ENVIRONMENTAL ASSESSMENT

MODIFICATION AND EXPANSION OF X-7725A WASTE
ACCOUNTABILITY FACILITY FOR STORAGE OF
POLYCHLORINATED BIPHENYL WASTES
at
PORTSMOUTH GASEOUS DIFFUSION PLANT
PIKETON, OHIO

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NOVEMBER 1995

U.S. DEPARTMENT OF ENERGY
OAK RIDGE OPERATIONS OFFICE
OAK RIDGE, TENNESSEE

MASTER

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Department of Energy
Portsmouth Site Office
P.O. Box 700
Piketon, Ohio 45661-0700
Phone: 614-897-5010

January 29, 1996
EF-21-7423

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MMES - PORTS

Mr. T. David Taylor, Site Manager
Lockheed Martin Energy Systems
Post Office Box 628
Piketon, Ohio 45661

Dear Mr. Taylor:

**ENVIRONMENTAL ASSESSMENT (EA) AND FINDING OF NO SIGNIFICANT
IMPACT (FONSI) FOR THE PROPOSED MODIFICATION AND EXPANSION OF THE
X-7725A**

Enclosed is the aforementioned subject documents. A copy of the EA and FONSI should be forwarded to the public information center and to the local newspaper publicizing its availability.

If you have questions or comments, call Dewintus Perkins at extension 5524.

Sincerely,

Eugene W. Gillespie
Site Manager
Portsmouth Site Office

EF-21:Perkins

Enclosures

United States Government

Department of Energy

Oak Ridge Operations

memorandum

DATE: January 22, 1996

REPLY TO
ATTN OF: EF-21:Perkins

SUBJECT: ENVIRONMENTAL ASSESSMENT AND FINDING OF NO SIGNIFICANT IMPACT
FOR THE PROPOSED MODIFICATION AND EXPANSION OF X-7725 WASTE
ACCOUNTABILITY FACILITY FOR POLYCHLORINATED BIPHENYL WASTES
AT PORTSMOUTH GASEOUS DIFFUSION PLANT, PIKETON, OHIO

TO:

Joe W. Parks, Assistant Manager for Enrichment Facilities, EF-20/ORO

The subject environmental assessment (EA), DOE/EA-1122, dated November 1995 has been reviewed. Based on the results of the analysis reported in the EA, and after consultation with the ORO National Environmental Policy Act Compliance Officer, and the Office of Chief Council, I have determined that the EA is adequate for publication and is hereby approved. I have also determined that within the meaning of the National Environmental Policy Act of 1969, the proposed action is not a major Federal Action significantly affecting the quality of the human environment, therefore, the preparation of an environmental impact statement is not required. The basis for this determination is explained in the attached Finding of No Significant Impact (FONSI).

Please note that your office is responsible for providing public notice of the availability of the EA and FONSI in accordance with 40 CFR 1021.322. I am providing a copy of these documents for your files.

James C. Hall
Manager

Attachments

cc w/attachments: P. Phillips, SE-311/ORO
D. Taylor, LMES/PORTS
D. Perkins, EF-21/PORTS
J. Sheppard, EF-21/PORTS
J. Parks, EF-20/ORO
C. M. Borgstrom, EH-42, HQ/FORS

FINDING OF NO SIGNIFICANT IMPACT

Modification and Expansion of Building X-7725A for Storage of Polychlorinated Biphenyl Wastes at the Portsmouth Gaseous Diffusion Plant, Piketon, Ohio

AGENCY: U.S. DEPARTMENT OF ENERGY

ACTION: FINDING OF NO SIGNIFICANT IMPACT

SUMMARY: The U.S. Department of Energy (DOE) has completed an environmental assessment (DOE/EA-1122) of the proposed modification and expansion of Building X-7725A, the Waste Accountability Facility, at the Portsmouth Gaseous Diffusion Plant (PGDP), Piketon, Ohio, to provide a central storage location for polychlorinated biphenyl (PCB) wastes. DOE must manage PGDP PCB wastes in accordance with Toxic Substances Control Act (TSCA) requirements and as prescribed in a Federal Facilities Compliance Agreement (FFCA) between DOE and the U.S. Environmental Protection Agency (EPA). Based on the results of the analysis reported in the EA, DOE has determined that the proposed action is not a major Federal action that would significantly affect the quality of the human environment within the context of the National Environmental Policy Act of 1969 (NEPA). Therefore, preparation of an environmental impact statement (EIS) is not necessary, and DOE is issuing this Finding of No Significant Impact (FONSI).

PUBLIC AVAILABILITY OF EA AND FONSI: Copies of the EA and FONSI may be reviewed at the following address and obtained from:

Mr. Eugene W. Gillespie, Site Manager
U.S Department of Energy
P.O. Box 700
Piketon, Ohio 45661-0700
Telephone: (614) 897-5010.

INFORMATION ON THE NEPA PROCESS: For information on the NEPA process, please contact:

Ms. Patricia W. Phillips, NEPA Compliance Officer
U.S. Department of Energy
Environmental Protection Division, SE-311
P. O. Box 2001
Oak Ridge, Tennessee 37830-8739
Telephone: (423) 576-4200.

BACKGROUND: The U.S. Department of Energy (DOE) must manage PGDP wastes containing polychlorinated biphenyls (PCBs) in accordance with Toxic Substances Control Act (TSCA) requirements and as prescribed in a Federal Facilities Compliance Agreement (FFCA) between DOE and the U.S. Environmental Protection Agency (EPA). PCB-containing wastes are currently stored in the PORTS process buildings where they are generated. DOE proposes to modify and expand the Waste Accountability facility (X-7725A) at the Portsmouth Gaseous Diffusion Plant (PORTS), Piketon, Ohio, to provide a central storage location for these wastes. The proposed action is needed to eliminate the fire and safety hazards presented by the wastes. The preferred alternative is to modify and expand Bldg. X-7725A to store wastes generated by TSCA compliance activities.

ALTERNATIVES: In this EA, DOE considered four alternatives: (1) no action, which would require storing wastes in limited storage areas in existing facilities; (2) modification and expansion of the X-7725A waste accountability facility (preferred alternative); (3) construction of a new PCB waste storage building at either of two sites; and (4) shipment of PCB wastes to the DOE TSCA incinerator at the Oak Ridge, Tennessee, K-25 Site..

If no action is taken, PCB-contaminated wastes would continue to be stored in Bldgs. X-326, X-330, and X-333. As TSCA cleanup activities continue, the quantity of stored PCB waste would increase, which would subsequently cause congestion in the three process buildings and increase fire and safety hazards. Legal ramifications of no action may result if PCB wastes are not managed in accordance with TSCA and the FFCA.

The third alternative is construction of a pre-engineered 30,000 ft² building at either of two locations: 1) X-616 surface impoundment previously closed under RCRA or 2) X-752 hazardous waste storage building previously closed under RCRA. This alternative would be more costly to implement than modification of an existing building.

A fourth alternative is to ship both solid and liquid wastes to the DOE TSCA incinerator at the K-25 Site. Presently, the TSCA incinerator burns only liquid PCB wastes. It is uncertain whether incineration of out-of-state solid PCB wastes will be acceptable to the State of Tennessee. In the interim, DOE must continue to store solid PCB wastes at PORTS. Because this alternative would not provide either storage or disposal of solid PCB wastes, which are the bulk of the wastes in storage, it was dismissed from further consideration.

ENVIRONMENTAL IMPACTS:

The following discussion summarizes environmental impacts that could result from implementation of the proposed action, no action, and construction of a new PCB storage facility.

Proposed Action

Socioeconomics: The proposed action and alternatives would not have socioeconomic impacts because employees would be drawn from the existing PORTS work force. Construction, which could begin as early as April 1996, would last approximately five to seven months, with a total

peak work force of 70. About 10-14 workers would be needed to transport wastes from process buildings to X-7725A.

Ambient noise: Noise from operation of construction vehicles and equipment would be confined to the plant site and would not be audible to offsite receptors.

Environmental justice: Because the proposed action would not adversely impact the community, there would be no disproportionate adverse impacts to minority or economically disadvantaged populations.

Archaeological/historic resources: The Ohio State Historic Preservation Office (SHPO) has advised DOE that PORTS is located within a region where Adena and Hopewell Indian Mounds have existed. However, the SHPO has indicated that the X-7725A and alternate sites are not in an area of cultural and archaeological concern. The current National Register of Historic Places lists no structures of historical significance within the boundary of PORTS.

Air Quality: Potential sources of air quality impacts at the X-7725A site include the disturbance of soils and emissions from construction equipment. Earthwork would create fugitive dust (particulate matter) in the immediate area of disturbance. Ambient air quality near the construction site would be affected on a sporadic and temporary basis. Offsite ambient air quality would not be affected because particulates would disperse and dilute in the atmosphere as they move offsite. During periods of dry weather, disturbed areas would be sprayed with water or an anti-dust agent to minimize dust emissions. Gaseous exhaust emitted by construction vehicles, tools, and machinery contains small quantities of carbon monoxide, nitrogen oxides, sulfur dioxide, and unburned hydrocarbons. Exhaust fumes may be detected by workers, but would not affect offsite receptors.

Water Resources: Potential sources of water resources impacts at the X-7725A site include erosion and sedimentation from soils disturbance and spills of hazardous and/or toxic materials. During construction, erosion and sedimentation runoff would be minimized by Best Management Practices, such as the use of geotextile fabric or high-density polyethylene silt fences, straw bale barriers, and sediment traps. Because of the small area of land disturbed and the distance to the nearest surface water (0.5 mile), no adverse impacts would be expected. There are no wild and scenic rivers within a 50-mile radius of PORTS.

Groundwater would not be affected by the proposed action unless there is an accidental spill. Accidental spills of hazardous materials can be quickly cleaned up and impacts to soils, groundwater, and surface waters minimized through the use of appropriate equipment and cleanup procedures

Geology and Soils: Geologic formations and topography would not be altered by the minor excavation that would be necessary for expansion of Bldg. X-7725A. Because the Natural Resources Conservation Service has advised DOE that there is no prime farmland within the PORTS boundary or immediately adjacent to PORTS, there would be no adverse impacts to soils.

Land Use: The proposed action would be compatible with the present use of the site as an industrial facility.

Ecology: A very small area of previously disturbed land would be affected by site clearing and construction. There are no important natural areas, critical habitat, and populations of federal- or state-listed threatened and endangered species at or near the X-7725A site that could be affected by soils disturbance, particulate and gaseous emissions, erosion and sedimentation runoff, and noise from vehicle and machinery operation.

Floodplain: PORTS facilities are located beyond the 100-year and 500-year floodplain of the Scioto River and its tributaries.

Wetlands: There are no wetlands at the proposed project site and none nearby that could be affected by soils disturbance, particulate and gaseous emissions, and/or erosion and sedimentation runoff.

Health and Safety: Public health and safety would not be affected by the proposed action because all activities would be conducted on the PORTS site. Occupational health and safety would be improved by the removal of fire and safety hazards in the process buildings. Workers would be exposed to common construction hazards, and injuries due to falls, burns, spills, etc. could occur. There is a low probability of accidental occupational exposure to PCBs and radioactivity in the waste during handling and transport because workers would wear personal protective equipment (PPE) and would be trained in appropriate procedures for handling PCBs.

Cumulative impacts: Cumulative impacts are those that result from individual actions that alone may be insignificant, but may be collectively significant. Other ongoing or planned projects at PORTS include the construction of UF₆ cylinder storage yards and the construction and operation of a solid waste landfill. These projects would be located in a different area of PORTS from the X-7725A site, and any impacts that result from them would not be additive with impacts of the expansion of X-7725A.

No Action

If no action is taken, the risk of a fire in the process buildings will increase as additional PCB wastes are stored. The fire load is affected by quantities of plastic spill containment pallets, wood pallets, and waste materials such as paper spill pads, PPE, and miscellaneous oil-covered materials. If a fire occurs in the process buildings, occupational injuries or fatalities could result. The resulting building contamination would render the facility unusable due to the high cost of decontamination.

Construction of New PCB Waste Storage Facility

Construction of a new waste storage building at either of two alternate sites would result in the same types of impacts to air quality and water resources as the proposed action. Because about 0.5 acres of land would be disturbed, atmospheric emissions and sediment runoff would be potentially greater than for the preferred alternative. Land use at either site would be compatible with other surrounding uses. No threatened and endangered species, prime farmland, archaeological/historic resources, floodplain, and wetlands would be impacted by construction of a new facility at either site. Occupational health and safety hazards would be the same as those associated with the preferred alternative.

DETERMINATION: Based on the findings of the EA and the implementation of mitigation defined in the EA and this FONSI, DOE has determined that the proposed modification and expansion of Building X-7725A at the Portsmouth Gaseous Diffusion Plant does not constitute a major Federal action that would significantly affect the quality of the human environment within the context of the National Environmental Policy Act. Therefore, preparation of an environmental impact statement is not required.

Issued at Oak Ridge, Tennessee, this 22 day of Jan. 1996.

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

January 22, 1996

EF-21:Perkins

**ENVIRONMENTAL ASSESSMENT AND FINDING OF NO SIGNIFICANT IMPACT
FOR THE PROPOSED MODIFICATION AND EXPANSION OF X-7725 WASTE
ACCOUNTABILITY FACILITY FOR POLYCHLORINATED BIPHENYL WASTES
AT PORTSMOUTH GASEOUS DIFFUSION PLANT, PIKETON, OHIO**

Joe W. Parks, Assistant Manager for Enrichment Facilities, EF-20/ORO

The subject environmental assessment (EA), DOE/EA-1122, dated November 1995 has been reviewed. Based on the results of the analysis reported in the EA, and after consultation with the ORO National Environmental Policy Act Compliance Officer, and the Office of Chief Council, I have determined that the EA is adequate for publication and is hereby approved. I have also determined that within the meaning of the National Environmental Policy Act of 1969, the proposed action is not a major Federal Action significantly affecting the quality of the human environment, therefore, the preparation of an environmental impact statement is not required. The basis for this determination is explained in the attached Finding of No Significant Impact (FONSI).

Please note that your office is responsible for providing public notice of the availability of the EA and FONSI in accordance with 40 CFR 1021.322. I am providing a copy of these documents for your files.

James C. Hall
Manager

Attachments

cc w/attachments: P. Phillips, SE-311/ORO
D. Taylor, LMES/PORTS
D. Perkins, EF-21/PORTS
J. Sheppard, EF-21/PORTS
J. Parks, EF-20/ORO
C. M. Borgstrom, EH-42, HQ/FORS

OFFICIAL FILE COPY

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RTG. SYMBOL: Sheppa
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Department of Energy

Oak Ridge Field Office
P.O. Box 2001
Oak Ridge, Tennessee 37831—
December 12, 1995
EF-21-7316

Mr. Larry Weaver
State Single Point of Contact
State Clearing House
Office of Budget and Management
30 East Broad, 34th Floor
Columbus, Ohio 43266-0411

Dear Mr. Weaver:

**NATIONAL ENVIRONMENTAL POLICY ACT (NEPA) ENVIRONMENTAL
ASSESSMENT (EA) AND FINDING OF NO SIGNIFICANT IMPACT (FONSI) FOR
THE MODIFICATION AND EXPANSION OF THE X-7725A WASTE
ACCOUNTABILITY FACILITY AT THE PORTSMOUTH GASEOUS DIFFUSION
PLANT, PIKETON, OHIO**

Enclosed are copies of the subject EA and FONSI. The Department of Energy (DOE) has prepared the subject EA to assess the potential impacts of the Modification and Expansion of the X-7725A Waste Accountability Facility at the Portsmouth Gaseous Diffusion Plant.

Based on the EA and supporting analyses, DOE has determined that the proposed action does not constitute a major federal action significantly affecting the quality of the human environment, pursuant to NEPA of 1969. Accordingly, the preparation of an Environmental Impact Statement (EIS) is not required, and DOE is issuing the subject FONSI.

If you and your staff wish to receive further information about this EA and FONSI, please contact Dewintus Perkins at (614) 897-5524. If you wish to receive additional information about the NEPA process, please call me at (423) 576-4200.

Sincerely,

A handwritten signature in cursive script, reading "James I. Elmer".

for Patricia W. Phillips
NEPA Compliance Officer
Oak Ridge Operations Office

Enclosures

**THE UNITED STATES DEPARTMENT OF ENERGY
ANNOUNCES THE AVAILABILITY FOR PUBLIC REVIEW
OF THE ENVIRONMENTAL ASSESSMENT
AND
FINDING OF NO SIGNIFICANT IMPACT
FOR THE MODIFICATION AND EXPANSION OF THE X-7725A WASTE
ACCOUNTABILITY FACILITY FOR POLYCHLORINATED BIPHENYL WASTES**

The U.S. Department of Energy (DOE) announces that the Environmental Assessment (EA) report and Finding of No Significant Impact (FONSI) for the modification and expansion of the X-7725A waste accountability facility for polychlorinated biphenyl (PCB) wastes at the Portsmouth Gaseous Diffusion Plant have been placed in the Environmental Information Center and are available for public review through February 29, 1996.

DOE prepared an EA to analyze the potential environmental consequences of this proposed action and the alternatives. This EA was prepared in accordance with the requirements of the National Environmental Policy Act (NEPA), the Council on Environmental Quality regulations implementing NEPA, and the DOE NEPA regulations. The purpose of this EA was to evaluate potential impacts to resources directly or indirectly affected by the the modification and expansion of the X-7725A waste accountability facility for polychlorinated biphenyl (PCB) wastes on plantsite. The EA describes the resources in the existing environment of PORTS that could be impacted by the proposed action. Based on the analysis in the EA, DOE has determined that the proposed action is not a major Federal action that would significantly affect the quality of the human environment within the context of NEPA. Therefore, preparation of an Environmental Impact Statement (EIS) is not required, and DOE has issued a FONSI.

The EA and FONSI for the modification and expansion of the X-7725A waste accountability facility for polychlorinated biphenyl (PCB) wastes at Ports are available at the following location and times:

U.S.Department of Energy's
Environmental Information Center
505 W. Emmitt Avenue, Suite 3
Waverly, Ohio 45690
Telephone: (614) 947-5093
Hours: Monday, Tuesday, Wednesday, & Friday 10:00 am - 4:00 pm
Thursday 9:00 am - 12:00 noon

Technical Contact: Dewintus Perkins
NEPA Document Manager
U.S. Department Of Energy
P.O. Box 700
Piketon, Ohio 45661
Telephone: (614) 897-5524

Questions concerning the DOE NEPA process may be directed to Carol Borgstrom (202) 586-4600 or (800) 472-2756.

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ABBREVIATIONS AND ACRONYMS

CERCLA	Comprehensive Environmental Response, Liability, and Compensation Act
CFR	Code of Federal Regulations
DNR	Department of Natural Resources (Ohio)
DOE	U.S. Department of Energy
DOT	U.S. Department of Transportation
EA	environmental assessment
EPA	U.S. Environmental Protection Agency
EPCRA	Emergency Preparedness and Community Right-to-Know Act
FFCA	Federal Facilities Compliance Agreement
FWS	U.S. Fish and Wildlife Service
ft	foot (feet)
gal	gallon
LLW	low-level (radioactive) waste
NEPA	National Environmental Policy Act
NPDES	National Pollutant Discharge Elimination System
OAC	Ohio Administrative Code
ORO	Oak Ridge Operations (DOE)
OSHA	Occupational Safety and Health Administration
PCB	polychlorinated biphenyl(s)
PORTS	Portsmouth Gaseous Diffusion Plant
PPE	personal protective equipment
ppm	parts per million
RCRA	Resource Conservation and Recovery Act
SHPO	State Historic Preservation Officer
SO ₂	sulfur dioxide
TSCA	Toxic Substances Control Act
UF ₆	uranium hexafluoride
USEC	United States Enrichment Corporation
²³⁵ U	uranium-235 isotope

SUMMARY

The U.S. Department of Energy (DOE) must manage wastes containing polychlorinated biphenyls (PCBs) in accordance with Toxic Substances Control Act (TSCA) requirements and as prescribed in a Federal Facilities Compliance Agreement (FFCA) between DOE and the U.S. Environmental Protection Agency (EPA). PCB-containing wastes are currently stored in the PORTS process buildings where they are generated. DOE proposes to modify and expand the Waste Accountability facility (X-7725A) at the Portsmouth Gaseous Diffusion Plant (PORTS), Piketon, Ohio, to provide a central storage location for these wastes. The proposed action is needed to eliminate the fire and safety hazards presented by the wastes.

In this EA, DOE considers four alternatives: (1) no action, which requires storing wastes in limited storage areas in existing facilities; (2) modifying and expanding the X-7725A waste accountability facility; (3) constructing a new PCB waste storage building; and (4) shipping PCB wastes to the K-25 TSCA incinerator.

If no action is taken, PCB-contaminated wastes would continue to be stored in Bldgs. X-326, X-330, and X-333. As TSCA cleanup activities continue, the quantity of stored waste would increase, which would subsequently cause congestion in the three process buildings and increase fire and safety hazards.

The preferred alternative is to modify and expand Bldg. X-7725A to store wastes generated by TSCA compliance activities. Construction, which could begin as early as April 1996, would last approximately five to seven months, with a total peak work force of 70.

A third alternative is to construct a pre-engineered 30,000 ft² building at either of two locations: 1) X-616 surface impoundment previously closed under RCRA or 2) X-752 hazardous waste storage building previously closed under RCRA. This alternative would be more costly to implement than modification of an existing building.

A fourth alternative is to ship both solid and liquid wastes to the Oak Ridge TSCA incinerator at the K-25 Site. Presently, the DOE TSCA incinerator burns only liquid PCB wastes. It is uncertain whether incineration of out-of-state solid PCB wastes will be acceptable to the State of Tennessee. In the interim, DOE must continue to store solid PCB wastes at PORTS. Because this alternative would not provide either storage or disposal of solid PCB wastes, which are the bulk of the wastes in storage, it was dismissed from further consideration.

Results of impacts analyses are as follows:

Proposed Action

Socioeconomics: The proposed action and alternatives would not have socioeconomic impacts because employees would be drawn from the existing PORTS work force. Construction, which could begin as early as April 1996, would last approximately five to seven months, with a total peak work force of 70. About 10-14 workers would be needed

to transport wastes from process buildings to X-7725A.

Ambient noise: Noise from operation of construction vehicles and equipment would be confined to the plant site and would not be audible to offsite receptors.

Environmental justice: Because the proposed action would not adversely impact the community, there would be no disproportionate adverse impacts to minority or economically disadvantaged populations.

Archaeological/historic resources: PORTS is located within a region where Adena and Hopewell Indian Mounds have existed. However, the (State Historic Preservation Officer (SHPO) has indicated that the X-7725A and alternate sites are not in an area of cultural and archaeological concern. The National Register of Historic Places lists no structures of historical significance within the boundary of PORTS.

Air Quality: Potential sources of air quality impacts at the X-7725A site include the disturbance of soils and emissions from construction equipment. Earthwork would create fugitive dust (particulate matter) in the immediate area of disturbance. Ambient air quality near the construction site would be affected on a sporadic and temporary basis. Offsite air quality would not be affected because particulates would disperse and dilute in the atmosphere as they move offsite. During periods of dry weather, disturbed areas would be sprayed with water or an anti-dust agent to minimize dust emissions. Gaseous exhaust emitted by construction vehicles, tools, and machinery contains small quantities of carbon monoxide, nitrogen oxides, sulfur dioxide, and unburned hydrocarbons. Exhaust fumes may be detected by workers, but would not affect offsite receptors.

Water Resources: Potential sources of water resources impacts at the X-7725A site include erosion and sedimentation from soils disturbance and spills of hazardous and/or toxic materials. During construction, erosion and sedimentation runoff would be controlled by the use of Best Management Practices, such as the use of geotextile fabric or high-density polyethylene silt fences, straw bale barriers, and sediment traps. Because of the small area of land disturbed and the distance to the nearest surface water (0.5 mile), no adverse impacts would be expected. There are no wild and scenic rivers within a 50-mile radius of PORTS.

Groundwater would not be affected by the proposed action unless there is an accidental spill. Accidental spills of hazardous materials can be quickly cleaned up and impacts to soils, groundwater, and surface waters minimized through the use of appropriate equipment and cleanup procedures.

Geology and Soils: Geologic formations and topography would not be altered by the minor excavation that would be necessary for expansion of Bldg. X-7725A. Because there is no prime farmland within the PORTS boundary or immediately adjacent to PORTS, there would be no adverse impacts to soils.

Land Use: The proposed action would be compatible with the present use of the site as an industrial facility.

Ecology: A very small area of previously disturbed land would be affected by site clearing and construction. There are no important natural areas, critical habitat, and populations of federal- or state-listed threatened and endangered species at or near the X-7725A site that could be affected by soils disturbance, particulate and gaseous emissions, erosion and sedimentation runoff, and noise from vehicle and machinery operation.

Floodplain: No adverse impacts would be expected because PORTS facilities are located beyond the 100-year and 500-year floodplain of the Scioto River and its tributaries.

Wetlands: There are no wetlands at the proposed project site and none nearby that could be affected by soils disturbance, particulate and gaseous emissions, and/or erosion and sedimentation runoff.

Health and Safety: Public health and safety would not be affected by the proposed action because all activities would be conducted on the PORTS site. Occupational health and safety would be improved by the removal of fire and safety hazards in the process buildings. Workers would be exposed to common construction hazards, and injuries due to falls, burns, spills, etc. could occur. There is a low probability of accidental occupational exposure to PCBs and radioactivity in the waste during handling and transport because workers would wear personal protective equipment (PPE) and would be trained in appropriate procedures for handling PCBs.

Cumulative impacts: Cumulative impacts are those that result from individual actions that alone may be insignificant, but may be collectively significant. Other ongoing or planned projects at PORTS are (1) construction of UF₆ cylinder storage yards and construction and operation of a solid waste landfill. These projects would be located a substantial distance away from the site of the proposed action, and any impacts that result from them would not be additive with impacts of the expansion of X-7725A.

No Action

If no action is taken, the risk of a fire in the process buildings will increase as additional PCB wastes are stored. The fire load is affected by quantities of plastic spill containment pallets, wood pallets, and waste materials such as paper spill pads, PPE, and miscellaneous oil-covered materials. If a fire occurs in the process buildings, occupational injuries or fatalities could result. The resulting building contamination would render the facility unusable due to the high cost of decontamination.

Construction of New PCB Waste Storage Building

Construction of a new waste storage building at either of two alternate sites would result in the same types of impacts to air quality and water resources as the proposed action. Because about 0.5 acres of land would be disturbed, atmospheric emissions and sediment runoff would be potentially greater than for the preferred alternative. Land use at either site would be compatible with other surrounding uses. No threatened and endangered species, prime farmland, archaeological/historic resources, floodplain, and wetlands would be impacted by construction of a new facility at either site. Occupational health and safety hazards would be the same as those associated with the preferred alternative.

1.0 INTRODUCTION

1.1 PURPOSE OF AND NEED FOR ACTION

The U.S. Department of Energy (DOE) must manage wastes containing polychlorinated biphenyls (PCBs) in accordance with Toxic Substances Control Act (TSCA) requirements and as prescribed in a Federal Facilities Compliance Agreement (FFCA) between DOE and the U.S. Environmental Protection Agency (EPA). A copy of the FFCA, which was effective February 20, 1992 (FFCA, 1992), is provided in Appendix A. PCB-containing wastes are currently stored in the PORTS process buildings where they are generated. DOE proposes to modify and expand the Waste Accountability facility (X-7725A) at the Portsmouth Gaseous Diffusion Plant (PORTS), Piketon, Ohio (Fig. 1), to provide a central storage location for these wastes. The proposed action is needed to eliminate the fire and safety hazards presented by the wastes.

1.2 BACKGROUND

1.2.1 PORTS Operations

The mission of PORTS is the separation of uranium isotopes through gaseous diffusion and the withdrawal and shipment of products enriched in the isotope uranium-235 (^{235}U). Process support operations at the plant include the feed and withdrawal of material from the primary process, treatment of water for both potable and cooling purposes, generation of steam for the diffusion process, decontamination of equipment removed for maintenance or replacement, and waste management. The enriched product is withdrawn from the process to fill customer orders.

Title IX of the Energy Policy Act of 1992 established the United States Enrichment Corporation (USEC) and transferred the uranium enrichment production functions of DOE to USEC effective July 1, 1993 (Public Law 102-486, 106 Stat. 2923). While USEC is responsible for production of enriched uranium, DOE remains responsible for compliance with provisions of the FFCA including adequate storage facilities for TSCA regulated waste. DOE has retained responsibility for other waste storage facilities at PORTS (including but not limited to the X-7725 RCRA mixed waste storage facility) and is responsible for all waste generated prior to the transfer of operations to USEC.

1.2.2 Federal Facilities Compliance Agreement

At PORTS, most PCB-containing wastes result from maintenance and spill clean-up activities being conducted to meet the requirements of the FFCA. (See Attachment I to the FFCA in Appendix A.) The FFCA established a remedial implementation plan

Figure 1. Geographic location of Portsmouth Gaseous Diffusion Plant.

(PORTS, 1992) to "bring DOE's Uranium Enrichment Plants (and support facilities) located in Portsmouth, Ohio, and Paducah, Kentucky; and DOE's former Uranium Enrichment Plant (and support facilities) located in Oak Ridge, Tennessee, into full compliance" with the TSCA and PCB regulations found at 40 Code of Federal Regulations (CFR) Part 761 *et seq.* The FFCA identifies actions to remove PCB-contaminated motor exhaust duct gaskets and PCB-containing lubricating oil from PORTS gaseous diffusion process buildings. It also specifies how nonradioactive and radioactive PCB-contaminated wastes will be stored [2(E) and 2(G) of Attachment I to FFCA; see Appendix A].

1.2.3 Past and Present PCB Contamination

Prior to 1980, eight of 29 PORTS lubricating oil systems were inadvertently contaminated with PCBs. These systems had residual PCB contamination concentrations ranging from 50 to 300 parts per million (ppm) (see Appendix B). In 1993, DOE removed PCB-contaminated lubricating oil from all plant areas and replaced it with PCB-free oil. This activity generated a large volume of TSCA-regulated waste, which was transported by tanker truck to the DOE K-25 Site in Oak Ridge, Tennessee, for disposal by incineration.

Still to be remediated are three process building ventilation systems. Motor exhaust ducts in these systems were assembled with felt gaskets at each joint. The gaskets were either saturated with PCBs as a sealant and/or had PCB-laden adhesive applied prior to attachment to the flanges. PCB-free lubricating oil from the motor bearings was drawn into the exhaust ducts and passed through the felt gaskets, leaching PCBs from the gaskets and adhesives. PCB-contaminated oil subsequently has leaked onto the floor. Undisturbed, the gaskets pose no threat to human health or the environment. However, PCB-contaminated oil that leaks from gaskets into occupied spaces is a potential threat to the health and safety of process building workers and could contribute to environmental contamination (e.g., water used to clean and rinse floors). PCB concentrations in the oil drips range from 120 to 36,000 ppm. According to the TSCA (40 CFR 761.3), this leakage and transport is considered to be a PCB spill, and prompt cleanup is required.

1.2.4 PCB Cleanup Activities

Troughing wastes are being generated in three interconnected process buildings: X-326, X-330, and X-333 (see Fig. 2). As part of FFCA cleanup requirements, polyvinyl chloride pipes ("troughs") were split lengthwise and placed under the duct joints to catch oil droplets and direct them to stainless steel containers. All motor exhaust ducts in the three process buildings have troughs installed in accordance with the FFCA.

Table 1 lists the sources and expected quantities of PCB wastes from troughing activities and process operations. Construction wastes include alternate troughs (i.e., troughs that were installed prior to FFCA negotiations and do not meet the specifications set forth in the FFCA), personal protective equipment (PPE), cleaning

Table 1. Expected PCB-contaminated waste streams from troughing activities in three process buildings at the Portsmouth Gaseous Diffusion Plant.

SOURCE AND TYPE	WASTE CLASSIFICATION	QUANTITY	
		55-gal drums	Weight (tons)
Troughing/clean up/construction			
Alternate troughs ^a	PCB ^b	330	34
Personal protective equipment	PCB, LLW ^c	473	72
Cleaning wastes	PCB, LLW	222	54
Liquid wastes	PCB, LLW	10	2
Process Operation			
Liquid wastes	PCB	2/year	0.5/yr
Personal protective equipment	PCB, LLW	d	d

^a Refers to troughs in place before effective date of FFCA; they would be removed and replaced according to FFCA requirements.

^b Polychlorinated biphenyl(s).

^c Low-level radioactive waste.

^d A very small volume of PPE is produced by operational activities. The volume of this waste is significantly less than the volume currently produced by cleanup activities.

wastes and some liquid wastes. Small volumes of PPE (e.g., coveralls and gloves) would be generated during oil collection and maintenance of the troughing systems. This waste would be similar to waste generated from troughing activities. Very little process waste [less than five 55-gallon (gal)] of PCB-contaminated oil per year) would be generated from the troughing systems.

Bldg. X-7725A would store radioactive PCB wastes indefinitely. The FFCA specifies that non-radioactive PCB wastes may be stored for one year at an approved location. Those PCB wastes containing RCRA-hazardous constituents are stored in adjacent Bldg. X-7725 (see Fig. 1). Final disposal of PCB wastes would occur offsite [as specified in Appendix A, Section 2 (D) of the FFCA].

LOCKHEED MARTIN

Figure 2. Location of the proposed action: Portsmouth Gaseous Diffusion Plant X-7725A Waste Accountability Facility.

1.3 SCOPE OF THIS EA

This environmental assessment (EA) has been prepared by DOE to satisfy the requirements of the National Environmental Policy Act (NEPA) of 1969. It was prepared in accordance with the President's Council on Environmental Quality regulations that implement NEPA (40 CFR Parts 1500-1508) and the DOE NEPA Rule (10 CFR 1021 *et seq*). The dual objectives of this EA are to provide the basis for a determination of the significance of potential environmental impacts of the proposed action and to ensure that decision making about the proposed action includes consideration of impacts. If impacts are potentially significant, an environmental impact statement will be prepared. If not, DOE will issue a finding of no significant impact for the proposed action.

In this EA, DOE considers four alternatives: (1) no action, which requires storing wastes in limited storage areas in existing facilities; (2) modifying and expanding the X-7725A waste accountability facility; (3) constructing a new PCB waste storage building; and (4) shipping PCB wastes to the K-25 TSCA incinerator. The following resources would not be affected.

Floodplain: PORTS facilities are located beyond the 100-year and 500-year floodplain of the Scioto River and its tributaries at PORTS (FEMA, 1988).

Wetlands: There are no jurisdictional wetlands at the proposed project site or nearby.

Wild and Scenic Rivers: There are no wild and scenic rivers within a 50-mile radius of PORTS (MMES, 1992).

Threatened and endangered species and critical habitat: There are no federal- or state-listed threatened or endangered species at the proposed project site.

Prime farmland soils: The proposed site and alternate sites are located in previously disturbed areas that are not prime farmland (USDA, 1990).

Socioeconomic resources: The proposed action and alternatives would not have socioeconomic impacts because employees would be drawn from the existing PORTS work force. Construction, which could begin as early as April 1996, would last approximately five to seven months, with a total peak work force of 70. About 10-14 workers would be needed to transport wastes from process buildings to X-7725A.

Ambient noise: Noise from operation of construction vehicles and equipment would be confined to the plant site and would not be audible to offsite receptors.

Environmental justice: Because the proposed action would not adversely impact the community, there would be no disproportionate adverse impacts to minority or

economically disadvantaged populations.

Archaeological/historic resources: PORTS is located within a region where Adena and Hopewell Indian Mounds have existed. However, the State Historic Preservation Officer (SHPO) has indicated that the X-7725A and alternate sites are not in an area of cultural and archaeological concern (see Appendix C). The current National Register of Historic Places lists no structures of historical significance within the boundary of PORTS.

1.4 AGENCY CONSULTATION

DOE has coordinated the NEPA process with government agencies and the public. This EA will be submitted to the Ohio Environmental Protection Agency (EPA) for review prior to a DOE decision on the potential for significant impacts.

In accordance with Section 106 of the National Historic Preservation Act, DOE consulted with the State Historic Preservation Officer (SHPO) about the proposed changes to Bldg. X-7725A. The Ohio Department of Natural Resources (DNR) and the U.S. Fish and Wildlife Service (FWS) were contacted for information about rare species, unique natural features, and species listed as threatened or endangered under the Endangered Species Act. Correspondence is provided in Appendix C.

2.0 ALTERNATIVES, INCLUDING THE PROPOSED ACTION

2.1 NO ACTION

If no action is taken, PCB-contaminated wastes would continue to be stored in Bldgs. X-326, X-330, and X-333. As TSCA cleanup activities continue, the quantity of stored waste would increase, which would subsequently cause congestion in the three process buildings and increase fire and safety hazards.

2.2 MODIFY AND EXPAND X-7725A WASTE ACCOUNTABILITY FACILITY

The preferred alternative is to modify and expand Bldg. X-7725A to store wastes generated by TSCA compliance activities. Construction, which could begin as early as April 1996, would last approximately five to seven months, with a total peak work force of 70.

2.2.1 Building, Utility, and Road Modifications

Building X-7725A is a one-story pre-fabricated metal structure located on the west side of PORTS, just north of Building X-7725. It measures 148.5 ft wide by 200.5 ft long and has an area of 30,000 ft². A 90-day RCRA storage area for groundwater samples is located in X-7725A. The building is ventilated by a single ridge vent and is within a security-monitored area. The site has no radiological or hazardous waste contamination (Lockwood Greene, 1994).

Figure 3 illustrates the layout of Bldg. X-7725A before and after the proposed action. Modifications would expand the 30,000 ft² facility on the south and east side by 50 ft, which would add 20,000 ft² to the building. An existing loading dock would remain in place, and a gully east of the building would not be affected. A concrete ramp would be constructed for each bay to facilitate forklift truck access into the storage areas. The perimeter road around the building would remain in place, with minor modifications along the east side of the structure.

Building X-7725A was manufactured by Varco Pruden (VP); therefore, VP materials would be used to tie-in and match building panels, gutters, and flashing. The roof slope would remain as is at 1:12. The new roof area would be guttered, and downspouts would route drainage to a collection pipe, which would tie into an existing 72-inch storm sewer line. Storm drains around the building would be relocated and sized to accommodate the building addition.

Sanitary water lines would be extended from a fire-water loop about 100 ft west of the building to storage bays to provide emergency shower and eye-wash stations. Building X-7725A has a gridded dry-pipe sprinkler system. It would be demolished, and a wet-pipe valve and riser, which would respond faster than the dry-pipe system, would be installed to meet the new design density.

The existing 112.5 KVA service may need replacement; service size will not be

determined until Title II design is completed. Also, during Title II design, it will be determined whether the new storage area must meet DOE Order 6430.1A, *General Design Criteria*, regarding the storage of toxic materials. If so, more exit doors and exit corridors would need to be added to the structure.

The facility use category per University of California Research Lab (UCRL)-15910, *Design and Evaluation Guidelines for Department of Energy Facilities Subjected to Natural Phenomena Hazards*, is "low hazard" (Lockwood Greene, 1994).

Criteria for TSCA waste storage (40 CFR 761.65) would be incorporated into X-7725A modifications. The facility must

- have adequate roof and walls to prevent rain water from reaching the stored PCBs and PCB items;
- have adequate floor space having a continuous berm a minimum 6-inches high. The floor and berm must contain a volume equal to at least two times the internal volume of the largest PCB-contaminated item or container stored therein or 25% of the total internal volume of all PCB-contaminated items or containers stored therein, whichever is greater;
- have no drain valves, floor drains, expansion joints, sewer lines, and/or openings that permit liquids to flow from the bermed area; and
- have floors and berms constructed of continuous smooth and impervious materials, such as concrete or steel, to prevent or minimize penetration of PCBs.
- be located above the 100-year floodplain.

2.2.2 Onsite Transport of PCB Wastes

PCB wastes presently stored in process buildings would be transported by flatbed truck to Building X-7725A. Distances travelled would be 1.0 mile, 1.6 miles, and 1.8 miles from buildings X-326, Door 6; X-330, Door 3; and X-333, Door 5, respectively. Forklifts would be used for handling drums. Prior to handling, health physics technicians would survey for radiological contamination. Ten to 14 waste handlers and technicians would be needed.

2.2.3 Storage of PCB Wastes

Collection of oil leaks and spills would continue until all leaking gaskets are replaced. These and other PCB wastes from troubleshooting activities would continue to be placed in Department of Transportation-(DOT)-approved, liquid-tight drums that would be stored on 4-ft square wooden pallets in Building X-7725A. The drums would not require nuclear criticality spacing. Four drums would be placed on each pallet, and pallets would be stacked three high. The total height of the stacked drums and pallets would be about 10.5 ft. Pallets would be grouped in 2,500 ft² areas separated by 10-foot-wide access aisles. In addition, two-foot-wide inspection aisles would be provided between each row of pallets within each area. A 6-inch dike would be installed around the storage area for containment of potentially contaminated fire water.

2.3 CONSTRUCTION OF A PCB WASTE STORAGE BUILDING

A third alternative is to construct a pre-engineered 30,000 ft² building at either of two locations: 1) X-616 surface impoundment previously closed under RCRA or 2) X-752 hazardous waste storage building previously closed under RCRA (see Fig. 2). The storage building would be designed and constructed in accordance with TSCA criteria (40 CFR 761.65; see Sect. 2.2) and would have the same design and services as X-7725A. About 0.5 acres of land would be needed.

Alternative sites for the proposed PCB waste storage facility are located in an area previously disturbed by industrial development within the secured boundaries of the plant and are easily accessible by plant personnel. Use of the X-752 facility would require decontamination and approval by the Ohio EPA. This alternative would be more costly to implement than modification of an existing building.

2.4 SHIPMENT OF PCB WASTES TO THE OAK RIDGE K-25 SITE

A fourth alternative is to ship both solid and liquid wastes to the DOE Oak Ridge TSCA incinerator at the K-25 Site. Presently, the DOE TSCA incinerator burns only liquid PCB wastes. Following end-of-year maintenance in 1995, the incinerator may begin test burns of solid PCB wastes, and if successful, will follow with PCB solids burns from DOE facilities (Marty Atkins, DOE-ORO, personal communication with Andrea Campbell, DOE-ORO, September 19, 1995).

PORTS has an aggressive schedule for transporting liquid PCB wastes to disposal at the TSCA incinerator. In fiscal year 1995, about 129,000 were sent to the K-25 Sites. About 175,000 lbs of liquids PCB wastes are expected to be sent in fiscal year 1996. In 1995, no solid PCB wastes were transported from PORTS to the TSCA incinerator. It is uncertain whether incineration of out-of-state solid PCB wastes will be acceptable to the State of Tennessee. In the interim, DOE must continue to store solid PCB wastes at PORTS. Because this alternative would not provide either storage or disposal of solid PCB wastes, which are the bulk of the wastes in storage, it was dismissed from further consideration.

3.0 THE AFFECTED ENVIRONMENT

3.1 AIR QUALITY

PORTS is located in an attainment area for criteria pollutants regulated in the National Ambient Air Quality Standards of the Clean Air Act and Ohio EPA regulations [Ohio Administrative Code (OAC) 3745-17]. The nearest Class I Prevention of Significant Deterioration area is the Dolly Sods Wilderness Area in eastern West Virginia, which is 174 miles east of PORTS.

PORTS is located in the humid continental climate zone, which is situated between the dominating polar front and the tropical climates. Therefore, temperature and precipitation extremes are common. Precipitation varies greatly from year to year, averaging 41.3 inches from 1951 to 1980. July and August are the wettest months of the year due to thunderstorms; October and November are the driest. Winters are moderately cold, with temperatures of 32° Fahrenheit (F) or below occurring an average of 99 days per year. In summer an average of 26 days are above 90° F (PORTS, 1992).

The PORTS plant is continuously monitored for airborne discharges from sources within and outside the boundary. Onsite atmospheric pollutant sources are permitted by the Ohio and the U.S. EPA for controlled releases. Common pollutants at the site include standard industrial emissions, such as fly ash; sulfur dioxide (SO₂); gasoline and fuel vapors; cleaning agents (e.g., nitric acid, ascorbic acid, 1,1-trichloroethane); and radionuclides (i.e., radioactive materials and daughter products of radioactive materials that have a measurable mean half-life).

3.2 WATER RESOURCES

3.2.1 Surface Water

A series of Scioto River tributaries at PORTS discharge to the Ohio River. The largest natural body of water on PORTS is Little Beaver Creek. Most of the flow in Little Beaver Creek is comprised of treated wastewater effluents discharged from PORTS outfalls in accordance with a National Pollutant Discharge Elimination System (NPDES) permit. The NPDES permit requires monitoring for total suspended solids, pH, temperature, and pollutants specific to each outfall. (See Fig. 3 for locations.)

Little Beaver Creek drains the northern and northeastern areas of the site before entering Big Beaver Creek (PORTS, 1991). Big Beaver Creek enters the Scioto River, which then flows into the Ohio River. The Scioto River is not a source of either drinking or industrial water downstream from PORTS, and it is not considered a recreational area except for sport fishing (PORTS, 1991).

State of Ohio water quality standards designate Little Beaver Creek as a warm-water aquatic habitat with the potential to supply water for local industry and agricultural purposes (OAC 3745-09).

The X-7725A facility is about 0.5 mile from the nearest surface water, which is an unnamed tributary to the Scioto River. The alternate sites for a new PCB waste storage facility are 0.5 mile (X-616 site) from an unnamed tributary to the Scioto River and 500 ft (X-752 site) from an unnamed tributary of Little Beaver Creek (see Fig. 3). None of the three sites is located within the 100-year floodplain (FEMA, 1988).

3.2.2 Groundwater

The surface and near-surface geology at PORTS have been influenced by the effects of glaciation. PORTS lies in an abandoned river valley that was filled with glacial lacustrine sediments deposited during the existence of prehistoric Lake Tight.

Groundwater in bedrock units and unconsolidated deposits below PORTS is available in very limited quantities due to the impermeable nature of the geologic materials in which they are contained. The direction of flow and gradient is reflected in the contours of the land surface of ridges and low-lying hills. Within the plant boundary, groundwater in bedrock is confined to the upper, fractured, weathered surface and flows in a north-to-south direction. In the vicinity of streams, groundwater flows toward and into the streams near the contact between the unconsolidated materials and the bedrock surface (Battelle, 1981).

3.3 GEOLOGY AND SOILS

Geologic materials underlying PORTS include consolidated rock units of Mississippian-age sandstone and shale and unconsolidated glacial lacustrine deposits of clay, silt, sand, and gravel. Bedrock outcrops in the north/south trending hills along the east and west portions of PORTS. The topography of the PORTS facility is characterized by low slopes to level ground.

Soils at PORTS have been previously disturbed within the perimeter security fence. There are no prime farmland soils at the X-7725A site or the alternate sites for a new PCB waste storage building.

3.4 LAND USE

Lands within or adjacent to the Scioto River floodplain are farmed intensively, mostly with corn and wheat. Hillside terraces are more commonly used for cattle pasture. Commercial woodlands (excluding sapling/seedling stands) are predominantly saw-timber stands and some pole-timber stands (PORTS, 1991).

There are approximately 25,000 forested acres within a 5-mile radius of the PORTS. There are also 500 acres of urban areas within the same distance. The distribution of forest property in Pike County is similar to surrounding counties.

Within the PORTS security fence is a fully developed industrial area. The grounds surrounding the buildings and other fixtures are maintained as lawns and support various grasses and other herbaceous plant species that are mowed periodically. No unique vegetation types exist within the boundaries of the reservation.

Land use at the X-7725A facility and the two alternate sites for a new PCB

Figure 3. Location of the proposed action (Bldg. X-7725A), alternate sites for a new PCB waste storage facility (X-616 and X-752), Little Beaver Creek, and other proposed projects considered in cumulative impacts assessment.

waste storage facility is industrial.

3.5 ECOLOGY

3.5.1 Vegetation

The vegetation of Pike County consists of three forest types: mixed mesophytic (upland mixed hardwoods), mixed oak (oak-hickory), and bottomland hardwoods. Species in the upland hardwood areas include green ash, northern red oak, tulip popular, and red maple. Oak-hickory areas include white oak, northern red oak, post oak, shagbark hickory, pignut hickory, and other species. The bottomland hardwood areas include sycamore, sugar maple, flowering dogwood, and American beech (PORTS, 1991).

All forest types are second-growth. Several areas that were previously cleared remained fallow for several years and are now in various stages of succession. Several small plantations of pines are located at PORTS, and wetlands have been identified along Little Beaver Creek in holding ponds/lagoons and in drainage ditches. There are no wetlands at the X-7725A site or at the alternate sites for a new PCB waste storage facility (see Appendix C).

Other than grass and weeds, there is no other vegetation at the X-7725A site. Because the alternate sites have also been disturbed, there is no vegetation present other than grass and weeds.

3.5.2 Wildlife

Forty-nine mammals have ranges that include the PORTS plant site. Of these, 22 have been observed onsite. The most abundant mammals onsite are the white-footed and short-tailed shrews. Large mammals include the eastern cottontail rabbit, white-tailed deer, opossum, and woodchuck. In addition, the eastern chipmunk, fox, gray squirrel, northern flying squirrel, and long-tailed weasel are known to be present on the site (PORTS 1991).

One hundred sixteen bird species have been observed within the boundaries of PORTS. These include year-round residents, winter residents, and migratory species. Ninety-nine species of birds are known to breed within Pike County (PORTS 1991).

Twenty-eight species of reptiles and thirty species of amphibians have ranges that include the plant site. Nine species of reptiles and six species of amphibians have been observed on the reservation. The most common species of reptiles are the eastern box turtle, black rat snake, and northern black racer. The most common species of amphibians are the American toad and the northern dusky salamander. Fifty-eight species of fish are found in streams (Little Beaver Creek, Big Run Creek, and Big Beaver Creek) in the immediate vicinity of the plant (PORTS, 1991).

Because of the industrial use of the X-7725A, X-616, and X-752 sites, small mammals and other wildlife are seen infrequently.

3.5.3 Threatened and Endangered Species

According to the Ohio Department of Natural Resources (DNR) and the U.S. Fish and Wildlife Service (FWS), there are three mammals, whose range includes the plant site, that are listed as federal or state threatened and endangered species. These include the federal- and state-listed Indiana bat (*Myotis sodalis*) and two Ohio threatened or endangered species, the river otter (*Lutra canadensis*) and the eastern woodrat (*Neotoma floridans*). None of these species have been found on the plant site to date (PORTS, 1991).

Other state-listed species that have been observed within the PORTS boundary include rocky skullcap (*Scutellaria saxatilis*), a threatened plant; blackjack oak (*Quercus marilandica*) a potentially threatened plant; Virginia meadowbeauty (*Rhexia virginica*), a threatened plant; Carolina yellow-eyed grass (*Xyris difformis*), an endangered plant; and the rough green snake (*Opheodrys aestuvus*), a special interest reptile.

Correspondence with the Ohio DNR and FWS is provided in Appendix C. Because of the disturbed nature of the X-7725A site and the alternate sites for the PCB storage facility, there is no permanent wildlife habitat present. Thus, fauna at the sites is limited to transitory visits of small mammals, birds, and invertebrate species.

3.6 ARCHAEOLOGICAL AND HISTORIC RESOURCES

PORTS is located within a region where Adena and Hopewell Indian mounds have existed. Additionally, several historic native American Indian tribes are known to have had villages nearby.

The entire PORTS facility is eligible for the National Register of Historic Places, but no specific structures of historic significance are identified within the boundary. The nearest structure listed on the National Register of Historic Places is the Van Meter farmhouse approximately four miles west of PORTS at the intersection of State Route 32 and 23 on the southwest corner (see Fig. 1). Correspondence with the SHPO is provided in Appendix C.

4.0 POTENTIAL ENVIRONMENTAL IMPACTS

4.1 NO ACTION

If no action is taken, the risk of a fire in the process buildings will increase as additional PCB wastes are stored. The fire load is affected by quantities of plastic spill containment pallets, wood pallets, and waste materials such as paper spill pads, PPE, and miscellaneous oil-covered materials. If a fire occurs in the process buildings, occupational injuries or fatalities could result. The resulting building contamination would render the facility unusable due to the high cost of decontamination.

4.2 PROPOSED ACTION

The potential environmental impacts from the modification and expansion of the X-7725A facility would be minor and largely reversible.

4.2.1 Air Quality

Potential sources of air quality impacts at the X-7725A site include the disturbance of soils and emissions from construction equipment. Construction would involve the removal of vegetation and excavation for the building foundation. Earthwork would create fugitive dust (particulate matter) in the immediate area of disturbance. Ambient air quality near the construction site would be affected on a sporadic and temporary basis. Offsite air quality would not be affected because particulates would disperse and dilute in the atmosphere as they move offsite. During periods of dry weather, disturbed areas would be sprayed with water or an anti-dust agent to minimize dust emissions. Gaseous exhaust emitted by construction vehicles, tools, and machinery contains small quantities of carbon monoxide, nitrogen oxides, sulfur dioxide, and unburned hydrocarbons. Exhaust fumes may be detected by workers, but would not affect offsite receptors.

4.2.2 Water Resources

Potential sources of water resources impacts at the X-7725A site include erosion and sedimentation from soils disturbance and spills of hazardous and/or toxic materials. During construction, erosion and sedimentation runoff would be controlled by the use of Best Management Practices, such as the use of geotextile fabric or high-density polyethylene silt fences, straw bale barriers, and sediment traps. Because of the small area of land disturbed and the distance to the nearest surface water (0.5 mile), no adverse impacts would be expected.

Groundwater at PORTS would not be affected by the proposed action unless there is an accidental spill. Accidental spills of hazardous materials can be quickly cleaned up and impacts to soils, groundwater, and surface waters minimized through

use of appropriate equipment and cleanup procedures (i.e., EPA-approved SPCCC plan; Ebasco, 1991). Under the Superfund Amendments and Reauthorization Act of 1986 (SARA), Title III, industrial facilities are required to report releases of "reportable quantities" of hazardous substances (CERCLA- and EPCRA-listed) to state and local emergency response personnel.

All production facilities and related support facilities at PORTS are above the 100-year and 500-year floodplain of the Scioto River and tributaries on the PORTS reservation (FEMA, 1988).

4.2.3 Geology and Soils

Geologic formations and topography would not be altered by the minor excavation that would be necessary for expansion of Bldg. X-7725A. Because there is no prime farmland within the PORTS boundary or immediately adjacent to PORTS, there would be no adverse impacts to soils.

Construction waste would be collected and disposed of in the construction spoils landfill. If RCRA-hazardous, wastes would be transported to storage in the adjacent X-7725 RCRA-mixed-waste storage facility. Following construction, the areas surrounding the building would be erosion-stabilized, landscaped, and seeded.

4.2.4 Land Use

The proposed action would be compatible with the present use of the site as an industrial facility.

4.2.5 Ecology

A very small area of previously disturbed land would be affected by site clearing and construction. There are no rare species, important natural areas, critical habitat, and federal- or state-listed threatened and endangered species at the X-7725A site that could be affected by soils disturbance, particulate and gaseous emissions, erosion and sedimentation runoff, and/or noise from vehicle and machinery operation.

4.2.6 Health and Safety

Public health and safety would not be affected by the proposed action because all activities would be conducted on the PORTS site. Occupational health and safety would be improved by the removal of fire and safety hazards in the process buildings.

Workers would be exposed to common construction hazards, and injuries due to falls, burns, spills, etc. could occur. There is a low probability of accidental occupational exposure to PCBs and radioactivity in the waste during handling and transport because workers would wear personal protective equipment (PPE) and would be trained in appropriate procedures for handling PCBs. If there is an accident during onsite transport

of solid or liquid radioactive PCB wastes, worker exposure would be minimal, because cleanup personnel would wear PPE and would follow established procedures. Under the Superfund Amendments and Reauthorization Act of 1986 (SARA), Title III, industrial facilities are required to report releases of "reportable quantities" of hazardous substances [under the Comprehensive Environmental Response and Liability Act (CERCLA) and Emergency Preparedness and Community Right-to-Know Act (EPCRA)] to state and local emergency response personnel.

Occupational exposures to radioactive materials in X-7725A would be less than those experienced by workers handling waste in the process buildings because the process buildings themselves are radiologically contaminated.

4.3 CONSTRUCTION OF A NEW PCB WASTE STORAGE BUILDING

Construction of a new waste storage building at either of two alternate sites would result in the same types of impacts to air quality and water resources as the proposed action (see Sects. 4.2.1 and 4.2.2). Because about 0.5 acres of land would be disturbed, atmospheric emissions and sediment runoff would be potentially greater than for the preferred alternative. Land use at either site would be compatible with other surrounding uses. No threatened and endangered species, prime farmland, archaeological/historic resources, floodplain, and wetlands would be impacted by construction of a new facility at either site. Occupational health and safety hazards would be the same as those associated with the preferred alternative.

4.4 CUMULATIVE IMPACTS

Cumulative impacts can result from individual minor actions that collectively may be significant. Other ongoing or planned projects considered in combination with the proposed action include the development of UF₆ cylinder storage yards and the construction and operation of a solid waste landfill, both of which are in the process of NEPA reviews. Relative locations of these projects are shown on Figure 3.

Air quality would be affected by particulate and gaseous emissions from heavy equipment and vehicle operation and particulate emissions from soils disturbance during all three projects. Changes in ambient air quality would be localized at each of the three sites and temporary. Because the three sources of emissions are spatially disconnected, additive impacts to air quality would not result. For all three projects, the Best Management Practice of wetting disturbed areas would minimize fugitive particulate emissions.

Little Beaver Creek may receive sediment in runoff from all three proposed project sites. This would result in minor short-term sedimentation that would be minimized through the use of silt fences and straw bales. Because of the spatial separation of the three sites, cumulative effects are expected to be minimal. The proposed project would not affect floodplains or wetlands; therefore, no cumulative impacts would result.

None of the proposed projects would adversely affect local geology or soils.

Therefore, no cumulative impacts would result.

The proposed action would affect the use of approximately one-half acre within the facility boundary. The UF_6 cylinder storage yards development project would affect approximately 11 acres, and the construction and operation of a solid waste landfill would affect approximately seven and a half acres. The cumulative effect of these actions is the development of approximately 19 acres for industrial use. Because these projects would take place in a previously disturbed industrial area, the resultant land use is compatible, and no adverse cumulative impacts would result.

The proposed project, the UF_6 cylinder yard, and the construction and operation of a new solid waste landfill would remove approximately 19 acres of common vegetation and, in terms of species diversity, poor wildlife habitat. Thus, cumulative impacts to PORTS ecology would be minor. No federal- or state-listed species would be impacted by the proposed action. Therefore, no cumulative impacts would result.

Because the occupational hazards associated with each of the proposed projects are unrelated, except for standard industrial hazards, cumulative impacts to occupational health and safety are not expected. No public health and safety impacts would result from any of the three proposed projects.

5.0 AGENCY CONSULTATION

The following table identifies individuals that were contacted by DOE during preparation of this EA.

Name	Affiliation	Location	Topic
Patricia Jones	Ohio Department of Natural Resources	Columbus, Ohio	Rare Species, Natural Areas, Protected Species
Kent Kroonemeyer, Buddy Fazio	U.S. Fish and Wildlife Service	Reynoldsburg, Ohio	Endangered Species Act Consultation, Threatened and Endangered Species
David Snyder	Ohio Archaeological and Historic Society	Columbus, Ohio	Archaeological and Historic Resources
Martha Raymond	Ohio State Preservation Office	Columbus, Ohio	Archaeological and Historic Resources

6.0 LIST OF PREPARERS

The following persons contributed to the preparation of this EA.

Name and Affiliation	Degree	Years Environmental Experience	Contribution to EA
Jackie Adams, Lockheed Martin Energy Systems	B.S., Botany	8	Initial Draft EA
Andrea Campbell, U.S. Department of Energy, Oak Ridge, Tennessee	B.S., M.S., Biology	16	Final Draft EA
Lee Hamblin, Lockheed Martin Energy Systems	B.S., Biology	22	Revised Draft EA
Dewintus Perkins, U.S. Department of Energy, Piketon, Ohio	B.S., Industrial Engineering	4	Project Information and Data; Agency Consultation

7.0 REFERENCES

- Battelle, 1981. *Hydrogeologic Site Evaluation of the Goodyear Atomic Uranium Enrichment Facility*, Battelle Columbus Laboratories, Ohio, November 16, 1981.
- Ebasco, 1991. *Spill Prevention Control and Countermeasures Plan for Portsmouth Gaseous Diffusion Plant*, EBASCO Environmental Co., Piketon, Ohio, December.
- FEMA, 1988. *Flood Insurance Rate Map*, Federal Emergency Management Agency, January 15.
- FFCA, 1992. *Federal Facility Compliance Agreement for the Toxic Substances Control Act*, United States Environmental Protection Agency and the Department of Energy, February 20.
- Government Institutes, 1989. *Wetlands Identification: Federal Manual for Identifying and Delineating Jurisdictional Wetlands*, Government Institutes, Inc., August.
- Lockwood Greene, 1994. *Proposal for Relocation of the X-744E PCB Warehouse into Building X-7725A*, Lockwood Greene Technologies, Inc., Oak Ridge, Tennessee, September 15.
- MMES, 1992. *Technical Site Information for the Site Development Plan, Portsmouth Uranium Enrichment Plant*, Martin Marietta Energy Systems, Inc., June 1, 1992.
- PORTS, 1991. *Environmental Report for 1991*, Portsmouth Gaseous Diffusion Plant, Piketon, Ohio.
- PORTS, 1992. *Implementation Plan for the Toxic Substances Control Act Federal Facilities Compliance Agreement*, Portsmouth Gaseous Diffusion Plant, Piketon, Ohio, March 11.
- USDA, 1990. *Soil Survey of Pike County*, U.S. Department of Agriculture, Soil Conservation Service, Pike County, Ohio, June.

APPENDIX A. FEDERAL FACILITIES COMPLIANCE AGREEMENT

JUL 16 1995

COMPLIANCE AGREEMENT
BETWEEN
THE UNITED STATES DEPARTMENT OF ENERGY
AND
THE ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C.

TOXIC SUBSTANCES CONTROL ACT

IN RE: DEPARTMENT OF ENERGY FACILITIES:
PADUCAH, KENTUCKY
PORTSMOUTH, OHIO
OAK RIDGE, TENNESSEE

I.

PARTIES

1. The United States Environmental Protection Agency ("EPA") and the United States Department of Energy ("DOE") are parties to this Compliance Agreement and Attachments I, II, and III herein ("Compliance Agreement" or "Agreement").

II.

JURISDICTION

2. This Agreement is entered into under the authority of the Toxic Substances Control Act ("TSCA") 15 U.S.C. §2601 et seq., Section 3004(j) of RCRA, 42 U.S.C. 6924, and Executive Order 12088, 43 F.R. 47707 (October 13, 1978).

III.

PURPOSE

3. EPA and DOE are entering into this Agreement to establish responsibilities and commitments for conducting actions required and/or authorized by TSCA and the PCB (polychlorinated biphenyl) Regulations at 40 C.F.R. Part 761, et seq., and applicable portions of E.O. 12088.

IV.

SCOPE

4. This Agreement establishes a plan which is intended to bring DOE's Uranium Enrichment Plants (and support facilities) located in Portsmouth, Ohio and Paducah, Kentucky and DOE's former Uranium Enrichment Plant (and support facilities) located

in Oak Ridge, Tennessee ("the facilities") into full compliance with TSCA and the PCB Regulations found at 40 C.F.R. Part 761.

5. This Agreement is not and shall not be construed to be a vehicle to relieve the DOE of any legal or regulatory obligations including obligations under TSCA or RCRA except as expressly provided for herein.

V.

FINDINGS OF FACT

6. DOE is a "person" within the meaning of 40 C.F.R. §761.3. DOE owns three uranium enrichment facilities. The facilities are located in Portsmouth, Ohio; Paducah, Kentucky; and Oak Ridge, Tennessee.

7. DOE provided EPA with information that twenty-four buildings (building numbers C-310, C-315, C-331, C-333, C-335, C-337, C-100, C-101, C-102, C-200, C-300, C-340, A, B and C, C-400, C-402, C-410, C-411, C-420, C-531-1, C-532, C-533-1, C-600, C-710, C-720, and C-750), at the Paducah, Kentucky, facility have ventilation duct gaskets impregnated with concentrations of PCBs which exceed 500 ppm. There are approximately 51,200 PCB impregnated gaskets located in these buildings. Six of these twenty-four buildings (building numbers C-310, C-315, C-331, C-333, C-335, and C-337), have PCB contaminated oil leaching through these gaskets. There are approximately 26,500 gaskets located in these buildings that are actively leaking, have shown evidence of leaking in the past, or may leak in the near future. DOE also provided EPA with information that PCB contaminated

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electrical voltage potential devices are in place at the Paducah facility.

8. DOE provided EPA with information that there are seventeen buildings at the Portsmouth, Ohio facility, (building numbers X-326, X-330, X-333, X-100, X-102, X-105, X-300, X-342, X-344, X-530B, X-533B, X-700, X-705, X-720, X-750, X-760, and X-770), which have ventilation duct gaskets impregnated with concentrations of PCBs which exceed 500 ppm. At least three of these buildings (building numbers X-326, X-330 and X-333), have PCB contaminated oil leaching through these gaskets. There are approximately 48,000 gaskets in these three buildings. There are approximately 23,000 gaskets in these three buildings that are actively leaking, have shown evidence of leaking in the past, or may leak in the near future. DOE also informed EPA that PCB contaminated process lubrication oil systems are also used at the Portsmouth facility. DOE notified EPA that there are a minimum of three buildings (building numbers K-29, K-31, and K-33), at the Oak Ridge, Tennessee, facility which have ventilation duct gaskets impregnated with PCBs at concentrations in excess of 500 ppm and have PCB contaminated oil leaching through these gaskets. There are approximately 11,700 gaskets in these three buildings that are actively leaking, have shown evidence of leaking in the past, or may leak in the near future. These leaks have also caused PCB contamination of electrical cables, cable trays, and associated equipment at all three of these facilities. 9.

40 C.F.R. §761.20 states, in pertinent part, that "[n]o person

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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." Using PCBs in ventilation duct gaskets, electrical voltage potential devices, and process lubrication oil systems are not authorized uses under 40 C.F.R. §761.30. DOE's use of PCBs in ventilation duct, gaskets, electrical voltage potential devices, and process lubrication systems represent violations of 40 C.F.R. §761.20, 15 U.S.C. 2614.

10. "Disposal" is defined by §761.3 to include "spills, leaks, and other uncontrolled discharges of PCBs". Any disposal of PCBs which is not authorized by 40 C.F.R. §761.60 is an unauthorized disposal. The leaking gaskets at the Respondent's Paducah, Portsmouth, and Oak Ridge facilities, and the leaking electrical voltage potential devices at the Paducah facility, constitute unauthorized disposal violations of 40 C.F.R. §761.60., 15 U.S.C. §2614.

11. DOE provided EPA with information that three storage areas (in building numbers C-746B, C-746R, and C-337), at the Paducah, Kentucky, facility contain or contained PCB Containers and PCB Articles in excess of 50 ppm PCBs for over one year. In addition, three PCB contaminated hydraulic systems at the Paducah facility are located in the C-340 building in unapproved storage areas.

12. DOE also provided EPA with information that two storage areas in building number X-333, the West End and the Center Area,

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of the Portsmouth, Ohio facility contain or contained PCB Containers and PCB Articles in excess of 50 ppm PCBs for over one year. Two storage areas (building numbers X-333, Center Area, and X-330), lack continuous curbing of at least six inches in height. At this facility, DOE also temporarily stores PCB liquid in 18"-48" tall, 5-inch diameter polyethylene bottles with screw on caps.

13. DOE provided EPA with information that three storage areas (building numbers K-306-1, K-726 and K-711), at the Oak Ridge, Tennessee facility contain or contained PCB Containers and PCB Articles in excess of 50 ppm PCBs for over one year. One storage area located in building number K-1435-B did not have adequate roof and walls to prevent rain water from reaching the PCBs and PCB Items. In addition, PCB contaminated and PCB transformers no longer in use are located in unapproved storage areas at Oak Ridge. Respondent's storage of PCBs in PCB Containers which do not conform to DOT specifications at its Portsmouth facility, storage of PCBs, PCB hydraulic systems, PCB contaminated transformers and PCB transformers in inadequate storage areas at the Paducah, Portsmouth, and Oak Ridge facilities, as well as Respondent's storage of PCB Containers and PCB Articles with concentrations in excess of 50 ppm for over one year at Paducah, Portsmouth, and Oak Ridge constitute storage violations of §§761.65 and 761.64. DOE admits the finding of facts included herein.

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VI.

APPLICABILITY

14. No change in ownership of the facilities will in any way alter DOE's responsibility under this Agreement, unless otherwise provided by law.

15. DOE and EPA shall provide a copy of this Agreement to all contractors, subcontractors, laboratories and consultants retained to conduct or monitor any portion of the work to be performed pursuant to this Agreement within seven (7) days of the effective date of this Agreement or date of such retention.

16. DOE agrees to give notice of this Agreement to any subsequent owner and/or operator before the transfer of ownership or the obligation of a new contractor/operator and to simultaneously notify EPA of any such change or transfer.

VII.

COVERED MATTERS

17. This Agreement addresses the requirements of TSCA and the PCB Regulations at 40 C.F.R. Part 761 applicable to the unauthorized use of PCBs in process lubrication oil, ventilation duct gaskets, and potential devices and the unauthorized disposal and storage of PCBs and PCB Items at the facilities, as set forth herein.

18. This Agreement also addresses the storage and disposal of radioactive contaminated wastes generated from activities required by this Agreement which contain hazardous waste that are subject to the land disposal restrictions and associated storage

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limitations of the Hazardous and Solid Waste Amendments of 1984.

19. The parties acknowledge that this Agreement does not affect the rights of the EPA to address any violations which exist or may exist at the facilities, which are not specifically covered by this Agreement.

20. 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 Statement of Facts and Conclusions of Law contained herein in an action to enforce the terms of this Agreement.

VIII.

REQUIREMENTS AND DELIVERABLES

21. DOE shall conduct all activities as set forth in the Attachments to this Agreement. All terms and conditions set forth in the Attachments to this Agreement constitute enforceable requirements of this Agreement.

22. DOE is required to secure EPA approval of a permit pursuant to Attachment I(2)(B). Additionally, EPA shall review and may comment upon all deliverables generated by DOE pursuant to the terms of this Agreement. In addition to EPA review, comment, or approval of the permit pursuant to Attachment I(2)(B), EPA may take a formal position on any matter related to the implementation of this Agreement by issuing a Written Notice of Position to DOE. DOE shall either conform with EPA's Written

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Notice of Position or subject EPA's Written Notice of Position to dispute resolution pursuant to Section XI of this Agreement.

23. Except as otherwise provided for in this Agreement, DOE shall strictly follow the disposal procedures set forth in 40 C.F.R. §761.60 and the storage procedures set forth in 40 C.F.R. §761.65.

24. All documentation required to be submitted to EPA under the terms of this Compliance Agreement shall be subject to EPA's approval and shall be submitted to the EPA Project Contact as follows:

Director, Compliance Division
Office of Compliance Monitoring
U.S. Environmental Protection Agency
401 M Street, S.W.
Washington, D.C. 20460

Attn: DOE Compliance Agreement

IX.

FUNDING

25. It is the expectation of the Parties that all obligations established pursuant to this Agreement will be fully funded. The DOE will take all necessary steps and use its best efforts to obtain timely funding to meet DOE's obligations under this Compliance Agreement, including budget requests supported by DOE's Environmental Restoration and Waste Management Five Year Plan (the "Five Year Plan"). However, 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. Section 1341, and DOE's performance of the commitments under this Compliance

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Agreement is subject to the availability of appropriated funds for such purposes. 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.

26. DOE prepares a Five-Year Plan to identify, integrate, and set priorities for DOE's compliance and cleanup activities at all DOE nuclear facilities and sites. The Five-Year Plan will assist DOE in addressing environmental requirements at its facilities and sites and in developing and supporting its budget requests. DOE updates the Five-Year Plan on an annual basis.

27. The terms of the Five-Year Plan shall be consistent with the provisions of this Agreement, including all requirements and schedules contained herein; it is the intent of the parties that DOE's Five-Year plan be drafted and updated in a manner that ensures that the provisions of this Agreement are incorporated into the DOE planning and budget process. Nothing in the Five-Year Plan shall be construed to affect the provisions of this Agreement.

28. DOE is developing a national priority system for inclusion in the Five-Year Plan. DOE's application of its national priority system may indicate to DOE that modification of the milestones established by this Agreement is appropriate. Where both parties agree to the modification, the procedures of Section XIV shall be used. Any modification of this Agreement will be incorporated, as appropriate, in the annual update to

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DOE's Five-Year Plan. Where the parties are unable to reach agreement on a requested modification, DOE may invoke the dispute resolution provisions set forth in Section XI. Pending resolution of any such dispute, the provisions and deadlines in effect pursuant to this Agreement shall remain in effect and enforceable in accordance with the terms of this Agreement.

X.

FORCE MAJEURE

29. DOE agrees to implement this Agreement in accordance with the deadlines set forth in the Attachments to this Agreement. DOE also agrees to adopt all reasonable measures to avoid or minimize any delays in the implementation of this Agreement. However, in the event of an unforeseeable or unexpected event or circumstance which is beyond the control of DOE, which could not be overcome by due diligence, and which necessitates revision of a deadline contained in this Agreement (hereinafter referred to as a "force majeure"), the parties agree to review and modify the deadline, as necessary. Force majeure events may include, but are not limited to, unforeseen and unavoidable delays caused by labor strikes, adverse weather conditions, natural disasters, unavailability of funds due solely to the restrictions of the Anti-Deficiency Act and only if DOE has demonstrated that it took all necessary steps and used its best efforts to obtain timely funding as set forth in Section IX of this Agreement, delays caused by compliance with applicable

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environmental statutes or regulations or other circumstances beyond the control of DOE.

30. If any event occurs which DOE believes will or may cause a force majeure delay in achieving compliance with any deadline set forth in this Agreement, DOE shall notify EPA in writing at least seven (7) calendar days prior to the anticipated delay. That notification shall state the precise cause of the delay, the time required for DOE to take appropriate measures to minimize the delay, and include a description of those appropriate measures.

31. If EPA finds that DOE has complied with the notice requirements of the preceding paragraph, and if EPA determines that the delay or anticipated delay has been or will be caused by a force majeure event, the EPA shall review and modify the associated deadline(s), as necessary, to conform with the delay. Delay in any one requirement shall not automatically justify or excuse delay in the attainment of other requirements.

32. If EPA determines that the delay or anticipated delay has neither been nor will be caused by a force majeure event the existing deadline(s) shall remain in force. EPA shall notify DOE of its determination in writing.

33. In the event that DOE disagrees with the determination made by the EPA pursuant to the preceding paragraphs, DOE may use Section XI (Dispute Resolution) of this Agreement to resolve such dispute. DOE shall have the burden of proving that any delays are caused by a force majeure event.

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XI.

DISPUTE RESOLUTION

34. If a dispute arises under this Agreement the procedures of this Section shall control. During the pendency of any dispute, DOE agrees that it shall continue to implement those portions of this Agreement which are not affected by the dispute and/or which can be reasonably implemented pending final resolution of the issue(s) in dispute. If the EPA determines that all or part of the work affected by the dispute should stop pending resolution of the dispute, DOE shall discontinue those portions of work specified in writing by EPA. If DOE believes that the work stoppage is inappropriate or may have potential significant adverse impacts, DOE may contact the Director, Compliance Division, Office of Compliance Monitoring (Office of Pesticides and Toxic Substances) to discuss the work stoppage. Following this meeting and after further consideration of the issues, the Director, Compliance Division, Office of Compliance Monitoring (Office of Pesticides and Toxic Substances) will issue, in writing, a final decision with respect to the work stoppage. This final written decision may immediately be subjected to formal dispute resolution. Such dispute may be brought directly to the EPA Assistant Administrator for the Office of Pesticides and Toxic Substances and the DOE Director, Office of Environmental Restoration and Waste Management and/or Assistant Secretary for Nuclear Energy at the discretion of DOE.

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35. EPA and DOE will each use Project Contacts as the point of contact for implementing this Compliance Agreement. The Project Contact for EPA is the Director, Compliance Division, Office of Compliance Monitoring (Office of Pesticides and Toxic Substances). DOE has designated two Project Contacts, one for the Portsmouth and Paducah facilities, and one for the Oak Ridge facility. DOE's Project Contact for the Portsmouth and Paducah facilities is the Director, Office of Operations and Facility Reliability (Office of Uranium Enrichment). DOE's Project Contact for the Oak Ridge facility is Chief, the Decontamination and Decommissioning Branch, Eastern Area Programs, Office of Environmental Restoration. Either party may make a redesignation of its Project Contact upon written notification to the other party.

36. In the event of a dispute between the Parties regarding the implementation of this Agreement, the parties shall make reasonable efforts to informally resolve, at the Project Contact level, the dispute. If resolution of a dispute cannot be achieved at the Project Contact level, the following procedures shall be implemented to resolve a dispute:

A. Within thirty (30) calendar days of any action by EPA which leads to or generates a dispute, including EPA's issuance of a Written Notice of Position, DOE shall submit to EPA a written statement of dispute setting forth the nature of the dispute, DOE's position with respect to the dispute and the information DOE is relying upon to support its position. If DOE

does not provide such written statement to EPA within this thirty (30) day period, DOE shall be deemed to have agreed with the action taken by EPA which led to or generated the dispute.

B. Upon receipt of the written statement of dispute, DOE and EPA shall engage in dispute resolution among the Project Contacts and/or their immediate supervisors. DOE and EPA shall have thirty (30) calendar days from the receipt by EPA of the written statement of dispute to resolve the dispute. During this period the Project Contacts and/or their immediate supervisors shall meet as many times as necessary to discuss and attempt resolution of the dispute.

C. If agreement cannot be reached within this thirty (30) day period EPA or DOE may, within ten (10) calendar days of the conclusion of the thirty (30) day dispute resolution period, submit a written notice to the other Party escalating the dispute to EPA's Assistant Administrator for the Office of Pesticides and Toxic Substances and to DOE's Director, Office of Environmental Restoration and Waste Management and/or Assistant Secretary for Nuclear Energy for resolution, who shall have thirty (30) calendar days to resolve the dispute. If neither Party elevates the dispute within this ten (10) day escalation period, the DOE shall be deemed to have agreed with EPA's position with respect to the dispute.

D. If EPA's Assistant Administrator for the Office of Pesticides and Toxic Substances and DOE's Director, Office of Environmental Restoration and Waste Management and/or Assistant

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Secretary for Nuclear Energy are unable to resolve the dispute within the specified thirty (30) day period, EPA or DOE may, within ten (10) calendar days of the conclusion of the thirty (30) day dispute resolution period, submit a written notice of dispute to the Administrator of EPA for final resolution of the dispute in accordance with all applicable laws and procedures. In the event that the dispute is not escalated to the Administrator of EPA within the designated ten (10) day escalation period, DOE shall be deemed to have agreed with EPA's position with respect to the dispute. The Administrator of EPA will review and resolve such dispute as expeditiously as possible. Upon request and prior to resolving the dispute, the Administrator shall meet and confer with the Secretary of DOE to discuss the issues under dispute. Upon resolution, the Administrator of EPA shall provide DOE with a written final decision setting forth the resolution of the dispute.

E. The pendency of any dispute under this Part shall not affect DOE's responsibility for timely performance of the work required by this Agreement, except that the time period for completion of work affected by such dispute shall be extended for a period of time usually not to exceed the actual time taken to resolve any good faith dispute in accordance with the procedures specified herein. All elements of the work required by this Agreement which are not affected by the dispute shall continue and be completed in accordance with the applicable schedule.

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F. Within thirty (30) calendar days of resolution of a dispute pursuant to the procedures specified in this Part, DOE shall 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.

G. Resolution of a dispute pursuant to this Part of the Agreement constitutes a final resolution of any dispute arising under this Agreement. DOE shall abide by all terms and conditions of any final resolution of dispute obtained pursuant to this Part of the this Agreement.

XII.

COVENANT NOT TO SUE AND RESERVATION OF RIGHTS

37. The facilities currently use, and will continue to use as set forth in this Agreement, ventilation duct gaskets which contain PCBs.

38. The facilities are currently storing, and will continue to store, PCB waste co-contaminated with radioactive materials. DOE is developing but does not currently have the means to dispose of these materials.

39. DOE has undertaken in this Agreement to address the PCB items, PCB gasket use, any releases of PCB contaminated oil from the ventilation duct gaskets, and the storage of PCB waste co-contaminated with radioactive material.

40. Therefore, based on the facts and circumstances known to EPA as of the effective date of this Agreement, and set forth

in this Agreement, EPA hereby agrees not to initiate any future civil administrative enforcement action against DOE or any of its contractors, or to refer a civil judicial enforcement action against DOE or its contractors under TSCA to the Department of Justice for covered matters defined in Section VI herein for so long as DOE is in compliance with the requirements of this Agreement.

41. The Parties recognize that compliance with the terms of this Agreement will require DOE to generate radioactive mixed wastes containing a hazardous component subject to the land disposal restrictions of the Hazardous and Solid Waste Amendments of 1984 for which there may be no available treatment capacity. Therefore, as long as DOE is using best efforts to locate or develop treatment capacity, and as long as DOE is in full compliance with the terms of this Agreement, EPA agrees not to initiate a civil or administrative enforcement action against DOE and its contractor under RCRA or to refer a civil judicial enforcement action against DOE or its contractor to the Department of Justice for the storage of prohibited waste generated pursuant to the requirements of this Agreement.

42. However, in the event that DOE is delayed in fulfilling its obligations as set forth in this Agreement as a result of insufficient availability of funding, and the Parties are unable to agree to an extension of schedules as provided for in Section IX (Funding), subject to Section X (Force Majeure) and Section

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XIV (Modifications), the covenant not to sue set forth above shall terminate.

43. 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 facility not specifically covered by this Agreement; (2) any emergency condition or imminent hazard which may exist or arise at the facility; (3) any cleanup action pursuant to any available authority.

44. Further, EPA filed a Complaint, Docket Number 91-H-02, against Martin Marietta Energy Systems on October 3, 1990, for violations of TSCA at the three uranium enrichment facilities. The Parties agree that nothing contained in this Agreement shall affect that enforcement action in any way.

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

45. DOE reserves the right to request the making of a rule, pursuant to Section 6(e)(2)(B) of TSCA, to authorize the use of PCBs in ventilation duct gasket material.

XIII.

EXPIRATION

47. Within thirty (30) calendar days of DOE's final notification of completion of the final milestones required under

XIV.

MODIFICATIONS

51. Modifications to this Agreement may be requested by EPA or DOE. Except as otherwise provided herein all such modifications shall be by mutual agreement of the signatories to this Agreement. All modifications requiring mutual agreement of EPA and DOE shall be in writing and shall be effective as of the date the last party affixed its signature.

52. The Parties recognize that in the course of implementing this Agreement there may be a need for minor field modifications to the Attachments to this Agreement or to deliverables submitted pursuant to this Agreement. The Parties agree that any such minor field modifications may be made pursuant to a mutual agreement of the Parties as set forth in a written agreement between the Project Contacts.

53. The Parties recognize that DOE has limited treatment and disposal capacity for PCBs and PCB items co-contaminated with other waste materials. In the event that it should become necessary to delay the treatment or disposal of materials covered by this Agreement to allow for the treatment or disposal of other waste materials generated by DOE which pose greater risks to human health or the environment, the Parties agree to modify this Agreement, as appropriate.

EFFECTIVE DATE

54. This Agreement shall become effective upon execution by 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 become effective upon the date which the last party affixed its signature to the Agreement.

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THE PARTIES SO AGREE:

Raymond B. Ludwiszewski
Acting Assistant Administrator
Office of Enforcement
Environmental Protection Agency

Date

Michael F. Wood, Director
Compliance Division
Office of Compliance Monitoring
Office of Pesticides and Toxic
Substances
Environmental Protection Agency

Date

William H. Young
Assistant Secretary for Nuclear
Energy
Department of Energy

Date

Leo P. Duffy
Director, Office of Environmental
Restoration and Waste Management
Department of Energy

Date

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5/11/95

ATTACHMENT I

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PORTSMOUTH AND PADUCAH
GASEOUS DIFFUSION PLANTS
REMEDIAL IMPLEMENTATION PLAN

1. Interim Measures:

(A) Troughing - All motor exhaust gasket flanges will be troughed to capture gasket drips. The purpose of this measure is to prevent further spills onto the floors of the buildings and does not relieve DOE from the obligation to comply with the measures set forth below which are designed to bring the facilities into full compliance with the PCB regulations.

Work Initiation Date: On-going

Work Completion Date: March 30, 1994

Documentation to be Provided to EPA:

- a. Notification of work completion
- b. Quarterly progress reports to be included in DOE's Annual Compliance Agreement Report¹ and subject to EPA inspection

(B) On-Site Disposal Investigation - DOE is to provide EPA with a certification that all identified sites historically used for the disposal of PCB contaminated wastes are being or will be sampled and analyzed to determine the extent of contamination within the context of separate present or pending permits, Agreement(s) or Orders between DOE and EPA. These requirements in the permits, Agreement(s) or Orders will satisfy EPA's historical Spill Clean-up Policy.

Work Completion Date: Thirty days from this agreement becoming effective.

Documentation to be Provided to EPA:

¹DOE shall submit to EPA an Annual Compliance Agreement Report pursuant to this Compliance Agreement by July 1, 1992, and yearly thereafter covering the previous calendar year until the expiration of this Compliance Agreement. The Annual Compliance Agreement Report will include summaries of the reporting requirements as set forth within this Agreement and the PCB Annual Document will be used as an additional reference.

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a. Certification that all PCB disposal sites at Paducah and Portsmouth are being investigated pursuant to separate permits, Agreements or Orders.

b. Copies of permits, Agreements or Orders embodying requirements to investigate PCB disposal sites at Paducah and Portsmouth.

(C) Potential Devices - Electrical Voltage Potential Devices at the Paducah Gaseous Diffusion Plant may continue to be used prior to replacement so long as the following steps are taken: 1. Daily documented inspections will be performed to check for seepage of PCB contaminated oil to the external surfaces; 2. Immediate documented cleanup of external surfaces if PCB contaminated oil is found; 3. Containment such as sealing in clear plastic for those with recurring seepage, with daily changeout of the plastic and cleanup of the external surfaces; 4. Restricting access to potential devices showing seepage by the use of flagging and caution signs. Final compliance will be achieved by replacing all potential devices which are unauthorized for use.

Work Initiation Date: On-going

Work Completion Date: May 31, 1993

Documentation to be provided to EPA:

a. Notification of work completion

b. Copies of monthly summaries of the daily inspection and cleanup documentation will be included in DOE's Annual Compliance Agreement Report and subject to EPA inspection

(D) Air Sampling - Consistent with DOE's monitoring at the facilities, PCB air sampling will be continued in process buildings with motor exhaust systems. At least 5 samples will be taken per process building per year. For each of these buildings, samples will be taken quarterly every calendar year, at least 30 days apart, with an additional set of samples taken sometime during the year. For each periodic (annual) air monitoring activity in a building, there are two kinds of sampling sites:- best-engineering judgement (BEJ) selected sites and randomly selected sites. The same BEJ sites may be selected for more than one monitoring period. The randomly selected sites shall be different from the BEJ sites and shall be newly selected for each periodic monitoring activity according to the attached guidance provided in the appended "Selection of Random Sampling Sites." It would be a rare coincidence for the same randomly

selected location in the same building to be sampled in more than one periodic monitoring activity. DOE shall report quarterly to the EPA any PCB concentrations greater than 0.5 micrograms per cubic meter measured from any air monitoring sampler at any location. Upon receipt of any such measurement data, EPA will contact DOE to address further monitoring requirements and any other required actions. Should EPA conclude that air sampling results produced pursuant to this Agreement so warrant, EPA and DOE shall meet and shall agree upon additional protective measures to be taken by DOE.

Work Initiation Date: On-going

Work Completion Date: One year after facility shutdown

Documentation to be provided to EPA:

- a. Notification of work completion
- b. Air sampling results will be included in DOE's Annual Compliance Agreement Report

2. Compliance Measures

(A) Process Lubrication Oil - All process lubrication storage systems associated with gaseous diffusion process shall be inventoried, sampled and the samples analyzed.

Work Completion Date: Completed

Documentation to be Provided to EPA:

- a. Notification of work completion
- b. Sample and Analysis Report - Includes results of sampling and analysis as well as inventory of all process lubrication storage systems associated with gaseous diffusion process. Inventory shall include location, concentration of PCBs (ppm) and total volume of process lubrication oil. This information will be included in DOE's Annual Compliance Agreement Report.

Alternate Language:

(B) Process Lubrication Oil Removal - DOE shall provide evidence that the disposal of the PCB lubrication oil will begin no later than 180 calendar days from the date of this agreement. There are only two ways this evidence shall be provided:

- (1) If DOE proposes to employ a PCB disposal process which does not currently have an appropriate PCB disposal

that is regulated
for use.

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approval (according 40 C.F.R. §761.60) on the date this agreement is signed, the proposed company shall submit a complete (as determined by EPA) permit application to the EPA, within 60 calendar days of the date of this agreement. Upon receipt of a complete application the EPA shall issue a demonstration permit at a time mutually agreed upon between EPA and the proposed disposal company. The demonstration test shall occur within 90 calendar days of the receipt of the complete application. The proposed disposal company shall complete a successful, as determined by EPA, demonstration test on time (within five calendar days of the beginning of the demonstration test) and submit a complete, as determined by EPA, demonstration test report including the relevant chemical analysis and other measurements, taken at the demonstration, within 60 calendar days of the completion date of the demonstration. Providing the information generated at the demonstration and the demonstration test report indicates that PCBs were disposed of in accordance with the PCB regulatory requirements, EPA will issue a commercial operating permit within 60 days of receipt of the complete demonstration test report. Within 60 days of the effective date of the commercial operating permit, DOE shall provide EPA with a copy of the contract with this company to dispose of all of the lubricating oil within 240 calendar days of the effective date of the permit. According to this option, the PCBs shall be disposed of no later than a total of 575 days from the date this agreement is signed.

(2) If DOE intends to employ a company having an appropriate PCB disposal approval (according to 40 C.F.R. §761.60) authorizing disposal of the PCBs in the lubrication oil at the concentration present, within 90 days of the date of this agreement DOE shall submit a copy of a contract to EPA to begin the disposal within 180 calendar days of the date of this agreement and complete the disposal of the PCBs in the lubrication oil no later than 240 calendar days from the date disposal starts or no more than a total of 426 calendar days from the date of this agreement. Disposal status and Notification of Completion shall be included in the Annual Compliance Report.

(C) Spill Cleanup - PCBs and PCB contaminated oil that may leak onto building floors shall be cleaned up in accordance with the EPA Spill Cleanup Policy. For spills >500 ppm PCBs, this shall consist of cleanup to 10ug PCB/100cm² with 95% confidence, based on the statistical sampling approach set forth in Attachment III, which shall be used within the spill area to verify cleanup to appropriate levels or, alternatively, to 100ug PCB/100cm² with 95% confidence, based on the statistical sampling approach set forth in Attachment III, which shall be used within the spill area to verify cleanup to appropriate levels followed by application of an appropriate sealant, such as a 2-layered epoxy type paint. All spill cleanups will be initiated within 24 hours of discovery, excluding historic spills which are defined

as PCB stains resulting from spills which have occurred prior to the effective date of this Agreement. Historic spills may be left in place until demolition, in accordance with paragraph (H), provided public access to the facility is restricted to prevent unauthorized entry. In the event that a new spill should occur on a historic spill site, and the appropriate standard specified above cannot be met after best efforts to meet the standard are made, DOE may request that EPA consider the efforts DOE has made and classify the spill area as a historic spill for purposes of the cleanup under this Agreement.

Work Initiation Date: ongoing

Documentation to be Provided to EPA:

- a. Quarterly report documenting PCB spills and PCB spill cleanup measures to be included in DOE's Annual Compliance Agreement Report and subject to EPA inspection

✓ (E) Storage - Except as specifically set forth herein, all PCB waste storage areas shall meet storage area requirements in accordance with 40 C.F.R. §761.65, and shall not contain non-radioactive PCBs and PCB items stored for more than one year. Radioactive PCBs and PCB items may be stored for more than one year prior to disposal as set forth in paragraph (H) of this agreement. The trough system contains multiple collection points for the PCB contaminated liquids which leak from the gaskets. For purposes of this agreement, the date these liquids are removed from service and placed into storage for disposal is the date they are transferred from the collection system into drums and placed into a PCB storage area. The DOE has ongoing programs to better characterize the radioactive content of its wastes to allow them to be disposed by the commercial sector. For purposes of this Agreement, when a radioactive PCB waste is determined to be non-radioactive, the date it is considered placed into storage for disposal will be the date on which it is certified by DOE to be non-radioactive. DOE may continue to utilize polyethylene storage containers for radioactive PCBs prior to criticality analysis. DOE may continue to store radioactive PCBs in polyethylene containers should criticality analysis indicate the need for such; otherwise, following such analysis the material will be transferred to appropriate storage containers.

Work Initiation Date: On-going

Work Completion Date: June 30, 1992

Documentation to be Provided to EPA:

- a. Notification of work completion

b. Certification that all PCB storage areas contain PCBs and PCB Items in storage for disposal for less than one year, excluding radioactive PCBs and PCB Items.

c. Certification that all PCBs and PCB Items designated for disposal are being stored in a PCB storage area which meets all storage area requirements under 40 C.F.R. §761.65.

(F) Gasket Removal Program and Ventilation Duct Management - Ventilation duct gaskets contaminated with PCBs shall be removed in accordance with NESHAP and applicable worker safety requirements, applicable asbestos removal requirements, and stored in accordance with TSCA and RCRA requirements, except as otherwise provided in this Agreement. Because of the enormous volume of contaminated ductwork and the limited regulation storage space available, it is agreed that during the ventilation ductwork/gasket removal, processing, and decontamination DOE may store ductwork in areas that do not meet the storage requirements set forth under TSCA and RCRA so long as the access to these storage areas is restricted and all necessary steps are taken to preclude the release of free flowing liquids. Following waste characterization, segregation, and processing, all resultant waste will be stored for disposal in accordance with applicable requirements of TSCA and RCRA. In no case shall DOE continue to store contaminated ductwork material in nonregulation areas after December 31, 2015 without the prior written approval of EPA. Ventilation ducts (and associated flanges) contaminated with PCBs shall be decontaminated pursuant to EPA's Spill Cleanup Policy, 40 C.F.R. Part 761.120 - 761.135, or be disposed of as required by Section (H).

Work Initiation Date: 2005 or upon
decommissioning date,
whichever is earlier.

Work Completion Date: 2015 or within
ten years of work initiation
date, whichever is applicable.

Documentation to be Provided to EPA:

- a. Notification of work initiation
- b. Notification of work completion
- c. Yearly progress reports to be included in DOE's Annual Compliance Agreement Report

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d. Certification that removal of gaskets is complete, and that all gaskets and gasket materials are being disposed of in accordance with section (H).

(G) Electrical Cables and Associated Equipment - PCB contaminated electrical cables and associated equipment shall be removed from the facilities upon decommissioning, unless they require maintenance, servicing or replacement during plant operations or gasket removal. If maintained or serviced, the cables, cable trays, and associated equipment shall be removed or cleaned up to 10ug PCB/100cm² or 100ug PCB/100cm² with 95% confidence followed by application of appropriate sealant.

Work Initiation Date: Ongoing

Work Completion Date: Upon demolition

Documents to be Provided to EPA:

a. Quarterly report documenting all cleanup measures and/or removal of electrical cables to be included in the DOE Annual Compliance Agreement Report and subject to EPA inspection.

(H) Disposal - All waste PCBs, PCB Items and ventilation ducts (and associated flanges), electrical cables and associated equipment contaminated with PCBs which were not decontaminated pursuant to paragraphs (F) and (G), shall be disposed of in accordance with 40 C.F.R. §761.60. All waste PCBs and PCB Items contaminated with hazardous waste and/or asbestos shall be disposed of in accordance with TSCA, NESHAP and RCRA requirements, and/or alternate disposal methods approved by EPA.

Work Initiation Date:

Non-radioactive PCBs and PCB Items - Ongoing

Co-contaminated, radioactive PCBs and PCB Items stored for disposal - As soon as possible following establishment of an EPA-approved operating incinerator, or EPA-approved alternate disposal method.

Ventilation gaskets, ductwork and flanges, electrical cable, associated equipment, and historic spill material - upon demolition of the two facilities. [See paragraphs (D) and (G)].

Work Completion Date:

Non-radioactive PCBs and PCB Items - within one year after the date the materials were placed into storage for disposal in accordance with paragraph (E).

Co-contaminated, radioactive PCBs and PCB Items stored for disposal - within ten years of work initiation date for materials already in storage; 2016 or within ten years of storage, whichever date is earlier, for materials placed into storage after effective date of this Agreement.

Ventilation gaskets, ductwork and flanges, electrical cable, associated equipment, and historic spill material - 2016 or within ten years of work initiation date, whichever date is earlier.

Documentation to be Provided to EPA:

- a. Quarterly progress reports to be included in the DOE Annual Compliance Agreement Report and subject to EPA inspection. The progress report shall include an inventory of items disposed.
- b. Certification that all non-radioactive PCBs and PCB Items, which contain greater than 50 ppm PCBs, in storage for over one year, have been properly disposed.
- c. Certification that all radioactive and non-radioactive PCBs and PCB Items, including electrical cable and historic spill material have been properly disposed.

(I) Worker Safety Measures - All persons entering the 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 which is reasonably anticipated to be encountered during compliance with this Agreement in accordance with applicable worker protection standards.

Documentation to be Provided to EPA:

- a. Certification that suitable personal protective clothing and equipment is being utilized. To be provided 30 days from the effective date of the Agreement.

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(J) hydraulic systems at Paducah GDP - The C-340 building at Paducah is a non-operating building that contains three PCB contaminated hydraulic systems above 50 ppm PCBs which have been drained and will not be refilled. The areas in C-340 where the hydraulic systems are located are radioactively contaminated due to past operations. workers must wear protective clothing to enter these areas. Respiratory protection is required during air turbulence generating activities such as grinding, welding, and cleaning in all of the processing areas. In some locations within these areas, respiratory protection is required just to inspect components of the hydraulic systems. Therefore, all readily accessible PCB contaminated hydraulic systems components will be inspected and documented annually for leaks and accumulation of free liquid. The hydraulic systems and any residual PCBs contained therein may be left in place in the C-340 building until demolition in accordance with the schedule below. Final removal and disposal or decontamination of the PCB contaminated hydraulic systems will be conducted in accordance with Section H of this Agreement.

Work Initiation Date: 2005 or upon decommission date, whichever is earlier.

Work Completion Date: 2015 or within 10 years of work initiation date, whichever, is applicable.

Documentation to be Provided to EPA:

- a. Results of annual inspection will be included in DOE's Annual Compliance Agreement Report and subject to EPA inspection.
- b. Notification of work initiation.
- c. Notification of work completion.
- d. Yearly progress reports upon work initiation to be included in DOE's Annual Compliance Agreement Report.
- e. Certification that removal of the hydraulic systems is complete and materials are being disposed of in accordance with Section H.

Selection of Random Sampling Sites

Random Numbers shall be used in the selection of some sampling sites at the DOE facilities. The random site selection process will be as follows:

1. Site selection requires accurate floor plans for facilities to be sampled and a table of random numbers (attached).
2. Establish a two dimensional grid system on the floor plan for each facility to be sampled. Grid intervals shall be no larger than three meters. Number the grid intervals by integers beginning with zero at the origin, which would be one of the corners of the inside of the building. These integers are the eligible numbers for potential random selection.
3. For purposes of sample site selection, there are two ways to generate random numbers to identify coordinates for each of the two dimensions for each building floor plan. One way is by the use of an automatic random number generator on an electronic calculator. The other way is by using the attached random number table.

To begin the site selection on the attached random number table, first select a random start location position on the random number table as follows:

- a. Locate a book with at least one hundred consecutive numbered pages.
- b. Locate a random start column on the random table by opening the book and taking the last digit of a page number. The far left column is column 1 and the far right column is column zero. Close the book.
- c. The first row is row one and the last row is number 45. Locate the random start row as follows:
 - i. Open the book again and select another last digit for the first digit of the row. Only zero through four are eligible for the first digit of the row since there are only 45 rows. If the last digit is five through nine (an ineligible selection), close the book and reselect, that is, open another page until a number between zero and four is the last digit. Close the book.
 - ii. Select the second digit the same way as the column number and the first digit of the row, reselecting if an ineligible digit is selected. For example, if the first digit is selected for the row is 4 and the second digit selected is six, the second digit must be reselected. If the random start

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comes up 46 to 00, these numbers are ineligible and another digit should be selected.

- d. Once column and row are selected. The start location in the random number table will be the upper left side of the block of five numbers formed by the row and column.

A random start selection procedure is not needed for an automatic random number generator.

4. Using the randomly selected starting point on the random number table as in 3a.- 3d. above, or using an automatic random number generator, random numbers shall be taken from the table one dimension at a time to select each sampling point. The list of consecutive integers assigned to the grid lines for each dimension of each floor plan, as described in #2 above, define the eligible population of coordinates for each dimension of each floor plan.

For each floor plan, each sampling location should be selected one dimension at a time as follows. Select the number of consecutive digits in the random number table, or in the number generated by the automatic random number generator, that are in the grid line numbers. Usually this will be two (single digits should be preceded by a zero), for each of the two dimensions. These selected digits, when among the eligible population of coordinates for each dimension, will be the coordinates of the sampling location grid point.

- a. If using the random number table:

Continue selecting coordinates across a row from right to left and down a column. When all numbers in a column have been used, proceed to the first row of the next column and work down.

Example: Suppose column 5 and row 39 were selected on the random number table were selected. The number at the random start is 7. Therefore, the first dimension of the first floor plan is 76. If 76 is ineligible, then the next two digits should be 04. The next pair would be 55, 64, 41, 02, etc.

- b. If using an automatic random number generator:

- i. if the generator generates a single random digit at a time, select single digits one at a time until sufficient eligible digits are selected for each coordinate and for each floor plan; and

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ii. if the generator generates more than a one digit number, start from the left side of each random number and select digits until sufficient eligible digits are selected. If there are insufficient digits generated to complete all necessary coordinates from a single generated random number, use all digits present to select complete coordinates (do not carry over unused digits) and then generate another number and continue selecting the additional coordinates until all have been selected and all have eligible coordinates.

5. Locating points on the floor, using the randomly selected coordinates, may not be as simple as identifying the location on the floor plan. Use "landmarks" on the floor plan as best as possible.

Using the two coordinates generated using random numbers, it is possible that a selected location is not eligible. Eligibility in this case is based on whether a sampler can physically be located at breathing level at a selected set of coordinates. Ineligibility may result from the presence of a wall, a pillar, or some other obstacle. In this case, place the sampler as near as possible to the selected location, so long as the nearby location is no more than half of a grid interval (along either coordinate axis) distant from the original location. If a sampler has to be moved from an ineligible location a distance of more than half of a grid interval along either coordinate axis, select two new sampling point coordinates, relocate the new sampling point in the building, and check the new sampling point for eligibility.

STATISTICS FOR MANAGEMENT

A PAGE OF RANDOM DIGITS

05128	59866	51281	68124	75064
86746	89698	56020	37810	88684
87513	17690	61427	72914	48563
02622	41026	80875	41293	21529
64981	28180	38629	76962	93285
57888	13938	38554	86836	02195
56316	37723	00234	21424	26664
98849	72762	59767	52497	24227
51632	54799	27973	68568	68465
12874	82160	67202	85199	27908
57580	77884	07092	01671	53362
51875	64611	19736	25589	46569
39133	30393	58319	85098	66519
24541	61477	89731	18421	29861
50859	84746	28302	13264	07595
28119	24200	09110	28485	30326
45206	53300	38688	39968	32604
57571	65919	56405	17839	92073
52829	01172	08915	11467	14793
00134	36233	89434	38669	91592
99826	64005	94325	73553	78280
11694	46262	55067	64603	59762
57622	93328	98885	07783	04351
82691	51238	14106	43083	33356
88799	65621	59809	37850	66128
69125	95591	81168	99246	66416
74698	44233	67602	21615	72336
77451	47350	21234	67672	80567
61715	96485	22121	98844	59289
92735	45064	50924	00865	19690
72353	45775	68590	85685	99975
12979	05720	92754	76911	55240
44365	70254	50864	36619	30094
49076	18439	29522	42541	79327
78143	65919	13699	91844	10676
03474	76025	97043	33834	44638
35870	89158	55864	98078	50563
73887	67928	60045	70782	11937
45968	73667	65062	73306	76045
67622	54579	17279	67440	56441
66913	60664	67547	39523	02043
74859	62155	09234	47367	13047
90879	44969	11129	17139	79630
95909	82459	96218	60768	76417
29212	40873	41590	67255	30757

SCIENTIFIC SAMPLING—A SHORT-CUT TO FACT-FINDING

ANOTHER PAGE OF RANDOM DIGITS

79419	22359	65206	54941	95992
69914	04146	01419	48575	77822
49374	25473	60982	27119	16060
22199	11865	26201	18570	72803
13786	27475	31254	36050	73736
45445	41059	55142	55585	39829
21067	57238	35352	67741	98761
30302	95327	12849	15795	97479
70040	91385	96436	58982	91281
13351	48321	28357	88526	74396
16564	04716	14594	22363	85700
30987	57657	33398	63053	46792
79172	72764	66446	78864	96004
57875	45228	49211	69755	27896
57146	64665	31159	06980	64709
42826	06974	61063	97640	13433
93929	01836	36590	75052	89476
83585	00414	62851	48787	28447
27548	37516	24343	63046	02081
32982	56455	53129	77693	25022
30104	67126	76656	29347	28492
35240	00818	09136	01952	48442
94031	62209	43740	54102	76895
99321	11331	06838	03818	77063
78286	71732	04704	61384	57343
43108	56592	42467	88801	91280
91053	60958	20706	31929	57422
98172	44346	60430	59627	26471
12523	57345	41246	98416	08669
66682	82517	33150	27868	53375
01056	27534	23085	49602	74391
18730	96197	64483	40364	90913
07794	60475	49666	17578	12830
48883	77154	74973	42096	34934
70171	59431	76033	40076	20292
48830	55029	10371	09963	85857
73151	64463	50058	11468	93553
06571	95934	09132	13746	82514
76609	52553	47508	25775	91309
32138	61197	95476	69442	54574
04855	27029	01542	72443	72302
65434	12124	91087	87800	34870
86800	16781	65977	65946	65728
51233	81409	46773	69135	36170
92933	77341	20839	36126	18911

ATTACHMENT II

OAK RIDGE GASEOUS DIFFUSION PLANT
REMEDIAL IMPLEMENTATION PLAN

(A) On-Site Disposal Investigation - DOE will provide EPA with a certification that all identified sites historically used for the disposal of PCB contaminated wastes are being or will be sampled and analyzed to determine the extent of contamination within the context of separate present or pending permits, Agreements or Orders between EPA and DOE. These requirements in the permits, Agreements, or Orders will satisfy EPA's Historical Spill Cleanup Policy.

Work Completion Date: Thirty days from this agreement becoming effective.

Documentation to be Provided to EPA:

a. Certification that all PCB disposal sites at Oak Ridge are being investigated pursuant to separate permits, Agreements or Orders between EPA and DOE.

b. Copies of permits, Agreements or Orders embodying requirements to investigate PCB disposal sites at the Oak Ridge Gaseous Diffusion Plant.

(B) Process Lubrication Oil - All process lubrication storage systems associated with the gaseous diffusion process shall be inventoried, sampled and the samples analyzed.

Work Initiation Date: On-going

Work Completion Date: September 30, 1991

Documentation to be Provided to EPA:

a. Sample and Analysis Report - Includes inventory and results of sampling and analysis of process lubrication storage systems associated with gaseous diffusion process. Inventory shall include location, concentration of PCBs (ppm) and total volume of lubrication oil. This information will be included in DOE's Annual Compliance Agreement Report.

(C) Spill Cleanup - PCBs and PCB contaminated oil that has leaked or may leak onto building floors shall be cleaned up in accordance with the EPA Spill Cleanup Policy. For spills >500 ppm PCBs, this shall consist of cleanup to 10ug PCB/100cm2 with 95% confidence, based on the statistical sampling approach set forth in Attachment III, which shall be used within the spill area to verify cleanup to appropriate levels or alternatively, to

Documentation to be Provided to EPA:

- a. Notification of work completion in Annual Compliance Agreement Report
- b. Notification to Regional Administrator if non-radioactive PCBs and PCB Items will be in storage for over one year until September 30, 1994.
- c. Certification that all PCB waste storage areas meet storage area requirements under 40 C.F.R. §761.65.
- d. By September 30, 1995, DOE shall provide EPA with certification that all PCB waste storage areas contain PCBs and PCB Items less than one year old, excluding PCBs and PCB Items co-contaminated radioactive materials.
- e. By September 30, 1994, DOE shall provide EPA with certification that all PCBs, PCB items and PCB equipment designated for disposal are being stored in a PCB waste storage area which meets storage area requirements under 40 C.F.R. §761.65.
- f. By September 30, 1994 DOE shall provide EPA with certification that all PCB transformers removed from service for disposal have been drained, drained fluid properly disposed and the transformer carcasses sealed.
- g. Certification that all PCB or PCB contaminated transformers removed from service for disposal have been drained, drained fluid properly disposed of, and the transformer carcasses sealed:
 - by October 1, 1991, for all askeral filled transformers,
 - by March 31, 1992, for all mineral oil filled transformers,

(E) Gasket Removal Program and Ventilation Duct Management
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 worker safety requirements for NESHAP, requirements for asbestos removal, stored and/or disposed in accordance with TSCA and RCRA requirements, except as otherwise provided pursuant to this Agreement. Because of the enormous volume of contaminated ductwork and the limited regulation

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storage space available, it is agreed that during the ventilation ductwork/gasket removal, processing, and decontamination DOE may store ductwork in areas that do not meet the storage requirements set forth under TSCA and RCRA so long as the access to these storage areas is restricted and all necessary steps are taken to preclude the release of free flowing liquids. Following waste characterization, segregation, and processing, all resultant waste will be stored for disposal in accordance with applicable requirements of TSCA and RCRA. In no case shall DOE continue to store contaminated ductwork material in nonregulation areas after December 31, 2001 without the prior written approval of EPA. Motor ventilation ducts (and associated flanges) contaminated with PCBs shall be decontaminated pursuant to EPA's PCB Spill Cleanup Policy, 40 C.F.R. Part 761.120 - 761.135, or be disposed of as required by Section (G).

Work Initiation Date: August 1, 1991

Work Completion Date: August 1, 2001 for removal of gasket material, ventilation duct decontamination by 2015 or final decommissioning project, whichever is earlier

Documentation to be Provided to EPA:

- a. Notification of work initiation
- b. Notification of work completion
- c. Yearly progress reports to be included in the Annual Compliance Agreement Report
- d. Certification that removal of gaskets is complete, and that all gaskets and gasket materials are being disposed of in accordance with Section (G).

(F) Electrical Cables - PCB contaminated electrical cables shall be removed and disposed of in accordance with 40 C.F.R. §761.60.

Work Initiation Date: Upon demolition

Documents to be Provided to EPA:

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- a. Notification of work initiation

Work Initiation Date: Upon demolition

Documents to be Provided to EPA:

- a. Notification of work initiation
- b. Notification of work completion
- c. Quarterly progress reports to be included in DOE's Annual Compliance Agreement Report.

4

3/24

(G) Disposal - All waste PCBs, PCB Items and ventilation ducts (and associated flanges), electrical cables and associated equipment contaminated with PCBs which were not decontaminated pursuant to paragraphs (E) and (F), shall be disposed of in accordance with 40 C.F.R. §761.60. The DOE has ongoing programs to better characterize the radioactive content of its wastes to allow them to be disposed by the commercial sector. For purposes of this Agreement, when a radioactive PCB waste is determined to be non-radioactive, the date it is considered placed into storage for disposal will be the date on which it is certified by DOE to be non-radioactive. All waste PCBs and PCB Items contaminated with hazardous waste and/or asbestos shall be disposed of in accordance with TSCA, NESHAP and RCRA requirements, and/or alternate disposal methods approved by EPA.

Work Initiation Date: On-going

Work Completion Date: 2015 or final decommissioning project completion, whichever is earlier.

Documentation to be Provided to EPA:

- a. Quarterly progress reports to be included in the DOE Annual Compliance Agreement Report and subject to EPA inspection. The progress report shall include an inventory of items disposed.
- b. Certification that all non-radioactive PCBs and PCB Items, which contain greater than 50 ppm PCBs, in storage for over one year, have been properly disposed.
- c. Certification that all radioactive and non-radioactive PCBs and PCB Items, including electrical cable and historic spill material have been properly disposed.

(H) Worker Safety Measures - All persons entering the 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 which is reasonably anticipated to be encountered during compliance with this Agreement in accordance with applicable worker protection standards.

Documentation to be Provided to EPA:

- a. Certification that suitable personal protective clothing and equipment is being utilized. To be provided 30 days from the effective date of the

Agreement.

(I) Baseline Air Sampling - PCB air sampling will be provided in process buildings with motor ventilation systems. Five samples will be taken annually except for buildings where active decontamination and decommissioning work is being performed. In buildings where active ventilation duct work is being performed, quarterly air sampling will be performed while work is in progress. Each quarter, five samples will be taken per process building. Air sampling results will be included in DOE's Annual Compliance Agreement Report, unless air monitoring results require DOE to submit a quarterly report. DOE shall report quarterly to the Exposure Evaluation Division of EPA any PCB concentrations greater than 0.5 micrograms per cubic meter measured from any air monitoring sampler at any location. Upon receipt of any such measurement data, EPA will contact DOE to address further monitoring requirements and any other required actions. Should EPA conclude that air sampling results produced pursuant to this Agreement so warrant, EPA and DOE shall meet and shall agree upon additional protective measures to be taken by DOE.

ATTACHMENT III

STATISTICAL SAMPLINGREQUIRED FOR SPILL CLEANUP VERIFICATION*

If the cleanup area for a PCB spill which has occurred as of and subsequent to the effective date of this Agreement is:

a. less than 100 cm² - Record the exact surface area of the spill and cleanup area and wipe sample the entire area.

b. greater than 100 cm² but less than 500 cm² - Take one randomly located 100 cm² wipe sample.

c. greater than 500 cm² but less than 1500 cm² - Take three randomly located 100cm² non-adjacent wipe samples.

d. greater than 1500 cm² - Follow the sampling procedure set forth in EPA's Spill Cleanup Manual.

* Applicable for PCB spills $\geq$ 500 ppm.

6/10/1

APPENDIX B. PCB ANALYSIS OF PROCESS LUBE OILS

nal Correspondence

MARTIN MARIETTA ENERGY SYSTEMS, INC.

February 26, 1992
POEF-554-92-90

Listed Distribution

PCB Analysis of Process Lube Oils

Method: GC/ECD Analysis Based on EPA Test Method EPA-600/4-81-045,
*The Determination of Polychlorinated Biphenyls in Transformer
Fluid and Waste Oils.*

<u>Sample Location</u>	<u>PCB, ppm (μg/g)</u>	<u>Sample Location</u>	<u>PCB, ppm (μg/g)</u>
Unit 25-1	2.5	Unit 31-1	7.6
25-2	2.4	31-2	11
25-3	<2	31-3	6.3
25-4	<2	31-4	<2
25-5	<2	31-5	7.2
25-6	<2		
25-7	<2		

Unit 27-1	4.4	Unit 33-1	230
27-2	2.4	33-2	120
27-3	2.1	33-3	32
-----		33-4	32
Unit 29-1	76	33-5	86
29-2	60	33-6	170
29-3	13	33-7	20
29-4	57	33-8	210
29-5	16		
29-6	11		

		ERP	<2
		North Worthington	2.6
		South Worthington	<2
		Detection Limit	2

All samples were collected in December 1991.

Listed Distribution

Page 2

February 26, 1992

POEF-554-92-90

Quality Control Data:

<u>Sample Location</u>	<u>PCB, ppm (μg/g)</u>
Unit 25-2 Replicate	2.5 (RPD = 4%)
29-2 Replicate	55 (RPD = 9%)
31-2 Replicate	11 (RPD = 0%)
33-4 Replicate	32 (RPD = 0%)
29-3 (Spike 10.3 ppm PCB-1260)	22 (87% Recovery)
31-5 (Spike 10.3 ppm PCB-1260)	16 (85% Recovery)
33-2 (Spike 114.5 ppm PCB-1260)	206 (75% Recovery)
33-7 (Spike 20.6 ppm PCB-1260)	35 (73% Recovery)
Control 170 ppm PCB-1260 in Lube Oil	130 (76% Recovery)
Blank	<2
Blank	<2

RPD = Relative Percent Difference

P. A. Hutchins, X-710, MS-2222, PORTS (5737)

PAH:msc

Charge No.: 511-553

TSR No.: 32773

APPENDIX C. AGENCY CONSULTATION LETTERS

A04 FROM 084 975

Ohio Historic Preservation Office

Ohio Historical Center
1982 Velma Avenue
Columbus, Ohio 43211-2497
614/297-2470
Fax: 297-2546

OHIO
HISTORICAL
SOCIETY
SINCE 1885

July 17, 1995

Ms. Dewintus Perkins
Department of Energy
Portsmouth Site Office
P.O. Box 700
Piketon, OH 45661-0700

Re: X-7725A Building Modification, Portsmouth Gaseous Diffusion Plant, Pike County, Ohio

Dear Ms. Perkins,

This is in response to correspondence from your office dated June 20, 1995 (received June 23) with additional information received July 13, 1995, regarding the above referenced project. The comments of the Ohio Historic Preservation Office (OHPO) are submitted in accordance with provisions of the National Historic Preservation Act of 1966, as amended (16 U.S.C. 470 [36 CFR 800]); the Department of Energy serves as the lead federal agency. My staff has reviewed this project, and I offer the following comments.

The project involves modification of the X-7725A Building. The Portsmouth Gaseous Diffusion Plant (PORTS) is considered eligible for inclusion in the National Register of Historic Places because of its exceptional significance in the history of post-World War II United States and in particular in our development of nuclear energy potential. The proposed expansion will substantially alter the size of the X-7725A building, but it is our opinion that this change will not have an effect on the overall facility given that the changes are minor compared to massive size of surrounding core buildings. We concur with your plans to maintain a similar roof line and use similar siding. Also, we concur that the ground in this area has been severely disturbed and no archaeological work is needed. Based on available information, we concur with your assessment that the proposed project will have no effect on any property listed in or eligible for listing in the National Register of Historic Places. No further coordination with this office is necessary for this project unless there is a change in the scope of work.

Any questions concerning this matter should be addressed to David Snyder at (614) 297-2470, between the hours of 8 am. to 5 pm. Thank you for your cooperation.

Sincerely,

Martha J. Raymond, Department Head
Technical and Review Services

MJR/DMS:ds

George V. Voinovich • Governor
Donald C. Anderson • Director

June 22, 1995

Eugene W. Gillespie
Department of Energy
Portsmouth Site Office
P.O. Box 700
Piketon, OH 45661-0700

Dear Mr. Gillespie:

After reviewing our maps and files, I find the Natural Heritage database contains no records for rare species or unique natural features at the proposed expansion site of the Piketon X-7725 Waste Accountability Facility located in quadrant III of PORTS, Pike County, Piketon Quad. There are no existing or proposed state nature preserves or scenic rivers in the vicinity of the Portsmouth Gaseous Diffusion Plant.

Our inventory program has not completely surveyed Ohio and relies on information supplied by a number of individuals and organizations. A lack of records for any particular area is not a statement that rare plant or animal species are absent from a site.

Please contact me if I can be of any further assistance.

Sincerely,

Patricia D. Jones

Patricia D. Jones
Data Management Supervisor
Division of Natural Areas & Preserves

/pdj

United States Department of the Interior

Fish and Wildlife Service

Reynoldsburg Field Office

6950-H Americana Parkway

Reynoldsburg, Ohio 43068-4115

In Reply Refer to:

COMM: 614/469-6923 FAX: 614/469-6919

June 6, 1995

Ms. Dewintus Perkins
Portsmouth Site Office
U.S. Dept. of Energy
P.O. Box 700, MS-7560
Piketon, OH 45661

Dear Ms. Perkins:

This responds to your June 2, 1995, phone request for information on Federally threatened and endangered species. Your request pertains to endangered species issues at the Portsmouth Gaseous Diffusion Plant located near Piketon, Pike County, Ohio. You requested a list of Federally threatened or endangered species that may occur in the vicinity of the Piketon plant. You also asked about permit procedures under Section 10 of the Endangered Species Act (ESA). We understand a new or additional future effort may occur to survey for all threatened or endangered species throughout the grounds of the Piketon facility.

This technical assistance letter is submitted in accordance with provisions of the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. 661 et seq.); the Endangered Species Act, of 1973, as amended, and is consistent with the intent of the National Environmental Policy Act of 1969, the U. S. Fish and Wildlife Service's Mitigation Policy. It does not, however, constitute the report of the Secretary of the Interior under Section 2(b) of the Act, nor does it represent the review comments of the Department of the Interior on any forthcoming environmental document.

ENDANGERED, THREATENED, OR PROPOSED SPECIES

The Piketon facility lies within the range of the Federally endangered Indiana bat (*Myotis sodalis*). Summer habitat used by this bat in Ohio is still not well defined. Indiana bats use woodlots and riparian corridors within one to three miles of small to medium sized streams and rivers. The following summer habitat requirements are thought to be important:

1. Dead trees and snags along riparian corridors especially those with exfoliating bark or cavities which may be used as maternity roost areas.
2. Live trees (such as shagbark hickory) which have exfoliating bark or cavities in the trunk or branches.
3. Stream corridors, riparian areas, and nearby woodlots which provide forage sites.

We normally recommend that if trees with exfoliating bark (i.e., potential roost trees) are encountered within a project area, they and surrounding trees should be conserved wherever possible. If they must be cut, they should not be cut between April 15 and September 30.

Three Federally listed plants could potentially be found on the grounds of the Piketon facility, but we currently do not have any records of their occurrence at the Piketon facility or in Pike County. Two of these plants, the Virginia spiraea (Spirea virginiana) and small whorled pogonia (Isotria medeoloides) are Federally threatened and, in Ohio, are known to occur only in neighboring Scioto County. The other plant, running buffalo clover (Trifolium stoloniferum), is Federally endangered and has been documented in Hamilton, Clermont, and Warren Counties of Ohio.

Our office has a number of volumes of a baseline environmental risk assessment report (July and December 1994 versions) that describes physical, chemical, and biological issues at the Piketon facility. These volumes address some endangered species issues at the facility during previous years. The volumes may assist you in determining the degree of endangered species survey work completed at the Piketon facility, to date.

CANDIDATE SPECIES

Though action is not required for candidate species under the Endangered Species Act, we provide the following information. The project lies within the range of the following Federal Category 2 candidate species.

Birds: Appalachian bewick's wren (Thryomanes bewickii)
Plants: Glade spurge (Euphorbia purpurea)
Fish: Eastern sand darter (Ammocrypta pellucida)
Amphibians: Hellbender (Cryptobranchus alleganiensis)
Mussels: Salamander mussel (Simposonaias ambigua)
 Rayed been mussel (Villosa fabilis)

We are currently trying to gather available statewide information on the hellbender, eastern sand darter, glade spurge, and Appalachian bewick's wren.

SECTION 10 ESA PERMITS

An application form and description of needed information are provided with this letter to help you apply for a Section 10 scientific take permit. Once granted, the permit will allow certain identified individuals to conduct capture, survey, and handling work relating to certain Federally threatened or endangered species at the Piketon facility. Our endangered species biologist, Buddy B. Fazio, can assist you with development of your permit application. Final approval of your permit request will depend on review by the endangered species staff (primary contact, Lisa Mandell; 612-725-3536 ext. 250) of our Region 3 headquarters in Twin Cities, Minnesota. Please apply early for a permit, as the required time to review and revise the permit application could be lengthy (60 to 90 days, or more).

STATE LISTED SPECIES

Two divisions of the Ohio Department of Natural Resources, the Division of Wildlife (DOW, 614-265-6300) and the Division of Natural Areas and Preserves (DNAP, 614-265-6472), maintain lists of other plant and animal species of concern to the State of Ohio. The Ohio Environmental Protection Agency (OEPA, 614-644-2856) also maintains lists of fish and invertebrate species found in many of Ohio's rivers and streams. If you have not already done so, please contact each of these agencies to obtain site-specific information on State listed species.

If you desire further assistance, please contact endangered species biologist Buddy B. Fazio at this office. You may also wish to discuss the risk assessments and related issues with contaminants biologist Bill Kurey at this office.

Sincerely,

Kent Kroonmeyer

cc: Lisa Mandell, USFWS-R3-TE, Fort Snelling, MN
DOW, Wildlife Environmental Section, Columbus, OH
DOW, Permits Section, Columbus, OH
ODNR, Division of Real Estate and Land Management, Columbus, OH
Ohio Division of Natural Areas and Preserves, Columbus, OH
Ohio EPA, Water Quality Monitoring, Columbus, OH
US EPA, Office of Environmental Review, Chicago, IL