 50 ppm or greater will not be required to be disposed of or decontaminated as long as the only contact of

PCBs is through the normal course of analysis appropriate to the design of the instrument. Any chromatographic columns plastic tubing which cannot reasonably be shown to be purged of PCBs at the time of disposal for the column or tubing will be disposed of or decontaminated in accordance with the terms of this Attachment.

6. Laboratory glassware and other equipment may be decontaminated in accordance with commonly accepted laboratory techniques (e.g., rinsing with organic or aqueous solvent as appropriate) provided any rinsate is disposed of in accordance with the terms of Section (F) "Disposal" of this Attachment.

7. Non-liquid wastes other than excess sample material, such as sample bottles, disposable pipettes, tissue, disposable weighing pans, surgical gloves, etc., generated from analytical processes involving PCB samples may be collected in containers for disposal. Containers of this non-liquid laboratory waste may be disposed of based on the actual concentration of the collected waste in the container based on analysis of the contents. This laboratory waste will be disposed of in accordance with other applicable federal, state, and local requirements.

8. Limited quantities of PCBs, as defined in paragraph 10 below, may be used for:

   a. chemical analysis of PCBs for purposes of developing PCB analytical techniques;
   b. scientific experimentation on the physical properties of PCBs, chemical reactions of PCBs (other than the evaluation of the disposal or destruction of PCBs), and the chemical analysis of PCBs; and
   c. testing to determine environmental transport processes, biochemical transport processes, the effects of PCBs on the atmospheric environment, aquatic environments, terrestrial environments, and the health effects of PCBs such as general toxicity, sub-chronic toxicity, chronic toxicity, specific organ/tissue toxicity, neurotoxicity, genetic toxicity, and metabolic products.

9. R&D activities authorized pursuant to sub-section (K) 8, of this Attachment do not include research or analysis for the development of any PCB product, nor R&D for disposal, including, but not limited to, demonstrations for PCB disposal approvals, pre-demonstration tests, testing major modifications to approved PCB technologies, treatability studies, the development of new disposal technologies, and research on transformation processes such as biodegradation. R&D for such disposal activities are addressed in sub-section 12, of Section (F) "Disposal" of this Attachment.

10. The R&D activities conducted under this Section are subject to all other applicable Federal, State, and local laws and regulations. PCBs may be used for R&D in limited quantities as samples of environmental media in containers larger than 5 milliliters containing PCBs that have been packaged pursuant to applicable DOT performance standards, in a manner other than a totally enclosed manner, provided that:

a. DOE will notify the EPA in writing at least 30 days prior to the commencement of any R&D activity authorized under this Section. Each notification shall identify the person conducting the R&D activity, the location where the PCB R&D activities will be conducted, the quantity of PCBs to be treated, the type of R&D technology to be used, the general physical and chemical properties of the material being treated, and an estimate of the duration of the PCB activity.

b. No more than 100 grams of pure PCBs is used for R&D activities under this Section at each facility (K-25 Site, Y-12 Plant, ORNL) annually.

c. All PCB wastes (e.g., spent laboratory samples, residuals, unused samples, contaminated media/instrumentation, clothing, etc.), are stored in compliance with the storage requirements of Section (C) "Storage" of this Attachment.

d. Manifests are used for all R&D PCB wastes being transported from the R&D facility to a commercial storage and/or a disposal facility.

e. Material limitations for use of PCBs are set out at paragraph 10 b, of this Section and shall not be exceeded without prior approval from the EPA. Requests to exceed the material limitation must be submitted in writing to the EPA. Each request must provide a justification for the additional quantity or concentration needed, as well as specify the quantity or concentration of PCB material needed, and the duration of the activity.

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Rev. 0 (10/28/96)

Attachment II

STATISTICAL SAMPLING
REQUIRED FOR SPILL CLEANUP VERIFICATION

This attachment is applicable for PCB spills $\geq$ 500 ppm and < 500 ppm PCB spills involving one pound or more of PCBs by weight. If the cleanup area for a PCB spill which has occurred as of or subsequent to the effective date of this agreement is:

a. less than 100 cm^2 - record the exact surface area of the spill and cleanup area and wipe sample the entire area.

b. greater than 100 cm^2 but less than 500 cm^2 - take one randomly located 100 cm^2 wipe sample.

c. greater than 500 cm^2 but less than 1500 cm^2 - take three randomly located 100 cm^2 non-adjacent wipe samples.

d. greater than 1500 cm^2 but less than 30 m^2 - follow the sampling procedure set forth in EPA's spill cleanup manual.

e. greater than 30 m^2 - sampling procedures will be established on a case-by-case basis in consultation with EPA.

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Attachment III

ALTERNATIVE DECONTAMINATION PROCEDURE FOR EQUIPMENT/TOOLS WITH INTERNAL OR OTHER SURFACES NOT AMENABLE TO WIPE-SAMPLING

A. Any non-porous surface in contact with free flowing mineral oil dielectric fluid (MODEF) or other PCB liquid of a viscosity similar to or less viscous than MODEF at concentrations of ≤ 1,000 ppm PCBs may be decontaminated as follows:

1. Drain the free flowing liquid and allow the residual surfaces to drain for an additional 15 hours.

2. Dispose of drained liquid according to Section F "Disposal" of Attachment I of this Agreement.

3. Soak the contaminated or potentially contaminated surfaces in sufficient clean (containing < 2 ppm PCBs) verified aqueous decontamination fluid (VADF) such that there is a minimum of 100 milliliters of VADF for each 100 cm^2 of contaminated or potentially contaminated surface for at least 1 hour at room temperature (20° C or greater). VADFs include:

   a. Butcher's Hot Springs Cleaner$_{TM}$ (1:64 dilution); and

   b. Penetone 155 Power Cleaner$_{TM}$ (1:64 dilution).

4. Drain the VADF from the surfaces.

5. Dispose of the drained VADF in accordance with Section F "Disposal" of Attachment I of this Agreement.

B. Any non-porous surface in contact with free flowing MODEF or other PCB liquid of a viscosity similar to or less viscous than MODEF containing between 1000 and 10,000 ppm PCBs may be decontaminated as follows:

1. Drain the free flowing liquid and allow the residual surfaces to drain for an additional 15 hours.

2. Dispose of drained liquid according to Section F "Disposal" of Attachment I of this Agreement.

3. Soak the contaminated or potentially contaminated surfaces in sufficient clean (containing < 2 ppm PCBs) performance-based organic decontamination fluid (PODF) such that there is a minimum of 800 milliliters of PODF for each 100 cm^2 of contaminated or potentially contaminated surface for at least 1 hour at room temperature (20° C or greater). Approved PODFs include:

   a. kerosene;
   b. diesel fuel;
   c. terpene hydrocarbons; and
   d. mixtures of terpene hydrocarbons and terpene alcohols.

4. Drain the PODF from the surfaces.

5. Dispose of the PODF in accordance with Section F "Disposal" of Attachment I of this Agreement.

C. Any non-porous surface in contact with free flowing mineral oil dielectric fluid (MODEF) or other PCB liquid of a viscosity similar to or less viscous than MODEF at concentrations of > 10,000 ppm PCBs, or askaral PCB (up to 70 percent PCB in a mixture of trichlorobenzenes and tetrachlorobenzenes) may be decontaminated as follows:

1. Drain the free flowing PCBs and allow the residual surfaces to drain for an additional 15 hours.

2. Dispose of drained PCBs according to Section F "Disposal" of Attachment I of this Agreement.

3. Soak the contaminated or potentially contaminated surfaces in a sufficient amount of clean (containing < 2 ppm PCBs) PODF as identified in paragraph B 3, of this Attachment, such that there is a minimum of 800 milliliters of flushing solvent for each 100 cm^2 of contaminated or potentially contaminated surface for at least 15 hours at room temperature (20° C or greater).

4. Drain the PODF from the surfaces.

5. Dispose of the drained PODF in accordance with Section F "Disposal" of Attachment I of this Agreement.

6. Resoak the surfaces as specified in paragraph C 3, of this Attachment.

7. Drain the PODF from the surfaces.

8. Dispose of the drained PODF in accordance with Section F "Disposal" of Attachment I of this Agreement.

D. Confirmatory sampling is not required, but any person using this procedure to claim a surface is decontaminated must be able to substantiate that claim with records, photographs, video recordings, or other forms of documentation.

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