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Dear Dr. Snyder:

**SUBMITTAL OF NATIONAL HISTORIC PRESERVATION ACT SECTION 110
SURVEY OF ARCHITECTURAL PROPERTIES AT THE PORTSMOUTH GASEOUS
DIFFUSION PLANT IN SCIOTO AND SEAL TOWNSHIPS, PIKETON, OHIO
(DOE/PPPO/03-0147&D1)**

In accordance with Section 110 of the National Historic Preservation Act (NHPA), the Department of Energy (DOE) Portsmouth Paducah Project Office (PPPO) has prepared the enclosed *National Historic Preservation Act Section 110 Survey of Architectural Properties at the Portsmouth Gaseous Diffusion Plant, in Scioto and Seal Townships, Piketon, Ohio* (DOE/PPPO/03-0147&D1).

This document identifies the architectural properties at the Portsmouth Gaseous Diffusion Plant (PORTS). The information in this architectural survey will be used in the development of the NHPA mitigation planning for Portsmouth. The document is based upon the original survey information developed by Advanced Simulation and Computing and the Ohio Historic Inventory forms (on file at the Ohio Historic Preservation Office).

DOE is issuing this inventory for your information and for the information of our consulting parties and the public. DOE will be placing a public notice in newspapers of local circulation and placing information about the availability of the inventory on its website.

If you have any questions in reference to this submittal, or DOE's NHPA program activities, please contact Kristi Wiehle of my staff at (740) 897-5020.

Sincerely,

A handwritten signature in black ink, appearing to read "W. E. Murphie".

William E. Murphie
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Enclosure:

NHPA Section 110 Survey of Architectural Properties at PORTS

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DOE/PPPO/03-0147&D0

**National Historic Preservation Act Section 110 Survey
of Architectural Properties at the Portsmouth
Gaseous Diffusion Plant in Scioto and
Seal Townships, Piketon, Ohio**



This document is approved for public release per review by

Henry H. Thomas
PORTS Classification Officer

08/03/10
Date

Restoration Services, Inc. (RSI)

contributed to the preparation of this document and should not be considered an eligible contractor for its review.

National Historic Preservation Act Section 110 Survey
of Architectural Properties at the Portsmouth
Gaseous Diffusion Plant in Scioto and
Scal Townships, Piketon, Ohio

DOE/PPPO/03-0147&D0, Draft C

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ACRONYMS

| | |
|-------|---|
| AEC | Atomic Energy Commission |
| AL | architectural location |
| DoCC | <i>Description of Current Conditions at the Portsmouth Gaseous Diffusion Plant, Piketon, Ohio</i> |
| DOE | U.S. Department of Energy |
| EA | <i>Report for Environmental Audit Supporting Transition of the Gaseous Diffusion Plants to the United States Enrichment Corporation</i> |
| EM | Environmental Management |
| FD | Facility Directory |
| GCEP | Gas Centrifuge Enrichment Plant |
| HEU | highly enriched uranium |
| LEU | low enriched uranium |
| NHPA | National Historic Preservation Act of 1966 |
| OHI | Ohio Historic Inventory |
| PORTS | Portsmouth Gaseous Diffusion Plant |
| USEC | United States Enrichment Corporation |
| USGS | U.S. Geologic Survey |
| UTM | Universal Transverse Mercator |

1. INTRODUCTION

A National Historic Preservation Act (NHPA) Section 110 survey of the Portsmouth Gaseous Diffusion Plant (Portsmouth) in Scioto and Seal townships, Pike County, Ohio (Fig. 1), has been completed by the ASC Group, Inc. The purpose of this survey is to provide information for compliance with Section 110 of the NHPA of 1966, as amended, and to support the review of activities conducted under Section 106 of the NHPA. The fieldwork for this survey was also conducted by ASC Group.

The study area for both the literature review and the survey consisted of the entire federal reservation on which the facility is located. The total project area consisted of 3,777 acres. The literature review was completed between September 1996 and June 1997. The purpose of the survey was to conduct a structured review of the standing architectural properties [e.g., buildings, structures, and facilities of the Portsmouth site (Fig. 2)] and document on Ohio Historic Inventory (OHI) forms (on file with the Ohio Historic Preservation Office), and to prepare the data for future evaluation in terms of their eligibility for inclusion in the National Register of Historic Places. The survey fieldwork was conducted in September 1996 and April 1997. The Principal Investigator for the survey, Douglas Terpstra, M.S., also made a site visit to Portsmouth on April 19, 2006, to confirm the facility had undergone few physical alterations since the time of the original fieldwork. Demolition of miscellaneous buildings and structures began in 1997 and continues to the present time in association with Environmental Management (EM) program activities.

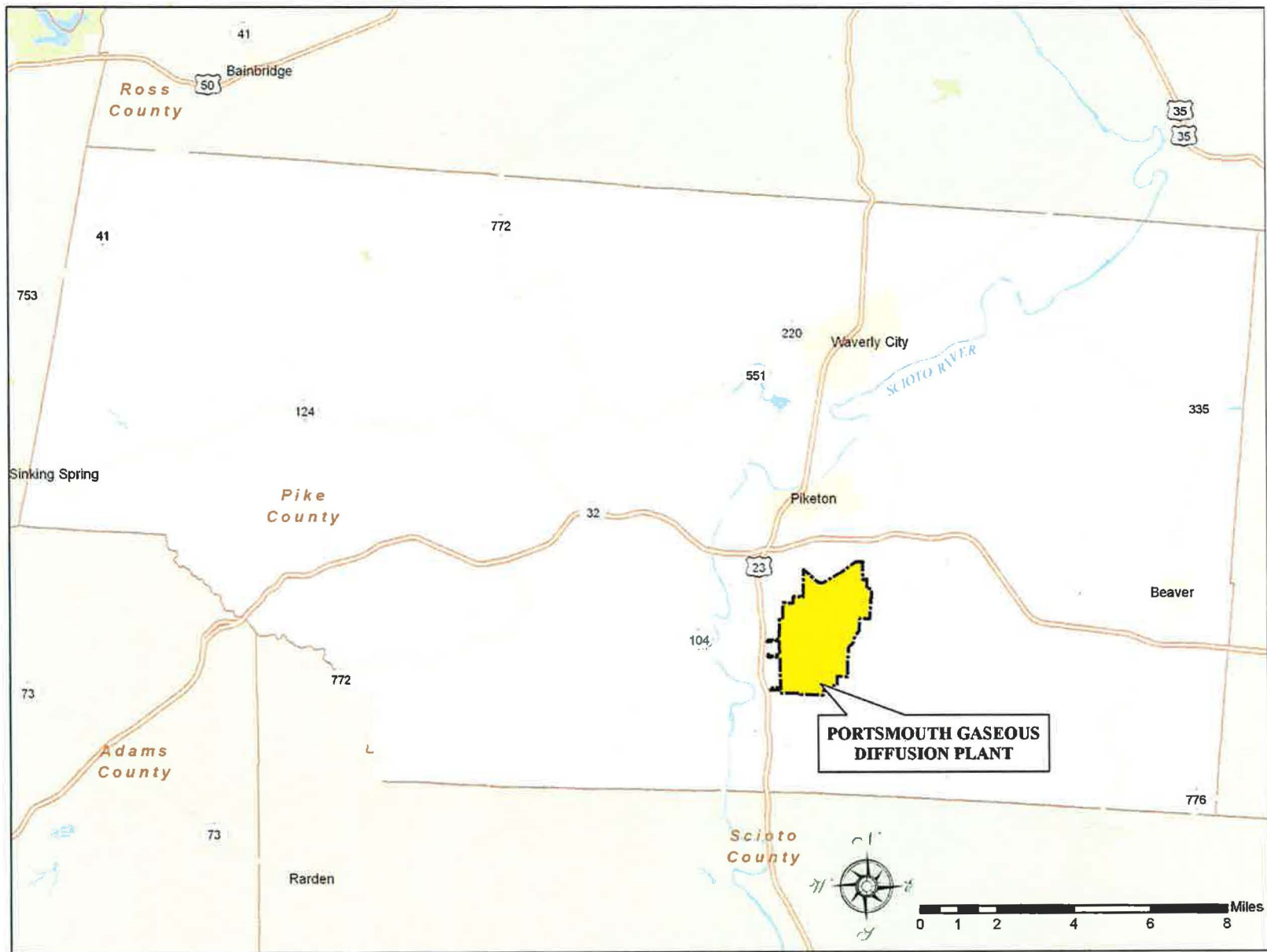


Fig. 1. Pike County highway map showing the location of the survey area.

**Fig. 2. Site plan of the Portsmouth site indicating the Ohio Historic Inventory and Architectural
Location numbers documented during the architectural survey.
(Oversized figure in enclosed envelope)**

2. LITERATURE REVIEW

2.1 PREVIOUS DOCUMENTATION OF ARCHITECTURAL PROPERTIES

The literature review was conducted in 1996-1997. The OHI files were examined to locate any previously documented buildings, structures, and architectural sites within or immediately adjacent to the study area; none were found. Review of the Pike County and Ohio Department of Transportation bridge files identified no bridges within the project area.

No historic cartographic sources (i.e., atlases, county plat maps, U.S. Geologic Survey (USGS) 15-ft topographic maps) were consulted for the architectural survey because no intact buildings that predate construction of the Portsmouth facility survive on the federal reservation. Also, since the pre-Portsmouth facility bridges that survive are minor structures, they would not be indicated on any historic cartographic sources.

Three official documents that were reviewed as part of the environmental survey or site directory listed many Portsmouth facility buildings and structures. These documents include the *Description of Current Conditions at the Portsmouth Gaseous Diffusion Plant, Piketon, Ohio* (DoCC) (Geraghty and Miller, Inc. 1990), *Report for Environmental Audit Supporting Transition of the Gaseous Diffusion Plants to the United States Enrichment Corporation* (EA) (U.S. Department of Energy 1993), and Portsmouth Facility Directory (FD) (Martin Marietta Utility Services 1995). These documents supplied information on the name, designation, design, date, size, and use of most of the architectural properties at PORTS.

After reviewing these documents, it was decided that the FD was the most up to date and complete source and it was used as the standard for names and designations in this report. Both the DoCC and EA lacked the descriptions of some buildings and structures. The FD also lacked some structures encountered in the field, although most were recently built or portable and, thus, probably not in their original location. Where the FD appeared to be in error or not updated, the EA was used as the standard.

2.2 HISTORIC CONTEXT

No intact buildings or architectural sites that predate construction of the Portsmouth facility survive on the federal reservation. Thus, an abbreviated history of the county and township is provided and the context for pre-World War II buildings is omitted. However, several pre-Portsmouth structures survive, namely four bridges. A history and context regarding these structures is included.

2.2.1 Pre-Portsmouth History

The land on the east side of the Scioto River was surveyed in the rectangular survey system in the 1790s-1800s. Piketon was founded in 1814, Pike County and Seal Township were organized in 1815, and Scioto Township was separated from Seal Township and organized in 1851 (Benjamin D. Rickey & Co. 1983; Pike County Chapter, Ohio Genealogical Society ca. 1992).

2.2.2 Transportation

Infrastructure played an important role in the historical economic development of Pike County, as it did in most of Ohio. The types of transportation included rivers, roads, and railroads, and the use, construction, and improvement of these transportation methods altered the pattern of settlement and farming. Settlers entered the area on the transportation routes that were available and the residents preferred to live near a

means of transportation. With easier access to markets, it benefited farmers to put more of their acreage under the plow, consequently increasing their income (Noble and Wilhelm 1995).

Throughout history, water travel has always been preferable to roads, as the latter were rarely in passable condition until recently. Although the Scioto River was a significant navigable natural waterway in Pike County, it was several miles from the project area and no other navigable waterways were nearby and, thus, had little impact on the settlement and development of the pre-Portsmouth Site. In the 1830s, the Ohio & Erie Canal was built on the west side of the Scioto River valley, which caused an economic revolution in the agricultural economy of Ohio, including the Scioto River valley.

As settlement and development progressed, a road system emerged. Transport among rural people was by foot, horseback, or wagon. Much of Pike County was heavily forested, which made road construction difficult, time consuming, and expensive. Most rural roads were little improved, poorly maintained, and often created by landowners who were also responsible for their maintenance. With the growing availability of the automobile, improved roads became important in the 1900s and 1910s. In 1911, state funds were made available for road maintenance (Aumann 1954). In the nineteenth century, the railroad also came to prominence, which gave industries and farmers access to larger, distant markets. The Scioto Valley Railroad (later the Norfolk & Western) and the Chesapeake & Ohio Railroad both passed near PORTS.

2.2.3 The United States Nuclear Program History

Concern over suspected German nuclear research during World War II led the U.S. government to develop its own nuclear program in 1942, dubbed the Manhattan Project. Scientists knew that splitting an atom, a process called fission, produced surplus energy and could be manipulated into a chain reaction producing great quantities of energy. Most early efforts at creating chain reactions focused on manipulating the element uranium. However, scientists found that fission in uranium primarily occurs in the isotope U-235, which is found naturally only in small amounts, and that they would have to enrich the concentration of U-235 in a given batch of uranium to make that uranium fissionable in a chain reaction (Carver and Slater 1994; Thomason and Associates 2003).

Through experiments conducted during World War II, Manhattan Project scientists found that gaseous diffusion was the most efficient means of enriching uranium among the several known methods. The gaseous diffusion process is based on the principle that molecules of a lighter isotope would pass through a porous barrier more easily than molecules of a heavier one if there were high pressure on one side and low pressure on the other (Carver and Slater 1994).

In 1946, Congress passed the Atomic Energy Act, which created the Atomic Energy Commission (AEC). Although the AEC initially intended to focus research efforts on both military and civilian applications of atomic energy, the emergence of hostilities with the Soviet Union and the Cold War led to the majority of resources and budget going to national defense programs. After World War II, the U.S. and Soviet Union entered a period of mutual distrust and eventually an arms race as each country sought to maintain a nuclear superiority over the other (Carver and Slater 1994; Thomason and Associates 2003).

This arms race spurred a massive expansion of the AEC nuclear infrastructure. The expansion of facilities had two purposes: 1) to increase the nation's production capacity for atomic weapons and 2) to create redundant sites in case a Soviet attack destroyed one. Beginning in 1950, this expansion program, estimated at a cost of \$3 billion, was one of the largest federal construction projects in peacetime history. Prior to the Korean War, the nation's entire gaseous diffusion capacity was located at the Manhattan Project-era Oak Ridge Gaseous Diffusion Plant (later known as the K-25 Site) in Oak Ridge, Tennessee. In addition to other new facilities, the AEC planned for new gaseous diffusion plants. In 1950, the

Kentucky Ordnance Works in Paducah, Kentucky, was chosen as the site of the first new plant and the AEC selected a site near Portsmouth, Ohio, for the second plant in 1952 (Carver and Slater 1994; Hewlett and Holl 1989).

Although the primary focus of the government's nuclear program during the post-World War II period was weapons production, interest in civilian uses grew as more information about nuclear power applications became available to the public. Beginning in the late 1940s, the public's imagination grew with dreams of atomic-powered houses, cars, ships, spaceships, and aircraft. President Dwight Eisenhower signed the Atomic Energy Act of 1954, which loosened government controls on nuclear research and eventually allowed the development of the private nuclear power industry. The first full-scale nuclear power plant in the U.S. became operational in December 1957 (Carver and Slater 1994).

2.2.4 The Choice of Portsmouth for a Gaseous Diffusion Plant

In October 1951, the AEC acting Director of Production authorized staff at Oak Ridge to begin the search for a site for the third gaseous diffusion facility. Stone & Webster Engineering Corporation was the survey contractor. Considerations for the first phase of the search were that the site be in the zone considered safe from enemy aircraft, that the site have enough low-cost power and water for the complex, and that there be a sufficient population base from which to draw employees. By December 1951, Stone & Webster had focused on seven areas: three in the Ohio River Valley, three in Oklahoma, and the Kansas City-St. Joseph, Missouri, area. The Ohio River Valley had the most advantages with relatively low fuel costs, ample water from the Ohio River, adequate housing and labor resources, and an industrial base that could absorb the excess power if the gaseous diffusion plant were shut down or its production lowered (History Associates Incorporated 1987).

In January 1952, the AEC authorized a more intensive examination of sites in the Ohio River Valley. The more detailed search criteria at the second phase of the search included an examination of local labor-management relations to avoid work stoppages like those that had occurred during the construction of the Paducah facility. Stone & Webster identified three possible sites in the region: Louisville, Kentucky, and Cincinnati and Portsmouth, Ohio. Although Louisville and Cincinnati were the leading candidates, Louisville residents and civic groups were opposed to the facility being located in their city, and the demands of labor unions in the Cincinnati area discouraged the AEC from locating in that city. Although the Portsmouth site was relatively remote from a major population center and was considered to have a deficient highway system, it had the support of both area residents and the local labor unions. The site was approved by AEC in August 1952 (History Associates Incorporated 1987).

2.2.5 Portsmouth Facility History

The 3,777-acre Portsmouth site is located in south-central Ohio in rural Pike County, approximately 22 miles north of Portsmouth and 75 miles south of Columbus, the state capitol. In August 1952, the AEC selected a tract of land in the Ohio River Valley near the Scioto River in Pike County for the site of the new gaseous diffusion plant. Site selection was based on the availability of a vast expanse of relatively flat terrain (the original tract was 4,000 acres) as well as the availability of large amounts of electrical power, a dependable source of water, local labor, and suitable transportation routes.

Construction of the Portsmouth Site began in late 1952, and operations commenced in 1954. In March 1956, the plant was completed 6 months ahead of schedule by construction contractor Peter Kiewit and Sons of Nebraska at a cost of \$750 million, considerably less than the estimated \$1.2 billion construction cost. Construction required 69 million man-hours, more than 68,000 drawings, and as many as 22,500 construction workers at its peak in the summer of 1954. Workers cleared more than 1,200 acres and moved more than 4.5 million cubic yards of earth.

The Portsmouth plant was the last of three gaseous diffusion plants to be constructed, the first being in Oak Ridge, Tennessee, and the second in Paducah, Kentucky. The mission at Portsmouth was to increase the national production of enriched uranium and maintain the nation's superiority in the development and use of nuclear energy.

In the 1960s, Portsmouth mission changed from enriching uranium for nuclear weapons to one that included producing highly enriched uranium (HEU) fuel for naval reactors and other defense-related purposes. Highly enriched uranium is defined as uranium that has been enriched to a uranium-235 isotopic content of 20 percent or more. The production of HEU was suspended by the U.S. Department of Energy (DOE) in November 1991. At that point, the Portsmouth era of HEU production, which included the highest enrichment levels in the DOE complex (97.65 percent in the U235 isotope) and spanned the longest period (from 1956 until 1991), was over (DOE 2001).

The plant produced only low-enriched uranium (LEU) for commercial nuclear power plants from suspension of HEU operations in late 1991 until uranium enrichment production ceased in 2001. The Portsmouth Site and its sister facility, the Paducah Gaseous Diffusion Plant, Paducah, Kentucky, worked in tandem to produce LEU fuel. The Paducah plant enriched uranium up to 2.7 percent and then shipped it to the Portsmouth plant for further enrichment to approximately 4-5 percent. In 1993, uranium enrichment operations were turned over to the United States Enrichment Corporation (USEC) in accordance with the Energy Policy Act of 1992. USEC was privatized in July 1998, and a corporate business decision was made in January 2000 to terminate uranium enrichment at Portsmouth in May 2001, while maintaining operation of the Paducah, Kentucky, gaseous diffusion plant.

After USEC ceased uranium enrichment activities at PORTS, DOE placed the gaseous diffusion plant in cold standby through a contract with USEC to maintain the facilities for possible restart within 18-24 months in the event of a significant disruption in the nation's supply of enriched uranium. DOE continued the plant in cold standby through FY 2005 and has since transitioned the gaseous diffusion plant into cold shutdown in preparation for future decontamination and decommissioning of the facilities as a part of the DOE EM mission at PORTS.

In December 2002, USEC announced the Portsmouth facility's former centrifuge buildings, built in the early 1980s but never put into operation, would be used for a lead cascade centrifuge demonstration plant. In January 2004, USEC also announced that the Portsmouth site was selected over the Paducah, Kentucky, location for a new advanced commercial centrifuge plant. This advanced centrifuge plant is in development by USEC.

The DOE awarded a contract in August 2002 to Uranium Disposition Services LLC (UDS) to design, build and operate two depleted uranium hexafluoride conversion plants, one at the Portsmouth site and the other at the Paducah, Kentucky, site. Construction began in fiscal year 2004, and the Portsmouth plant is expected to be operational in the near future. The Portsmouth facility will also convert DUF6 shipped from the East Tennessee Technology Park in Oak Ridge, Tennessee.

DOE owns the Portsmouth plant and is presently carrying out its EM mission that began in 1989. The EM mission includes environmental restoration ("cleanup"), e.g., remediation of soil and groundwater, and the deactivation, decontamination, demolition, and decommissioning of facilities. A component of environmental restoration is the management of waste generated from the cleanup work. DOE also has legacy waste management responsibilities as well as responsibility for the management of materials associated with past operations and management of the contractors engaged in these various activities.

3. ARCHITECTURAL SURVEY FIELDWORK METHODOLOGY

It was known from USGS topographic quadrangle maps and Portsmouth site maps that the project area was predominantly level and rolling rural open land and rolling and hilly woodland, with many buildings and structures concentrated in the center, which created an industrial park. Unlike most architectural surveys, the 1996-1997 fieldwork documented all buildings and structures despite nearly all of them being less than 50 years of age at the time of the survey.

Architectural documentation for the survey included physical inspection, consultation of existing documents, and comparative study. The in-depth examination of each standing building, structure and architectural site included measurement and visual inspection. The ASC Group did not take photographs but made use of archival photos supplied by the facility due to DOE security requirements that prohibit bringing photographic equipment on site.

The English system of measurement was used for all measurements because it was the only system in use during construction of the Portsmouth facility, and because it provides a context to increase understanding of the buildings and their distribution.

Visual inspection identified the materials, techniques, ornament, alterations, design, and uses of each building, structure and architectural site. This was then compared with published analyses, field guides of architecture and engineering, and observations from past surveys to determine the architectural style (or lack thereof), building type, or other classification. During and after the survey, data was collected from the environmental surveys and site directory on each of the properties.

All architectural resources, regardless of age, were examined, recorded, and assigned an architectural location (AL) number in the order in which they were encountered and were documented on Ohio Historic Inventory (OHI) forms. Some properties were grouped together under the same architectural location number if they were of similar age, tightly grouped, and/or were closely interdependent, such as the numerous components found in a sewage treatment plant, water treatment plant, or switchyard. Underground structures were inventoried if there were visible aboveground elements, such as the X-220A Instrumentation Tunnels (PIK-144-12/AL 100).

Each reference to an AL or OHI form in the survey includes both the AL and OHI numbers assigned to it as well as the Portsmouth facility designation and name. The AL numbers were also included on the OHI forms. All architectural locations, Portsmouth facility numbers, and OHI numbers were plotted and are shown on Fig. 2.

Most structures were inventoried, except for minor structures such as ground-mounted electric transformers and small, open platforms. Significant and large architectural sites such as electric substations or switchyards were inventoried. Architectural sites not inventoried were those such as parking lots, storage yards, storage pads, and most basins and pits. One exception was the X-701C Neutralization Pit (PIK-61-12/AL17), which had a distinctive design and construction. This property was proposed for clean up by the EM Program at the time of surveying, as noted on the OHI form, but was demolished in 2001. If available information indicated that a building, structure, or site was scheduled for removal, it was recorded on the OHI forms.

Not all facilities listed in the EA were inventoried. Many were overall systems, such as the X-215 Exterior Lighting and X-220B2 Carrier Communications System, or were ordinary structures of little architectural value, such as the X-208 Security Fence and X-210 Sidewalks.

The Portsmouth facility is divided into four irregular quadrants for purposes of management by the EM Program. The standard method of referring to a Portsmouth facility building is "X-100 Administration Bldg. on 19th Street in Quadrant I."

Quadrants I and II were surveyed in September 1996. The survey began in the northeast corner of the inner facility in Quadrant II and the outer area was surveyed last. Quadrants III and IV were surveyed in April 1997, following the same method, with the survey beginning in Quadrant III.

Again, the survey included on-site examination of the facility and development of a historic context against which to evaluate the significance of the buildings and structures present. The survey also documents the inventory of resources on the OHI forms. The survey will be utilized in the development of a Cultural Resources Management Plan for the facility and to support DOE's requirements to comply with Sections 110 and 106 of the NHPA, as amended.

4. ARCHITECTURAL SURVEY RESULTS

The Portsmouth site area that was surveyed includes land in use as building sites, paved areas, mowed fields, roads, railroads, artificial ponds, and woods. A total of 160 architectural locations were identified and documented on OHI forms (Appendix A).

Five architectural locations that were surveyed are owned by the Ohio Valley Electric Corporation (OVEC): OVEC office building (PIK-178-12/AL134), OVEC storage shed (PIK-179-12/AL135), OVEC microwave tower and dish (PIK-180-12/AL136), and two Don Marquis substations (PIK-181-12/AL137 and PIK-182-12/AL138). During surveying, it was established that the OVEC office building was not on the Portsmouth site (it is off site, outside the DOE-owned property boundary). The storage shed is on property owned by OVEC and is not under the jurisdiction or control of DOE. The microwave tower and dish and two substations are not owned or under the jurisdiction of DOE, but are managed and controlled by OVEC. Although these facilities were inventoried during the survey, they should not have been as they are OVEC-owned. They are not a part of the DOE inventory report.

A list of the inventoried properties (e.g., buildings, structures, facilities) by Portsmouth facility designation number, name, and mission or mission support association is presented in Table 1. As listed in this format, a total of 196 properties were inventoried at PORTS. The inventoried properties listed in order of their architectural location number, including the OHI number, are presented in Table 2.

The OHI forms (on file at the Ohio Historic Preservation Office) contain all information, photographs, diagrams, and mapping recorded for each architectural location. Buildings grouped chronologically and by general function are shown in Tables 3 through 6.

The tables attached to this section (Tables 1-6) are for inventory/informational purposes only. No eligibility determination for inclusion of the National Register of Historic Places has been made with regard to the facilities surveyed as part of this report.

4.1 DISCUSSION OF DOCUMENTATION

Since a detailed site map and locational system is already established for PORTS, and because the facility has a large number of buildings in a small area, a center point on the X-300 building (PIK-84-12/AL40) was chosen as the Universal Transverse Mercator (UTM) point for most OHI forms. Four structures at

the Site that predate the Portsmouth facility were given their own UTM points, per agreement with Ohio Historic Preservation Office, because they were originally unassociated with the facility.

The thematic association for all inventoried architectural locations was determined to be "Manufacturing Industries - Utilities - Nuclear Energy" since this is a government installation that produced refined radioactive material for generating electricity (Gordon 1992).

The AEC is credited on most of the OHI forms as the design source. Although the contractors responsible for constructing and operating the Portsmouth site likely would have drawn up most designs, AEC would have had oversight.

The quadrant system was used in this report for the ease of reference to the current system used on site. Dates stated on the OHI forms represent information obtained from the EA and DoCC. Circa dates shown in the tables on the forms ("ca") indicate the exact date is unclear, but the sources indicated it was probably in the span of dates given. When no date was given in the sources, a date was estimated from the material and design of similar structures.

A frequent material encountered at the Site was "transite." This is a commercial brand name of asbestos-containing material used on the original Portsmouth buildings and structures, and is typically a large corrugated or flat panel similar to asbestos shingles used on houses in the mid-twentieth century (DOE 1993).

4.2 DESCRIPTION OF THE PORTSMOUTH FACILITY

The Portsmouth site is located just outside of the Scioto River Valley proper, separated by the low range of hills forming the valley wall. The reservation is on rolling and gently rolling upland terrain in a partly filled ancient valley and on the valley walls, surrounded by relatively undeveloped woodland. Due to this placement, the facility is screened from view from outside the reservation. Upon entering the reservation on the publicly accessible portions of the perimeter road, vistas open up to reveal the industrial facility.

The Portsmouth facility is concentrated in the southwest part of the federal reservation (Fig. 1). Most buildings, structures, and sites (a total of 131) are within the roughly oval perimeter road, which encloses about 1,265 acres of the reservation's 3,777 acres. A total of 29 architectural locations are outside the perimeter road, mostly to the north and northeast. Five main access roads, located at the cardinal directions, connect the perimeter road to the road system outside of the reservation; however, not all roads provide public access.

Main access to the reservation is to the west from U.S. 23. From this highway, the "principal access road" runs uphill through the valley wall, where a vista opens up with a view of the heart of the facility. The main entrance into the gaseous diffusion plant facilities is on the eastern portion of the perimeter road, on the opposite side from the main access road to the west.

An irregular oval perimeter road separates the modified older pre-Portsmouth facility roads on the exterior from the irregular grid of streets on the interior. The east-west streets are numbered and the north-south streets are named after Ohio counties. A railroad siding connects the Norfolk Southern Railroad with the CSX Railroad in the northern part of the reservation, and a spur splinters into many smaller spurs serving the process buildings and storage areas in the facility.

4.3 PORTSMOUTH DEVELOPMENT PERIODS

This section is included to provide a greater basis for analyzing the results of the survey. It draws from the physical evidence of the buildings and structures themselves and, thus, augments and enhances the documentary information presented in the literature review. Four periods of development clearly evident when considering the span and distribution of dates and the facility history include the 1) pre-Portsmouth facility structures, 2) original Portsmouth facility, 3) Portsmouth facility additions, and 4) GCEP facility and later buildings. Each development period is discussed in the following sections. All the architectural locations are represented in the period of development tables and none are included in more than one period. The period of development indicated for the facilities in the tables reflects the facility's construction date although its use or operation may continue to the present time (see Tables 3 through 6). Properties are listed in order of architectural location number in each table. Only exemplary or important ALs are mentioned in the text; the tables and OHI forms contain additional information on the ALs discussed.

Not all buildings, structures, and architectural properties are represented in Tables 3 through 6 because some of the properties are interrelated and were grouped together into one AL, such as would be found in the many components in a switchyard (e.g., AL103 and 120). The date of only the largest and most dominant part of a facility was used.

4.3.1 Pre-Portsmouth Facility Structures: Period of Development 1 (1900-1951)

The first development period consists of structures that predate the facility, survived the site clearing, and were modified for use in the Portsmouth facility. These architectural properties (four bridges) are listed in Table 3. Apparently, the site clearing was thorough in removing all aboveground buildings and structures, except for the few bridges that were usable after modification. Only one building and two cemeteries survived the clearing (PIK-205-12, PIK-206-9, and PIK-207-12). These areas are discussed in the *Phase I Archaeological Survey for the Portsmouth Gaseous Diffusion Plant in Scioto and Seal Townships, Pike County, Ohio* (Schweikart et al. 1997).

The three surviving bridges (PIK-146-9/AL102, PIK-201-9/AL157, and PIK-202-12/AL158) all have evidence of widening, raising, and rebuilding of the deck at the time the Portsmouth facility was built. Two trusses of the other bridge, the X-204 Railroad Overpass (PIK-199-9/AL155), each have a date of approximately 30 years before facility construction.

4.3.2 Original Portsmouth Facility: Period of Development 2 (1952-1956)

The second development period consists of the original Portsmouth Gaseous Diffusion Plant built between 1952 and 1956. This represents most of the facility as built according to the original plans and before any buildings and structures were added. These buildings and structures fall into six general categories or groups and are listed in Table 4. The first group, most notable, and at the center of the facility, are the three huge process buildings, giant structures lacking color and windows, tied together by large overhead piping, framed in steel, and sheathed with transite panels (PIK-143-12/AL099, PIK-145-12/AL101, and PM-167-12/AL123).

The second group consists of the original cooling facilities with a large pump house (PIK-101-12/AL057 and PIK-151-12/AL107) at the center of an array of redwood cooling towers topped with conical flues (PIK-46-12/AL002). Operation of the cooling towers often created a characteristic local fog during plant operations.

The third group includes the headquarters buildings at the main (east) entrance. These buildings vary widely in design but their diversity enhances the almost campus-like setting. Most notable is the wood-framed, pinwheel-shaped X-100 Administration Building (PIK-94-12/AL050). Across from the Administration Building is the concrete X-104 Guard Headquarters (PIK-79-12/AL035) that has a minimal international styling in the cantilevered eaves and hoods. Anchoring one corner of the headquarters buildings group is the bunker-like domed concrete X-300 Plant Control Facility (PIK-84-12/AL040), which is designed to withstand a direct nuclear attack. The wood-framed X-100 Administration Building, X-102 Cafeteria (PIK-90-12/AL046) and X-101 Health Service Center (PIK-91-12/AL047) were intended to be temporary buildings.

The fourth group includes the two large electric switchyards (PIK-147-12/AL103, PIK-148-12/AL104, PIK-164-12/AL120, and PIK-165-12/AL121) that feed the process buildings. These switchyards are barren, graveled, fenced areas that contain many steel towers and wires. The switchyards are fed by the OVEC-owned two-tier electric substation on the hill on the west side of Portsmouth (PIK-181-12/AL137 and PIK-182-12/AL138).

The fifth group consists of the many warehouses at the Site. These warehouses are linear one-story steel structures with M-roofs scattered in various locations throughout the facility.

The sixth group includes a wide variety of support buildings such as mechanical buildings, portals, garages, storage facilities, and facilities related to site infrastructure, mostly steel framed and with transite siding.

4.3.3 Portsmouth Facility Additions: Period of Development 3 (1957-1978)

The third development period consists of a wide variety of support buildings and structures added between the end of the original phase of construction and the onset of construction of the GCEP plant in the late 1970s. Most of these architectural properties are of relatively minor significance and include structures related to water and sewage, warehouses, and process support buildings (see Table 5).

4.3.4 GCEP Facility and Later Buildings: Period of Development 4 (1979-Present)

The fourth development period consists of GCEP, a semi-self-sufficient facility added to Portsmouth from 1979 to 1985 and other miscellaneous support buildings added in recent years to support the operation of Portsmouth (see Table 6). Many of the support buildings are EM Program environmental monitoring stations and other buildings constructed in the 1980s and 1990s to meet environmental requirements. These properties are usually located on the fringes of the industrial area at a waterway (PIK-51-12/AL007, PIK-53-12/AL009, and PIK-196-12/AL152).

The GCEP project was canceled in June 1985 before the project was completed, and the facility was never placed into operations. Many of the GCEP buildings have been reused and are clearly set apart by their newer architectural appearance, their concentration in the southwestern portion of the Site, and the elements of contemporary styling in the administration buildings (X-1000 and PIK-109-12/AL065).

The GCEP facilities dominate the buildings and structures of this period, with their large, irregular massing, steel sheathing, and physical ties of corridors and attached buildings (PIK-114-12/AL070, PIK-115-12/AL071, PIK-116-12/AL072, PIK-117-12/AL073, PIK-123-12/AL079, and PIK-140-12/AL096). The styling of the administration buildings is best characterized as "Late International" with their dark brick veneer, bands of single-pane windows, flat roofs, and cantilevered eaves and hoods (e.g., PIK-105-12/AL061, PIK-106-12/AL062, and PIK-107-12/AL063). Vehicular and pedestrian portals surround the GCEP facility, each a clone of the same design. These portals have bands

of bulletproof windows, low concrete block walls, and a wide, flat roof supported by steel posts (e.g., PIK-203-12/AL159). Other buildings and structures were constructed to serve as GCEP support facilities.

Additional roads (X-2202) and railroad spurs (X-2204) were added for the GCEP facility.

Table 1. List of all inventoried DOE architectural properties and their Portsmouth mission associations

| Portsmouth no. | Portsmouth name | Portsmouth Quad | AL#/OHI# | Year constructed | PRE-DOE | Missions | | | Mission support | | Comments |
|----------------|----------------------------------|-----------------|----------------|------------------|--------------------------|--|----------------------------|--------------------|---|--|--|
| | | | | | Pre-Portsmouth structure | Cold War mission (weapons and other defense related) | Other/non-Cold War related | EM mission related | Cold War mission related support facility | Other/EM/non-Cold War-related support facility | |
| X-100 | Administration Bldg. | I | 050/PIK-94-12 | 1954 | | | | | X | | |
| X-100B | Air Conditioning Equipment Bldg. | I | 049/PIK-93-12 | 1958 | | | | | X | | Addition to X-100 |
| X-101 | Health Services Center | I | 047/PIK-91-12 | 1954 | | | | | X | | |
| X-102 | Cafeteria | I | 046/PIK-90-12 | 1954 | | | | | X | | |
| X-103 | Auxiliary Office Bldg. | I | 039/PIK-83-12 | 1954 | | | | | X | | Retains integrity as one of the few examples of warehouse-style buildings on its original site |
| X-104 | Guard Headquarters | I | 035/PIK-79-12 | 1954, 1991 | | | | | X | | |
| X-104A | Indoor Firing Range | I | 034/PIK-78-12 | ca. 1980-1985 | | | | | | X | |
| X-105 | Maintenance Bldg. | II | 014/PIK-58-12 | 1957 | | | | | X | | Demolished |
| X-106 | Tactical Response Station | I | 036/PIK-80-12 | 1955 | | | | | X | | Original site fire station |
| X-106B | New Fire Training Bldg. | III | 126/PIK-170-12 | ca. 1993 | | | | | | X | |
| X-108A | South Portal and Shelter | I | 030/PIK-74-12 | 1955 | | | | | X | | |
| X-108B | North Portal and Shelter | I | 029/PIK-73-12 | 1955 | | | | | X | | |
| X-108E | Construction Entrance Bldg. | III | 124/PIK-168-12 | 1975 | | | | | X | | Associated with X-748 |
| X-108H | Pike Avenue Portal | IV | 119/PIK-163-12 | 1976 | | | | | X | | |
| X-109A | Personnel Monitoring Bldg. | III | 106/PIK-150-12 | 1955 | | | | | X | | |
| X-109B | Personnel Monitoring Bldg. | II | 013/PIK-57-12 | 1955 | | | | | X | | |

Table 1. List of all inventoried DOE architectural properties and their Portsmouth mission associations (continued)

| Portsmouth no. | Portsmouth name | Portsmouth Quad | AL#/OHI# | Year constructed | PRE-DOE | Missions | | | Mission support | | Comments |
|----------------|---|-----------------|----------------|-------------------------|--------------------------|--|----------------------------|--------------------|---|--|--|
| | | | | | Pre-Portsmouth structure | Cold War mission (weapons and other defense related) | Other/non-Cold War related | EM mission related | Cold War mission related support facility | Other/EM/non-Cold War-related support facility | |
| X-109C | Personnel Monitoring Trailer | I | 051/PIK-95-12 | 1980-1990 | | | | X | | | |
| X-111A | SNM Monitoring Portal | III | 099/PIK-143-12 | 1981 | | | | | | X | Part of X-326 |
| X-111B | SNM Monitoring Portal | III | 099/PIK-143-12 | 1981 | | | | | | X | Part of X-326 |
| X-112 | Data Processing Bldg. | I | 063/PIK107-12 | 1984 | | | | | | X | |
| X-114A (new) | Firing Range (new) | IV | 153/PIK-197-9 | ca. 1990 | | | | | | X | |
| X-114A (old) | Former Firing Range | IV | 150/PIK-194-12 | ca. 1979 | | | | | | X | |
| X-120 | South Weather Station | I | 091/PIK-135-12 | ca. 1979, ca. 1993-1996 | | | | | X | | Demolished |
| X-204* | Undocumented railroad overpass over North Access Road | IV | 155/PIK-199-9 | 1923, ca. 1952 | X | | | | | | *X-204 is the designation for the railroad system as a whole. However, this information refers only the railroad overpass. |
| X-215D | Electric Power Tunnels | IV | 120/PIK-164-12 | 1955 | | | | | X | | |
| X-220A | Instrumentation Tunnels (beside X-326, X-330 and X-333) | I and III | 100/PIK-144-12 | 1954 | | X | | | | | |
| X-230J2 | South Environmental Sampling Bldg. | I | 089/PIK-133-12 | 1968 | | | | | X | | |
| X-230J3 | West Environmental Sampling Bldg. | III | 132/PIK-176-12 | 1968 | | | | | X | | |
| X-230J5 | West Environmental Monitoring Station | III | 133/PIK-177-12 | 1981 | | | | X | | | |

Table 1. List of all inventoried DOE architectural properties and their Portsmouth mission associations (continued)

| Portsmouth no. | Portsmouth name | Portsmouth Quad | AL#/OHI# | Year constructed | PRE-DOE | Missions | | | Mission support | | Comments |
|----------------|--|-----------------|----------------|------------------|--------------------------|--|----------------------------|--------------------|---|--|--|
| | | | | | Pre-Portsmouth structure | Cold War mission (weapons and other defense related) | Other/non-Cold War related | EM mission related | Cold War mission related support facility | Other/EM/non-Cold War-related support facility | |
| X-230J6 | Northeast Environmental Monitoring Station | IV | 149/PIK-193-12 | 1981 | | | | X | | | |
| X-230J7 | East Environmental Monitoring Station (Liquid Effluent System) | II | 092/PIK-136-12 | 1981 | | | | X | | | |
| X-230J9 | North Environmental Storage Bldg. | IV | 143/PIK-187-12 | ca. 1986 | | | | X | | | |
| X-300 | Plant Control Facility | I | 040/PIK-84-12 | ca. 1952-1955 | | | | | X | | Control center for the gaseous diffusion process |
| X-300A | Process Monitoring Bldg. | I | 041/PIK-85-12 | ca. 1954 | | | | | X | | |
| X-300C | Emergency Communications Antenna | I | 040/PIK-84-12 | ca. 1952-1955 | | | | | X | | Part of X-300 |
| X-326 | Process Bldg. | III | 099/PIK-143-12 | 1956 | | X | | | | | Main process building |
| X-330 | Process Bldg. | III | 101/PIK-145-12 | 1955 | | X | | | | | Main process building |
| X-333 | Process Bldg. | IV | 123/PIK-167-12 | 1955 | | X | | | | | Main process building |
| X-334 | Transformer Storage and Cleaning Bldg. | IV | 118/PIK-162-12 | 1985 | | | | | | X | |
| X-342A | Feed Vaporization and Fluorine Generation Facility | IV | 113/PIK-157-12 | 1954, 1982-83 | | X | | | | | Used to prepare uranium for the diffusion process |
| X-342B | Fluorine Storage Bldg. | IV | 114/PIK-158-12 | 1954 | | | | | X | | |
| X-343 | Feed Vaporization and Sampling Facility | II | 006/PIK-50-12 | 1981 | | | | | | X | |
| X-344A | Toll Enrichment Facility | IV | 112/PIK-156-12 | 1958, 1971-75 | | X | | | | | Originally constructed to convert UF4 to UF6 for the gaseous diffusion process |

Table 1. List of all inventoried DOE architectural properties and their Portsmouth mission associations (continued)

| Portsmouth no. | Portsmouth name | Portsmouth Quad | AL#/OHI# | Year constructed | PRE-DOE | Missions | | | Mission support | | Comments |
|----------------|---|-----------------|----------------|------------------|--------------------------|--|----------------------------|--------------------|---|--|--|
| | | | | | Pre-Portsmouth structure | Cold War mission (weapons and other defense related) | Other/non-Cold War related | EM mission related | Cold War mission related support facility | Other/EM/non-Cold War-related support facility | |
| X-344B | Maintenance Storage Bldg. | IV | 115/PIK-159-12 | 1958 | | | | | X | | Retains integrity as one of the few examples of warehouse-style buildings on its original site |
| X-344C | Hydrofluoric Acid Storage Bldg | IV | 117/PIK-161-12 | 1958 | | | | | X | | Demolished |
| X-344E | Gas Ventilation Stack | IV | 117/PIK-161-12 | 1958 | | | | | X | | Demolished |
| X-344F | Safety Bldg. | IV | 117/PIK-161-12 | 1958 | | | | | X | | Demolished |
| X-345 | Special Nuclear Materials Storage Bldg. | II | 023/PIK-67-12 | 1980 | | | | | X | | |
| X-530A | Switchyard | III | 103/PIK-147-12 | 1954 | | | | | X | | Provided electrical power to X-326 and X-330 |
| X-530B | Switch House (includes Control House, North Switch House, South Switch House) | III | 104/PIK-148-12 | 1954 | | | | | X | | Part of X-530A |
| X-530C | Test and Repair Bldg. | III | 103/PIK-147-12 | 1954 | | | | | X | | Part of X-530A |
| X-530D | Oil House | III | 103/PIK-147-12 | 1954 | | | | | X | | Part of X-530A |
| X-530E | Valve House | III | 103/PIK-147-12 | 1954 | | | | | X | | Part of X-530A |
| X-530F | Valve House | III | 103/PIK-147-12 | 1954 | | | | | X | | Part of X-530A |
| X-530G | GCEP Oil Pumping Station | III | 103/PIK-147-12 | 1980 | | | | | | X | Although part of X-530-A, a newer addition built to support GCEP |
| X-533A | Switchyard | IV | 120/PIK-164-12 | 1954 | | | | | X | | Demolished |

Table 1. List of all inventoried DOE architectural properties and their Portsmouth mission associations (continued)

| Portsmouth no. | Portsmouth name | Portsmouth Quad | AL#/OHI# | Year constructed | PRE-DOE | Missions | | | Mission support | | Comments |
|----------------|---|-----------------|----------------|------------------|--------------------------|--|----------------------------|--------------------|---|--|--|
| | | | | | Pre-Portsmouth structure | Cold War mission (weapons and other defense related) | Other/non-Cold War related | EM mission related | Cold War mission related support facility | Other/EM/non-Cold War-related support facility | |
| X-533B | Switch House (includes Control House, East Switch House, West Switch House) | IV | 121/PIK-165-12 | 1955 | | | | | X | | Demolished |
| X-533C | Test and Repair Facility | IV | 120/PIK-164-12 | 1955 | | | | | X | | Demolished |
| X-533D | Oil House | IV | 120/PIK-164-12 | 1955 | | | | | X | | Demolished |
| X-533E | Valve House | IV | 120/PIK-164-12 | 1955 | | | | | X | | Demolished |
| X-533F | Valve House | IV | 120/PIK-164-12 | 1955 | | | | | X | | Demolished |
| X-533H | Gas Reclaiming Cart Garage | IV | 120/PIK-164-12 | 1985 | | | | | | X | Although part of X-533-A, a newer addition built to support GCEP |
| X-540 | Exchange Telephone Bldg. | I | 048/PIK-92-12 | 1954 | | | | | X | | |
| X-600 | Steam Plant | I | 054/PIK-98-12 | 1954, 1996 | | | | | X | | |
| X-600B | Steam Plant Shop Bldg. | I | 055/PIK-99-12 | 1981 | | | | | | X | |
| X-605-H | Booster Pump House and Appurtenances | IV | 144/PIK-188-12 | 1954 | | | | | X | | |
| X-605I | Chlorinator Bldg. | IV | 144/PIK-188-12 | 1954 | | | | | X | | |
| X-605J | Diesel Generator Bldg. | IV | 144/PIK-188-12 | 1954 | | | | | X | | |
| X-611 | Water Treatment Plant Chemical Bldg. and Mixing and Settling Basins | IV | 147/PIK-191-12 | 1954 | | | | | X | | |
| X-611C | Water Treatment Plant Filter Bldg. | IV | 148/PIK-192-12 | 1954 | | | | | X | | |
| X-611D | Recarbonation Instrumentation Bldg. | IV | 148/PIK-192-12 | 1979 | | | | | | X | |

Table 1. List of all inventoried DOE architectural properties and their Portsmouth mission associations (continued)

| Portsmouth no. | Portsmouth name | Portsmouth Quad | AL#/OHI# | Year constructed | PRE-DOE | Missions | | | Mission support | | Comments |
|----------------|--|-----------------|----------------|------------------|--------------------------|--|----------------------------|--------------------|---|--|------------|
| | | | | | Pre-Portsmouth structure | Cold War mission (weapons and other defense related) | Other/non-Cold War related | EM mission related | Cold War mission related support facility | Other/EM/non-Cold War-related support facility | |
| X-612 | Elevated Water Tank | III | 146/PIK-190-12 | ca. 1960 | | | | | X | | |
| X-614D | Sewage Lift Station | I | 082/PIK-126-12 | ca. 1970-78 | | | | | | X | |
| X-615 | Sanitary Sewage Treatment Facility | III | 128/PIK-172-12 | ca. 1954-1955 | | | | | X | | Demolished |
| X-616 | Liquid Effluent Control Facility | III | 127/PIK-171-12 | 1976 | | | | | X | | Demolished |
| X-617 | South pH Adjustment Facility | I | 088/PIK-132-12 | 1979 | | | | | | X | |
| X-618 | North Holding Pond Storage Bldg. | IV | 142/PIK-186-12 | 1981 | | | | | | X | |
| X-621 | Coal Pile Runoff Treatment Facility | I | 056/PIK-100-12 | 1984 | | | | | | X | |
| X-622 | South Groundwater Treatment Facility | I | 085/PIK-129-12 | ca. 1994 | | | | X | | | |
| X-623 | East Groundwater Treatment Facility | II | 007/PIK-51-12 | 1994-95 | | | | X | | | |
| X-624-1 | Recirculating Water Pump House | II | 093/PIK-137-12 | ca. 1993-96 | | | | | | X | |
| X-624 | Little Beaver Groundwater Treatment Facility | II | 094/PIK-138-12 | ca. 1993-95 | | | | X | | | |
| X-625 | Groundwater Treatment Facility | I | 095/PIK-139-12 | ca. 1995 | | | | X | | | |
| X-626-1 | Recirculating Water Pump House | I | 057/PIK-101-12 | 1954 | | | | | X | | |
| X-626-2 | Cooling Tower | I | 058/PIK-102-12 | 1954 | | | | | X | | |
| X-630-1 | Recirculating Water Pump House | IV | 107/PIK-151-12 | ca. 1954-55 | | | | | X | | |

Table 1. List of all inventoried DOE architectural properties and their Portsmouth mission associations (continued)

| Portsmouth no. | Portsmouth name | Portsmouth Quad | AL#/OHI# | Year constructed | PRE-DOE | Missions | | | Mission support | | Comments |
|----------------|---|-----------------|----------------|------------------|--------------------------|--|----------------------------|--------------------|---|--|------------|
| | | | | | Pre-Portsmouth structure | Cold War mission (weapons and other defense related) | Other/non-Cold War related | EM mission related | Cold War mission related support facility | Other/EM/non-Cold War-related support facility | |
| X-630-2A | Cooling Tower | IV | 108/PIK-152-12 | ca. 1954-55 | | | | | X | | |
| X-630-2B | Cooling Tower | IV | 109/PIK-153-12 | ca. 1954-55 | | | | | X | | |
| X-633-1 | Recirculating Water Pump House | II | 003/PIK-47-12 | 1954-55 | | | | | X | | Demolished |
| X-633-2A | Cooling Tower and Uncovered Extension Basin | II | 002/PIK-46-12 | 1954-55 | | | | | X | | Demolished |
| X-633-2B | Cooling Tower and Uncovered Extension Basin | II | 004/PIK-48-12 | 1954-55 | | | | | X | | Demolished |
| X-633-2C | Cooling Tower | II | 001/PIK-45-12 | 1976 | | | | | | X | Demolished |
| X-633-2D | Cooling Tower | II | 005/PIK-49-12 | 1978 | | | | | | X | Demolished |
| X-640-1 | Recirculating Water Pump House | II | 122/PIK-166-12 | 1960 | | | | | X | | |
| X-640-2 | Elevated Water Tank | II | 025/PIK-69-12 | 1960 | | | | | X | | |
| X-700 | Converter Shop and Cleaning Facility | II | 018/PIK-62-12 | 1955 | | | | | X | | |
| X-700A | Air Conditioning Equipment Bldg. | II | 020/PIK-64-12 | 1975 | | | | | | X | |
| X-701A | Lime House | II | 016/PIK-60-12 | 1955 | | | | | X | | Demolished |
| X-701C | Neutralizing Pit | II | 017/PIK-53-12 | 1973 | | | | | X | | Demolished |
| X-701D | Water Deionization Facility | II | 019/PIK-63-12 | 1955 | | | | | X | | Demolished |
| X-701E | Neutralizing Bldg. | II | 009/PIK-53-12 | 1973 | | | | | X | | |
| X-705 | Decontamination Bldg. | II | 002/PIK-65-12 | 1955 | | | | | X | | |
| X-705D | Heating Booster Pump Bldg. | II | 022/PIK-66-12 | 1983 | | | | | | X | |

Table 1. List of all inventoried DOE architectural properties and their Portsmouth mission associations (continued)

| Portsmouth no. | Portsmouth name | Portsmouth Quad | AL#/OHI# | Year constructed | PRE-DOE | Missions | | | Mission support | | Comments |
|----------------|--|-----------------|----------------|------------------|--------------------------|--|----------------------------|--------------------|---|--|--|
| | | | | | Pre-Portsmouth structure | Cold War mission (weapons and other defense related) | Other/non-Cold War related | EM mission related | Cold War mission related support facility | Other/EM/non-Cold War-related support facility | |
| X-710 | Technical Service Bldg. | I | 043/PIK-87-12 | 1953, 1975 | | | | | X | | Related to scientific operations at PORTS |
| X-710A | Technical Service Gas Manifold Shed | I | 045/PIK-89-12 | ca. 1955 | | | | | X | | Associated with the operation of X-710 (related to scientific operations of PORTS) |
| X-710B | Explosion Test Facility | I | 044/PIK-88-12 | 1956 | | | | | X | | Related to scientific operations at PORTS |
| X-720 | Maintenance and Stores Bldg. | II | 027/PIK-71-12 | 1954 | | | | | X | | |
| X-720A | Maintenance and Stores Gas Manifold Shed | II | 028/PIK-72-12 | 1954 | | | | | X | | Demolished |
| X-720B | Radio Base Station Bldg. | II | 024/PIK-68-12 | 1978 | | | | | X | | |
| X-720C | Paint and Oil Storage Bldg. | II | 026/PIK-70-12 | 1980 | | | | | | X | |
| X-735A | Landfill Utility Bldg. | IV | 145/PIK-189-9 | 1982 | | | | | | X | Demolished |
| X-740 | Waste Oil Storage Bldg. | III | 105/PIK-149-12 | 1982 | | | | | | X | Demolished |
| X-741 | Oil Drum Storage Facility | I | 031/PIK-75-12 | 1954 | | | | | X | | |
| X-742 | Gas Cylinder Storage Facility | I | 032/PIK-76-12 | 1954 | | | | | X | | |
| X-743 | Lumber Storage Facility | I | 042/PIK-86-12 | ca. 1953-56 | | | | | X | | This facility is in its original location |
| X-744B | Salt Storage Bldg. | IV | 140/PIK-184-12 | 1979 | | | | | | X | |
| X-744G | Bulk Storage Building - Non-UEA | II | 008/PIK-52-12 | 1956 | | | | | X | | |
| X-744H | Bulk Storage Bldg. | II | 010/PIK-54-12 | 1953 | | | | | X | | This facility is in its original location |
| X-744J | Bulk Storage Bldg. | II | 011/PIK-55-12 | 1953 | | | | | X | | This facility is in its original location |
| X-744K | Warehouse K - Non-UEA | I | 084/PIK-128-12 | 1953-54, 1978 | | | | | X | | |

Table 1. List of all inventoried DOE architectural properties and their Portsmouth mission associations (continued)

| Portsmouth no. | Portsmouth name | Portsmouth Quad | AL#/OHI# | Year constructed | PRE-DOE | Missions | | | Mission support | | Comments |
|----------------|------------------------------------|-----------------|----------------|------------------|--------------------------|--|----------------------------|--------------------|---|--|--|
| | | | | | Pre-Portsmouth structure | Cold War mission (weapons and other defense related) | Other/non-Cold War related | EM mission related | Cold War mission related support facility | Other/EM/non-Cold War-related support facility | |
| X-744L | Maintenance and Stores Warehouse | II | 015/PIK-59-12 | 1983 | | | | | | X | |
| X-744-N | Warehouse | III | 131/PIK-175-12 | 1988 | | | | | | X | |
| X-744-P | Warehouse | III | 131/PIK-175-12 | 1988 | | | | | | X | |
| X-744-Q | Warehouse | III | 131/PIK-175-12 | 1988 | | | | | | X | |
| X-744S | Warehouse | III | 129/PIK-173-12 | 1957, 1978 | | | | | X | | |
| X-744T | Warehouse | III | 129/PIK-173-12 | 1957, 1978 | | | | | X | | Demolished |
| X-744U | Warehouse | III | 129/PIK-173-12 | 1957, 1978 | | | | | X | | Demolished |
| X-744W | Surplus and Salvage Warehouse | IV | 141/PIK-185-12 | 1957, 1983 | | | | | X | | |
| X-746 | Materials Receiving and Inspection | I | 033/PIK-77-12 | 1954 | | | | | X | | Demolished |
| X-748 | Truck Scale Facility | III | 124/PIK-168-12 | 1975 | | | | | X | | Associated with X-108E |
| X-750 | Mobile Equipment Maintenance Shop | I | 037/PIK-81-12 | 1953 | | | | | X | | |
| X-750A | Garage Storage Bldg. | I | 038/PIK-82-12 | ca. 1953 | | | | | X | | Associated with X-750 |
| X-751 | Mobile Equipment Garage | I | 083/PIK-127-12 | 1979 | | | | | | X | |
| X-752 | Warehouse | IV | 139/PIK-183-12 | 1978 | | | | | X | | This may be an original Portsmouth warehouse, but it is not in its original location |
| X-760 | Chemical Engineering Bldg. | I | 052/PIK-96-12 | 1954 | | | | | X | | Demolished |
| X-770 | Mechanical Test Bldg. | I | 053/PIK-97-12 | 1954 | | | | | X | | Demolished |
| XT-801 | South Office Bldg. | I | 090/PIK-134-12 | 1977-78 | | | | | | X | |

Table 1. List of all inventoried DOE architectural properties and their Portsmouth mission associations (continued)

| Portsmouth no. | Portsmouth name | Portsmouth Quad | AL#/OHI# | Year constructed | PRE-DOE | Missions | | | Mission support | | Comments |
|-----------------------|--|-----------------|----------------|------------------|--------------------------|--|----------------------------|--------------------|---|--|----------|
| | | | | | Pre-Portsmouth structure | Cold War mission (weapons and other defense related) | Other/non-Cold War related | EM mission related | Cold War mission related support facility | Other/EM/non-Cold War-related support facility | |
| XT-847 | GCEP Construction Warehouse | I | 087/PIK-131-12 | ca. 1980-85 | | | | | | X | |
| X-1000 | Administration Bldg. | I | 065/PIK-109-12 | 1981 | | | | | | X | |
| X-1007 | Fire Station | I | 062/PIK-106-12 | 1981 | | | | | | X | |
| X-1020 | Plant Emergency Operations Center | I | 061/PIK-105-12 | ca. 1980-85 | | | | | | X | |
| X-1107AV | Administrative Portal-Vehicular | I | 086/PIK-130-12 | 1983 | | | | | | X | |
| X-1107BP | Administrative Portal-Pedestrian | I | 064/PIK-108-12 | 1985 | | | | | | X | |
| X-1107BV | Interplant Portal | I | 059/PIK-103-12 | 1985 | | | | | | X | |
| X-1107DV and X-1107DP | Northeast Portal - Vehicular and Northeast Portal - Pedestrian | III | 125/PIK-169-12 | 1985 | | | | | | X | |
| X-1107EV and X-1107EP | Northwest Portal - Vehicular and Northwest Portal - Pedestrian | III | 159/PIK-203-12 | 1985 | | | | | | X | |
| X-1107FP | South Portal - Pedestrian | I | 080/PIK-124-12 | 1985 | | | | | | X | |
| X-1107FV | South Portal - Vehicular | I | 081/PIK-125-12 | 1985 | | | | | | X | |
| X-3000 | Electronic Maintenance Facility | I | 066/PIK-110-12 | ca. 1980-85 | | | | | | X | |
| X-3001 | GCEP Process Building #1 | I | 072/PIK-116-12 | 1979-83 | | | X | | | | |

Table 1. List of all inventoried DOE architectural properties and their Portsmouth mission associations (continued)

| Portsmouth no. | Portsmouth name | Portsmouth Quad | AL#/OHI# | Year constructed | PRE-DOE | Missions | | | Mission support | | Comments |
|----------------|---|-----------------|----------------|------------------|--------------------------|--|----------------------------|--------------------|---|--|----------|
| | | | | | Pre-Portsmouth structure | Cold War mission (weapons and other defense related) | Other/non-Cold War related | EM mission related | Cold War mission related support facility | Other/EM/non-Cold War-related support facility | |
| X-3002 | GCEP Process Building #2 | I | 070/PIK-114-12 | 1979-83 | | | X | | | | |
| X-3012 | GCEP Process Support Bldg. | I | 071/PIK-115-12 | 1983 | | | X | | | | |
| X-3346 | Waste Handling and Storage Facility (GCEP Feed and Withdrawal Facility) | I | 079/PIK-123-12 | ca. 1980-85 | | | X | | | | |
| X-5000 | GCEP Switch House | I | 078/PIK-122-12 | 1982 | | | | | | X | |
| X-5001 | Switchyard | I | 078/PIK-122-12 | 1982 | | | | | | X | |
| X-5001A | Valve House | I | 078/PIK-122-12 | 1982 | | | | | | X | |
| X-5001B | Oil Pumping Station | I | 078/PIK-122-12 | 1982 | | | | | | X | |
| X-6000 | Cooling Tower Pump House | I | 067/PIK-111-12 | 1984 | | | | | | X | |
| X-6001 | Cooling Tower | I | 068/PIK-112-12 | 1984 | | | | | | X | |
| X-6001A | Valve House | I | 068/PIK-112-12 | 1984 | | | | | | X | |
| X-6613 | Sanitary Water Storage Tank | I | 075/PIK-119-12 | ca. 1980-85 | | | | | | X | |
| X-6614-E | Sewage Lift Station | III | 082/PIK-126-12 | ca. 1970-78 | | | | | X | | |
| X-6614G | Sewage Lift Station | I | 082/PIK-126-12 | ca. 1970-78 | | | | | X | | |
| X-6614H | Sewage Lift Station | I | 082/PIK-126-12 | ca. 1970-78 | | | | | X | | |
| X-6614J | Sewage Lift Station | III | 082/PIK-126-12 | ca. 1970-78 | | | | | X | | |
| X-6619 | Sewage Treatment Facility | III | 130/PIK-174-12 | 1980 | | | | | | X | |
| X-6643-I | Fire Water Storage Tank 1 | I | 076/PIK-120-12 | ca. 1980-85 | | | | | | X | |
| X-6643-II | Fire Water Storage Tank 2 | I | 077/PIK-121-12 | ca. 1980-85 | | | | | | X | |

Table 1. List of all inventoried DOE architectural properties and their Portsmouth mission associations (continued)

| Portsmouth no. | Portsmouth name | Portsmouth Quad | AL#/OHI# | Year constructed | PRE-DOE | Missions | | | Mission support | | Comments |
|-------------------|--|-----------------|----------------|-----------------------|--------------------------|--|----------------------------|--------------------|---|--|---|
| | | | | | Pre-Portsmouth structure | Cold War mission (weapons and other defense related) | Other/non-Cold War related | EM mission related | Cold War mission related support facility | Other/EM/non-Cold War-related support facility | |
| X-6644 | Fire Water Pump House | I | 074/PIK-118-12 | ca. 1980-85 | | | | | | X | |
| X-7721 | Maintenance, Stores and Training Facility | I | 060/PIK-104-12 | 1985 | | | X | | | | |
| X-7725 and X-7726 | Hazardous Waste Storage Bldg. (GCEP Recycle/ Assembly Bldg. and GCEP Training and Test Facility) | III | 096/PIK-140-12 | 1983 | | | X | | | | |
| X-7725A | GCEP Waste Accountability Facility | III | 097/PIK-141-12 | 1984 | | | | | | X | |
| X-7727H | GCEP Transfer Corridor | I and III | 073/PIK-117-12 | 1983 | | | X | | | | |
| --- | Undocumented Guard Post | II | 012/PIK-56-12 | ca. 1952-1960 | | | | | X | | Original construction date and location are unknown |
| --- | Undocumented Guard Booth | I | 069/PIK-113-12 | ca. 1960-1980 | | | | | X | | Original construction date and location are unknown |
| --- | Undocumented temporary warehouse in X-7445 R Yard | III | 098/PIK-142-12 | ca. 1996-97 | | | | | | X | |
| --- | Undocumented bridge over tributary to Little Beaver Creek | IV | 102/PIK-146-9 | ca. 1930-50, ca. 1954 | X | | | | | | Heavily altered roadway bridge lacking integrity |
| --- | Undocumented shed in X-530A switchyard | III | 103/PIK-147-12 | unknown | | | | | | | Although associated with X-530A switchyard, the age and original function are unknown |
| --- | Undocumented mobile office in X-530A switchyard | III | 103/PIK-147-12 | unknown | | | | | | | Although associated with X-530A switchyard, the age and original function are unknown |
| --- | Two undocumented booths in X-745E Yard | IV | 110/PIK-154-12 | ca. 1970-80 | | | | | X | | |
| --- | Undocumented shed in X-745C Yard | III | 111/PIK-155-12 | ca. 1996-97 | | | | | | X | |

Table 1. List of all inventoried DOE architectural properties and their Portsmouth mission associations (continued)

| Portsmouth no. | Portsmouth name | Portsmouth Quad | AL#/OHI# | Year constructed | PRE-DOE | Missions | | | Mission support | | Comments |
|----------------|---|-----------------|----------------|-------------------------|--------------------------|--|----------------------------|--------------------|---|--|--|
| | | | | | Pre-Portsmouth structure | Cold War mission (weapons and other defense related) | Other/non-Cold War related | EM mission related | Cold War mission related support facility | Other/EM/non-Cold War-related support facility | |
| --- | Undocumented mobile office behind X-344A | IV | 116/PIK-160-12 | ca. 1990-97 | | | | | | X | |
| --- | Undocumented mobile office in X-533A switchyard | IV | 120/PIK-164-12 | ca. 1997 | | | | | | X | Although associated with X-533A switchyard, it is a modern utilitarian structure |
| --- | Chlorine Bldg. | IV | 148/PIK-192-12 | ca. 1993-1997 | | | | | | X | Although associated with the X-611 water treatment complex, it is a modern utilitarian structure |
| --- | Undocumented Pipeline from Water Treatment Plant to X-611 B Sludge Lagoon | IV | 151/PIK-195-12 | 1978-1980 | | | | | X | | |
| --- | Undocumented Sludge Lagoon Environmental Monitoring Station | IV | 152/PIK-196-12 | ca. 1980 | | | | X | | | |
| --- | Undocumented Water Pipeline Bldg. near Little Beaver Creek | IV | 154/PIK-198-9 | ca. 1954 | | | | | X | | |
| --- | Undocumented earthen barricade | IV | 156/PIK-200-9 | ca. 1980-90 | | | | | | X | |
| --- | Undocumented Bridge over Tributary to Little Beaver Creek | IV | 157/PIK-201-9 | ca. 1880-1920, ca. 1954 | X | | | | | | Heavily altered roadway bridge lacking integrity |
| --- | Undocumented Bridge over Tributary to Little Beaver Creek | IV | 158/PIK-202-12 | ca. 1880-1920, ca. 1954 | X | | | | | | Heavily altered roadway bridge lacking integrity |
| --- | Undocumented Temporary Warehouse Beside X-3346 | I | 160/PIK-204-12 | ca. 1996-97 | | | | | | X | |

Table 1. List of all inventoried DOE architectural properties and their Portsmouth mission associations (continued)

| Portsmouth no. | Portsmouth name | Portsmouth Quad | AL#/OHI# | Year constructed | PRE-DOE | Missions | | | Mission support | | Comments |
|----------------|-----------------|-----------------|----------|------------------|--------------------------|--|----------------------------|--------------------|---|--|----------|
| | | | | | Pre-Portsmouth structure | Cold War mission (weapons and other defense related) | Other/non-Cold War related | EM mission related | Cold War mission related support facility | Other/EM/non-Cold War-related support facility | |
| | | | | | | | | | | | |

AL = architectural location

DOE = U.S. Department of Energy

EM = Environmental Management

GCEP = Gas Centrifuge Enrichment Plant

OHI = Ohio Historic Inventory

SNM = special nuclear material

The following non-DOE owned facilities were inventoried at the time of the 1996-1997 architectural survey. They are listed for informational purposes only and are not under the jurisdiction, ownership or control of DOE. 134/PIK-178-12 Ohio Valley Electric Corporation Administration Building; 135/PIK-179-12 Ohio Valley Electric Corporation storage shed; 136/PIK-180-12 Ohio Valley Electric Corporation microwave tower and dish; 137/PIK-181-12 Ohio Valley Electric Corporation Don Marquis Substation (upper tier yard); and 138/PIK-182-12 Ohio Valley Electric Corporation Don Marquis Substation (lower tier yard).

Table 2. List of all inventoried DOE architectural properties in the architectural survey of Portsmouth

| AL # | OHI # | Portsmouth # | Portsmouth name | Portsmouth Quad | Date constructed | Development period | Facility type |
|------|-----------|--------------|---|-----------------|------------------|--------------------|---------------------------|
| 001 | PIK-45-12 | X-633-2C | Cooling Tower | II | 1976 | 3 | Heat Exchanging Structure |
| 002 | PIK-46-12 | X-633-2A | Cooling Tower and Uncovered Extension Basin | II | 1954-55 | 2 | Heat Exchanging Structure |
| 003 | PIK-47-12 | X-633-1 | Recirculating Water Pump House | II | 1954-55 | 2 | Mechanical Bldg. |
| 004 | PIK-48-12 | X-633-2B | Cooling Tower and Uncovered Extension Basin | II | 1954-55 | 2 | Heat Exchanging Structure |
| 005 | PIK-49-12 | X-633-2D | Cooling Tower | II | 1978 | 3 | Heat Exchanging Structure |
| 006 | PIK-50-12 | X-343 | Feed Vaporization and Sampling Facility | II | 1981 | 4 | Process Bldg. |
| 007 | PIK-51-12 | X-623 | East Groundwater Treatment Facility | II | 1994-95 | 4 | Mechanical Bldg. |
| 008 | PIK-52-12 | X-744G | Bulk Storage Bldg.-Non-UEA | II | 1956 | 2 | Warehouse |
| 009 | PIK-53-12 | X-701E | Neutralizing Bldg. | II | 1973 | 3 | Mechanical Bldg. |
| 010 | PIK-54-12 | X-744H | Bulk Storage Bldg. | II | 1953 | 2 | Warehouse |
| 011 | PIK-55-12 | X-744J | Bulk Storage Bldg. | II | 1953 | 2 | Warehouse |
| 012 | PIK-56-12 | --- | Undocumented Guard Post | II | ca. 1952-1960 | 2 | Booth |
| 013 | PIK-57-12 | X-109B | Personnel Monitoring Bldg. | II | 1955 | 2 | Booth |
| 014 | PIK-58-12 | X-105 | Maintenance Bldg. | II | 1957 | 3 | Warehouse |
| 015 | PIK-59-12 | X-744L | Maintenance and Stores Warehouse | II | ca. 1983 | 4 | Warehouse |
| 016 | PIK-60-12 | X-701A | Lime House | II | 1955 | 2 | Mechanical Bldg. |
| 017 | PIK-61-12 | X-701C | Neutralizing Pit | II | 1973 | 2 | Basin |
| 018 | PIK-62-12 | X-700 | Converter Shop and Cleaning Facility | II | 1955 | 2 | Work Bldg. |
| 019 | PIK-63-12 | X-701D | Water Deionization Facility | II | 1955 | 2 | Mechanical Bldg. |
| 020 | PIK-64-12 | X-700A | Air Conditioning Equipment Bldg. | II | 1975 | 3 | Mechanical Bldg. |
| 021 | PIK-65-12 | X-705 | Decontamination Bldg. | II | 1955 | 2 | Work Bldg. |
| 022 | PIK-66-12 | X-705D | Heating Booster Pump Bldg. | II | 1983 | 4 | Mechanical Bldg. |
| 023 | PIK-67-12 | X-345 | Special Nuclear Materials Storage Bldg. | II | 1980 | 4 | Bunker Warehouse |
| 024 | PIK-68-12 | X-720B | Radio Base Station Bldg. | II | 1978 | 3 | Mechanical Bldg. |
| 025 | PIK-69-12 | X-640-2 | Elevated Water Tank | II | 1960 | 3 | Elevated Cylinder Tank |

Table 2. List of all inventoried DOE architectural properties in the architectural survey of Portsmouth (continued)

| AL # | OHI # | Portsmouth # | Portsmouth name | Portsmouth Quad | Date constructed | Development period | Facility type |
|------|-----------|------------------|---|-----------------|------------------|--------------------|-----------------------------|
| 026 | PIK-70-12 | X-720C | Paint and Oil Storage Bldg. | II | 1980 | 4 | Warehouse |
| 027 | PIK-71-12 | X-720 | Maintenance and Stores Bldg. | II | 1954 | 2 | Work Bldg. |
| 028 | PIK-72-12 | X-720A | Maintenance and Stores Gas Manifold Shed | II | 1954 | 2 | Covered Platform |
| 029 | PIK-73-12 | X-108B | North Portal and Shelter | I | 1955 | 2 | Booth |
| 030 | PIK-74-12 | X-108A | South Portal and Shelter | I | 1955 | 2 | Booth |
| 031 | PIK-75-12 | X-741 | Oil Drum Storage Facility | I | 1954 | 2 | Covered Platform |
| 032 | PIK-76-12 | X-742 | Gas Cylinder Storage Facility | I | 1954 | 2 | Covered Platform |
| 033 | PIK-77-12 | X-746 | Materials Receiving and Inspection | I | 1954 | 2 | Warehouse |
| 034 | PIK-78-12 | X-104A | Indoor Firing Range | I | ca. 1980-1985 | 4 | Enclosed Firing Range Bldg. |
| 035 | PIK-79-12 | X-104 | Guard Headquarters | I | 1954, 1991 | 2 | Office Bldg. |
| 036 | PIK-80-12 | X-106 | Tactical Response Station | I | 1955 | 2 | Garage |
| 037 | PIK-81-12 | X-750 | Mobile Equipment Maintenance Shop | I | 1953 | 2 | Garage |
| 038 | PIK-82-12 | X-750A | Garage Storage Bldg. | I | ca. 1953 | 2 | Storage Shed |
| 039 | PIK-83-12 | X-103 | Auxiliary Office Bldg. | I | 1954 | 2 | Warehouse |
| 040 | PIK-84-12 | X-300 and X-300C | Plant Control Facility and Emergency Communications Antenna | I | ca. 1952-1955 | 2 | Bunker Office Bldg. |
| 041 | PIK-85-12 | X-300A | Process Monitoring Bldg. | I | ca. 1954 | 2 | Mechanical Bldg. |
| 042 | PIK-86-12 | X-743 | Lumber Storage Facility | I | ca. 1953-56 | 2 | Covered Platform |
| 043 | PIK-87-12 | X-710 | Technical Service Bldg. | I | 1953, 1975 | 2 | Laboratory Bldg. |
| 044 | PIK-88-12 | X-710B | Explosion Test Facility | I | 1956 | 2 | Mechanical Bldg. |
| 045 | PIK-89-12 | X-710A | Technical Service Gas Manifold Shed | I | ca. 1955 | 2 | Covered Platform |
| 046 | PIK-90-12 | X-102 | Cafeteria | I | 1954 | 2 | Cafeteria |
| 047 | PIK-91-12 | X-101 | Health Services Center | I | 1954 | 2 | Medical Bldg. |
| 048 | PIK-92-12 | X-540 | Exchange Telephone Bldg. | I | 1954 | 2 | Office Bldg. |
| 049 | PIK-93-12 | X-100B | Air Conditioning Equipment Bldg. | I | 1958 | 3 | Mechanical Bldg. |
| 050 | PIK-94-12 | X-100 | Administration Bldg. | I | 1954 | 2 | Office Bldg. |
| 051 | PIK-95-12 | X-109C | Personnel Monitoring Trailer | I | 1980-1990 | 4 | Mobile Home |
| 052 | PIK-96-12 | X-760 | Chemical Engineering Bldg. | I | 1954 | 2 | Laboratory Bldg. |

Table 2. List of all inventoried DOE architectural properties in the architectural survey of Portsmouth (continued)

| AL # | OHI # | Portsmouth # | Portsmouth name | Portsmouth Quad | Date constructed | Development period | Facility type |
|------|------------|----------------------------------|--|-----------------|------------------|--------------------|---------------------------|
| 053 | PIK-97-12 | X-770 | Mechanical Test Bldg. | I | 1954 | 2 | Mechanical Bldg. |
| 054 | PIK-98-12 | X-600 | Steam Plant | I | 1954, 1996 | 2 | Heating Plant Structure |
| 055 | PIK-99-12 | X-600B | Steam Plant Shop Bldg. | I | 1981 | 4 | Garage |
| 056 | PIK-100-12 | X-621 | Coal Pile Runoff Treatment Facility | I | 1984 | 4 | Mechanical Bldg. |
| 057 | PIK-101-12 | X-626-1 | Recirculating Water Pump House | I | 1954 | 2 | Mechanical Bldg. |
| 058 | PIK-102-12 | X-626-2 | Cooling Tower | I | 1954 | 2 | Heat Exchanging Structure |
| 059 | PIK-103-12 | X-1107BV | Interplant Portal | I | 1985 | 4 | Booth |
| 060 | PIK-104-12 | X-7721 | Maintenance, Stores and Training Facility | I | 1985 | 4 | Office Bldg., Multi-level |
| 061 | PIK-105-12 | X-1020 | Plant Emergency Operations Center | I | ca. 1980-85 | 4 | Office Bldg. |
| 062 | PIK-106-12 | X-1007 | Fire Station | I | 1981 | 4 | Emergency Vehicle Garage |
| 063 | PIK-107-12 | X-112 | Data Processing Bldg. | I | 1984 | 4 | Office Bldg. |
| 064 | PIK-108-12 | X-1107BP | Administrative Portal-Pedestrian | I | 1985 | 4 | Booth |
| 065 | PIK-109-12 | X-1000 | Administration Bldg. | I | 1981 | 4 | Office Bldg. |
| 066 | PIK-110-12 | X-3000 | Electronic Maintenance Facility | I | ca. 1980-85 | 4 | Office Bldg. |
| 067 | PIK-111-12 | X-6000 | Cooling Tower Pump House | I | 1984 | 4 | Mechanical Bldg. |
| 068 | PIK-112-12 | X-6001 and X-6001A | Cooling Tower and Valve House | I | 1984 | 4 | Heat Exchanging Structure |
| 069 | PIK-113-12 | --- | Undocumented Guard Booth | I | ca. 1960-1980 | 3 | Booth |
| 070 | PIK-114-12 | X-3002 | GCEP Process Bldg. #2 | I | 1979-83 | 4 | Process Bldg. |
| 071 | PIK-115-12 | X-3012 | GCEP Process Support Bldg | I | 1983 | 4 | Office Bldg. |
| 072 | PIK-116-12 | X-3001 | GCEP Process Bldg. #1 | I | 1979-83 | 4 | Process Bldg. |
| 073 | PIK-117-12 | X-7727H | GCEP Transfer Corridor | I and III | 1983 | 4 | Mechanical Corridor |
| 074 | PIK-118-12 | X-6644 | Fire Water Pump House | I | ca. 1980-85 | 4 | Mechanical Bldg |
| 075 | PIK-119-12 | X-6613 | Sanitary Water Storage Tank | I | ca. 1980-85 | 4 | Large Cylinder Tank |
| 076 | PIK-120-12 | X-6643-I | Fire Water Storage Tank I | I | ca. 1980-85 | 4 | Large Cylinder Tank |
| 077 | PIK-121-12 | X-6643-II | Fire Water Storage Tank II | I | ca. 1980-85 | 4 | Large Cylinder Tank |
| 078 | PIK-122-12 | X-5000, X-5001, X-5001A, X-5001B | GCEP Switch House, Switchyard, Valve House and Oil Pumping Station | I | 1982 | 4 | Utility Yard |

Table 2. List of all inventoried DOE architectural properties in the architectural survey of Portsmouth (continued)

| AL # | OHI # | Portsmouth # | Portsmouth name | Portsmouth Quad | Date constructed | Development period | Facility type |
|------|------------|--|---|-----------------|----------------------------|--------------------|------------------------|
| 079 | PIK-123-12 | X-3346 | Waste Handling and Storage Facility (GCEP Feed and Withdrawal Facility) | I | ca. 1980-85 | 4 | Process Bldg. |
| 080 | PIK-124-12 | X-1107FP | South Portal - Pedestrian | I | 1985 | 4 | Booth |
| 081 | PIK-125-12 | X-1107FV | South Portal - Vehicular | I | 1985 | 4 | Booth |
| 082 | PIK-126-12 | X-614D, X-6614G, X-6614E, X-6614H (two), X- 6614J | Sewage Lift Stations | I and III | ca. 1970-78 | 3 | Mechanical Bldg. |
| 083 | PIK-127-12 | X-751 | Mobile Equipment Garage | I | 1979 | 4 | Linear Garage |
| 084 | PIK-128-12 | X-744K | Warehouse K - Non-UEA | I | 1953-54, 1978 | 2 | Warehouse |
| 085 | PIK-129-12 | X-622 | South Groundwater Treatment Facility | I | ca. 1994 | 4 | Mechanical Bldg. |
| 086 | PIK-130-12 | X-1107AV | Administrative Portal - Vehicular | I | 1983 | 4 | Booth |
| 087 | PIK-131-12 | XT-847 | GCEP Construction Warehouse | I | ca. 1980-85 | 4 | Warehouse |
| 088 | PIK-132-12 | X-617 | South pH Adjustment Facility | I | 1979 | 4 | Mechanical Bldg. |
| 089 | PIK-133-12 | X-230J2 | South Environmental Sampling Bldg. | I | 1968 | 3 | Mechanical Bldg. |
| 090 | PIK-134-12 | XT-801 | South Office Bldg. | I | 1977-78 | 3 | Office Bldg. |
| 091 | PIK-135-12 | X-120 | South Weather Station | I | ca. 1979, ca. 1993-1996 | 4 | Communications Antenna |
| 092 | PIK-136-12 | X-230J7 | East Environmental Monitoring Station (Liquid Effluent System) | II | 1981 | 4 | Mechanical Bldg. |
| 093 | PIK-137-12 | X-624-1 | Recirculating Water Pump House | II | ca. 1993-96 | 4 | Weatherport |
| 094 | PIK-138-12 | X-624 | Little Beaver Groundwater Treatment Facility | II | ca. 1993-95 | 4 | Mechanical Bldg. |
| 095 | PIK-139-12 | X-625 | Groundwater Treatment Facility | I | ca. 1995 | 4 | Mechanical Bldg. |
| 096 | PIK-140-12 | X-7725 and X-7726 | Hazardous Waste Storage Bldg. (GCEP Recycle/Assembly Bldg. and GCEP Training and Test Facility) | III | 1983 | 4 | Process Bldg. |
| 097 | PIK-141-12 | X-7725A | GCEP Waste Accountability Facility | III | 1984 | 4 | Warehouse |

Table 2. List of all inventoried DOE architectural properties in the architectural survey of Portsmouth (continued)

| AL # | OHI # | Portsmouth # | Portsmouth name | Portsmouth Quad | Date constructed | Development period | Facility type |
|------|------------|-----------------------|--|-----------------|--------------------------|--------------------|---------------------------|
| 098 | PIK-142-12 | --- | Undocumented Temporary Warehouse in X-7445 R Yard | III | ca. 1996-97 | 4 | Weatherport |
| 099 | PIK-143-12 | X-326, X-111A, X-111B | Process Bldg. and SNM Monitoring Portals | III | 1956, 1981 | 2, 4 | Process Bldg. |
| 100 | PIK-144-12 | X-220A | Instrumentation Tunnels (beside X-326, X-330 and X-333) | I and III | 1954 | 2 | Utility Tunnel |
| 101 | PIK-145-12 | X-330 | Process Bldg. | III | 1955 | 2 | Process Bldg. |
| 102 | PIK-146-9 | --- | Undocumented Bridge over Tributary to Little Beaver Creek | IV | ca. 1930-50, ca. 1954 | 1 | Bridge |
| 103 | PIK-147-12 | X-530C | Switchyard, Test and Repair Bldg., Oil House, Valve Houses, GCEP Oil Pumping Station, Undocumented Bldg., and Undocumented Mobile Office | III | 1954, 1980 (X-530G) | 2, 4 | Mechanical Bldg. |
| 104 | PIK-148-12 | X-530B | Switch House (includes Control House, North Switch House, South Switch House) | III | 1954 | 2 | Utility Yard |
| 105 | PIK-149-12 | X-740 | Waste Oil Storage Bldg. | III | 1982 | 4 | Weatherport |
| 106 | PIK-150-12 | X-109A | Personnel Monitoring Bldg. | III | 1955 | 2 | Office Bldg. |
| 107 | PIK-151-12 | X-630-1 | Recirculating Water Pump House | IV | ca. 1954-55 | 2 | Mechanical Bldg. |
| 108 | PIK-152-12 | X-630-2A | Cooling Tower | IV | ca. 1954-55 | 2 | Heat Exchanging Structure |
| 109 | PIK-153-12 | X-630-2B | Cooling Tower | IV | ca. 1954-55 | 2 | Heat Exchanging Structure |
| 110 | PIK-154-12 | --- | Two undocumented booths in X-745E Yard | IV | ca. 1970-80 | 3 | Booth |
| 111 | PIK-155-12 | --- | Undocumented shed in X-745C Yard | III | ca. 1996-97 | 4 | Storage Shed |
| 112 | PIK-156-12 | X-344A | Toll Enrichment Facility | IV | 1958, 1971-75 | 3 | Process Bldg. |
| 113 | PIK-157-12 | X-342A | Feed Vaporization and Fluorine Generation Facility | IV | 1954, 1982-83 | 2 | Process Bldg. |
| 114 | PIK-158-12 | X-342B | Fluorine Storage Bldg. | IV | 1954 | 2 | Mechanical Bldg. |
| 115 | PIK-159-12 | X-344B | Maintenance Storage Bldg. | IV | 1958 | 3 | Warehouse |
| 116 | PIK-160-12 | --- | Undocumented Mobile Office behind X-344A | IV | ca. 1990-97 | 4 | Mobile Home |

Table 2. List of all inventoried DOE architectural properties in the architectural survey of Portsmouth (continued)

| AL # | OHI # | Portsmouth # | Portsmouth name | Portsmouth Quad | Date constructed | Development period | Facility type |
|------|------------|--|---|-----------------|-------------------------------------|--------------------|--------------------------|
| 117 | PIK-161-12 | X-344C, X-344E, X-344F | Hydrofluoric Acid Storage Bldg., Gas Ventilation Stack, and Safety Bldg. | IV | 1958 | 3 | Weatherport |
| 118 | PIK-162-12 | X-334 | Transformer Storage and Cleaning Bldg. | IV | 1985 | 4 | Storage Garage |
| 119 | PIK-163-12 | X-108H | Pike Avenue Portal | IV | 1976 | 3 | Booth |
| 120 | PIK-164-12 | X-215D, X-533A, X-533C, X-533D, X-533E, X-533F, X-533H, and undocumented | Electric Power Tunnels, Switchyard, Test and Repair Facility, Oil House, Valve Houses, Gas Reclaiming Cart Garage, and Undocumented Mobile Office | IV | 1954, 1955, 1985 (X-533H), ca. 1997 | 2, 4 | Utility Yard |
| 121 | PIK-165-12 | X-533B | Switch House (includes Control House, East Switch House, West Switch House) | IV | 1955 | 2 | Mechanical Bldg. |
| 122 | PIK-166-12 | X-640-1 | Recirculating Water Pump House | II | 1960 | 3 | Mechanical Bldg. |
| 123 | PIK-167-12 | X-333 | Process Bldg. | IV | 1955 | 2 | Process Bldg. |
| 124 | PIK-168-12 | X-108E, X-748 | Construction Entrance Bldg. and Truck Scale Facility | III | 1975 | 3 | Booth |
| 125 | PIK-169-12 | X-1107DV and X-1107DP | Northeast Portal - Vehicular and Northeast Portal - Pedestrian | III | 1985 | 4 | Booth |
| 126 | PIK-170-12 | X-106B (new) | New Fire Training Bldg. | III | ca. 1993 | 4 | Emergency Training Bldg. |
| 127 | PIK-171-12 | X-616 | Liquid Effluent Control Facility | III | 1976 | 3 | Mechanical Bldg. |
| 128 | PIK-172-12 | X-615 | Sanitary Sewage Treatment Facility | III | ca. 1954-1955 | 2 | Mechanical Bldg. |
| 129 | PIK-173-12 | X-744S, X-744T, X-744U | Warehouses | III | 1957, 1978 | 3 | Warehouse |
| 130 | PIK-174-12 | X-6619 | Sewage Treatment Facility | III | 1980 | 4 | Mechanical Bldg. |
| 131 | PIK-175-12 | X-744-N, X-744P, X-744Q | Warehouses | III | 1988 | 4 | Warehouse |
| 132 | PIK-176-12 | X-230J3 | West Environmental Sampling Bldg. | III | 1968 | 3 | Mechanical Bldg. |
| 133 | PIK-177-12 | X-230J5 | West Environmental Monitoring Station | III | 1981 | 4 | Mechanical Bldg. |

Table 2. List of all inventoried DOE architectural properties in the architectural survey of Portsmouth (continued)

| AL # | OHI # | Portsmouth # | Portsmouth name | Portsmouth Quad | Date constructed | Development period | Facility type |
|------|------------|----------------------------|--|-----------------|---|--------------------|------------------------|
| 139 | PIK-183-12 | X-752 | Warehouse | IV | 1978 | 3 | Warehouse |
| 140 | PIK-184-12 | X-744B | Salt Storage Bldg. | IV | 1979 | 4 | Bin |
| 141 | PIK-185-12 | X-744W | Surplus and Salvage Warehouse | IV | 1957, 1983 | 3 | Warehouse |
| 142 | PIK-186-12 | X-618 | North Holding Pond Storage Bldg. | IV | 1981 | 4 | Mechanical Bldg. |
| 143 | PIK-187-12 | X-230J9 | North Environmental Storage Bldg. | IV | ca. 1986 | 4 | Booth |
| 144 | PIK-188-12 | X-605-H, X-605I, X-605J | Booster Pump House and Appurtenances, Chlorinator Bldg., Diesel Generator Bldg. | IV | 1954 | 2 | Mechanical Bldg. |
| 145 | PIK-189-9 | X-735A | Landfill Utility Bldg. | IV | 1982 | 4 | Storage Garage |
| 146 | PIK-190-12 | X-612 | Elevated Water Tank | III | ca. 1960 | 3 | Elevated Cylinder Tank |
| 147 | PIK-191-12 | X-611 | Water Treatment Plant Chemical Bldg. and Mixing and Settling Basins | IV | 1954 | 2 | Mechanical Bldg. |
| 148 | PIK-192-12 | X-611C, unnumbered, X-611D | Water Treatment Plant Filter Bldg., Chlorine Bldg. and Recarbonation Instrumentation Bldg. | IV | 1954 (X-611C), 1979 (X-611D), ca. 1993-1997 | 2, 4 | Mechanical Bldg. |
| 149 | PIK-193-12 | X-230J6 | Northeast Environmental Monitoring Station | IV | 1981 | 4 | Mechanical Bldg. |
| 150 | PIK-194-12 | X-114A (old) | Former Firing Range | IV | ca. 1979 | 4 | Weatherport |
| 151 | PIK-195-12 | --- | Undocumented Pipeline from Water Treatment Plant to X-611 B Sludge Lagoon | IV | 1978-1980 | 3 | Pipeline |
| 152 | PIK-196-12 | --- | Undocumented Sludge Lagoon Environmental Monitoring Station | IV | ca. 1980 | 4 | Mechanical Bldg. |
| 153 | PIK-197-9 | X-114A (new) | Firing Range (new) | IV | ca. 1990 | 4 | Open Firing Range |
| 154 | PIK-198-9 | --- | Undocumented Water Pipeline Building near Little Beaver Creek | IV | ca. 1954 | 2 | Mechanical Bldg. |
| 155 | PIK-199-9 | X-204 (2) | Undocumented Railroad Overpass over North Access Road | IV | 1923, ca. 1952 | 1 | Railroad Overpass |
| 156 | PIK-200-9 | --- | Undocumented earthen barricade | IV | ca. 1980-1990 | 4 | Earthen Barricade |

Table 2. List of all inventoried DOE architectural properties in the architectural survey of Portsmouth (continued)

| AL # | OHI # | Portsmouth # | Portsmouth name | Portsmouth Quad | Date constructed | Development period | Facility type |
|-------------|--------------|--------------------------|--|------------------------|----------------------------|---------------------------|----------------------|
| 157 | PIK-201-9 | --- | Undocumented Bridge over Tributary to Little Beaver Creek | IV | ca. 1880-1920, ca. 1954 | 1 | Bridge |
| 158 | PIK-202-12 | --- | Undocumented Bridge over Little Beaver Creek | IV | ca. 1880-1920, ca. 1954 | 1 | Bridge |
| 159 | PIK-203-12 | X-1107EV and X-1107EP | Northwest Portal - Vehicular and Northwest Portal - Pedestrian | III | 1985 | 4 | Booth |
| 160 | PIK-204-12 | --- | Undocumented Temporary Warehouse Beside X-3346 | I | ca. 1996-97 | 4 | Weatherport |

AL = architectural location

GCEP = Gas Centrifuge Enrichment Plant

OHI = Ohio Historic Inventory

The following non-DOE owned facilities were inventoried at the time of the 1996-1997 architectural survey. They are listed for informational purposes only and are not under the jurisdiction, ownership or control of DOE. 134/PIK-178-12 Ohio Valley Electric Corporation Administration Building; 135/PIK-179-12 Ohio Valley Electric Corporation storage shed; 136/PIK-180-12 Ohio Valley Electric Corporation microwave tower and dish; 137/PIK-181-12 Ohio Valley Electric Corporation Don Marquis Substation (upper tier yard); and 138/PIK-182-12 Ohio Valley Electric Corporation Don Marquis Substation (lower tier yard).

Table 3. Pre-Portsmouth structures: period of development 1 (1900–1951)

| AL no. | OHI no. | Portsmouth no. | Portsmouth name |
|---------------|----------------|-----------------------|---|
| 102 | PIK-146-9 | Undocumented | Undocumented Bridge over tributary to Little Beaver Creek |
| 155 | PIK-199-9 | X-204 | Undocumented Railroad overpass over North Access Road |
| 157 | PIK-201-9 | Undocumented | Undocumented Bridge over tributary to Little Beaver Creek |
| 158 | PIK-202-12 | Undocumented | Undocumented Bridge over Little Beaver Creek |

AL = architectural location
OHI = Ohio Historic Inventory

Table 4. Original Portsmouth facility: period of development 2 (1952–1956)

Key: (numbers and names in parenthesis date to a later period of development than the primary resource under which it is listed.)

| AL no. | OHI no. | Portsmouth no. | Portsmouth name |
|---|------------|---|--|
| Portsmouth Gaseous Diffusion Process Buildings | | | |
| 099 | PIK-143-12 | X-326 (X-111A, X-111B) | Process Bldg. (SNM monitoring portals) |
| 100 | PIK-144-12 | X-220A | Instrumentation Tunnels (beside X-326, X-330, and X-333) |
| 101 | PIK-145-12 | X-330 | Process Bldg. |
| 123 | PIK-167-12 | X-333 | Process Bldg. |
| Original Cooling Complexes | | | |
| 002 | PIK-46-12 | X-633-2A | Cooling tower and Uncovered Extension Basin |
| 003 | PIK-47-12 | X-633-1 | Recirculating Water Pump House |
| 004 | PIK-48-12 | X-633-2B | Cooling Tower and Uncovered Extension Basin |
| 057 | PIK-101-12 | X-626-1 | Recirculating Water Pump House |
| 058 | PIK-102-12 | X-626-2 | Cooling Tower |
| 107 | PIK-151-12 | X-630-1 | Recirculating Water Pump House |
| 108 | PIK-152-12 | X-630-2A | Cooling Tower |
| 109 | PIK-153-12 | X-630-2B | Cooling Tower |
| Headquarters Group | | | |
| 035 | PIK-79-12 | X-104 | Guard Headquarters |
| 036 | PIK-80-12 | X-106 | Tactical Response Station |
| 037 | PIK-81-12 | X-750 | Mobile Equipment Maintenance Shop |
| 040 | PIK-84-12 | X-300 and X-300C | Plant Control Facility and Emergency Communications Antenna |
| 046 | PIK-90-12 | X-102 | Cafeteria |
| 047 | PIK-91-12 | X-101 | Health Service Center |
| 050 | PIK-94-12 | X-100 | Administration Bldg. |
| Electric Switchyards | | | |
| 103 | PIK-147-12 | X-530A, X-530C, X-530D, X-530E, X-530F (X-530G, and undocumented [two]) | Switchyard, Test and Repair Bldg., Oil House, Valve Houses, (GCEP Oil Pumping Station, Undocumented Bldg., and Undocumented Mobile Office) |
| 104 | PIK-148-12 | X-530B | Switch House (includes Control House, North Switch House, and South Switch House) |
| 120 | PIK-164-12 | X-533A, X-533C, X-533D, X-533E, X-533F, (X-533H), X-215D and (undocumented) | Switchyard, Test and Repair Bldg., Oil House, Valve Houses, (Gas Reclaiming Cart Garage), Electric Power Tunnels, and Undocumented Mobile Office |
| 121 | PIK-165-12 | X-533B | Switch House (includes Control House, East Switch House, and West Switch House) |
| Original Warehouses | | | |
| 010 | PIK-54-12 | X-744H | Bulk Storage Bldg. |
| 011 | PIK-55-12 | X-744J | Bulk Storage Bldg. |
| 039 | PIK-83-12 | X-103 | Auxiliary Office Bldg. |
| 084 | PIK-128-12 | X-744K | Warehouse K – non-UEA |
| Support Buildings | | | |
| 008 | PIK-52-12 | X-744G | Bulk Storage Bldg – non-UEA |
| 012 | PIK-56-12 | Undocumented | Undocumented Guard Post |
| 013 | PIK-57-12 | X-109B | Personnel Monitoring Bldg. |
| 016 | PIK-60-12 | X-701A | Lime House |
| 017 | PIK-61-12 | X-701C | Neutralizing Pit |
| 018 | PIK-62-12 | X-700 | Converter Shop and Cleaning Facility |
| 019 | PIK-63-12 | X-701D | Water Deionization Facility |
| 021 | PIK-65-12 | X-705 | Decontamination Bldg. |

Table 4. Original Portsmouth facility: period of development 2 (1952–1956) (continued)

Key: (numbers and names in parenthesis date to a later period of development than the primary resource under which it is listed.)

| AL no. | OHI no. | Portsmouth no. | Portsmouth name |
|--------|------------|--|---|
| 027 | PIK-71-12 | X-720 | Maintenance and Stores Bldg. |
| 028 | PIK-72-12 | X-720A | Maintenance and Stores Gas Manifold Shed |
| 029 | PIK-73-12 | X-108B | North Portal and Shelter |
| 030 | PIK-74-12 | X-108A | South Portal and Shelter |
| 031 | PIK-75-12 | X-741 | Oil Drum Storage Facility |
| 032 | PIK-76-12 | X-742 | Gas Cylinder Storage Facility |
| 033 | PIK-77-12 | X-746 | Materials Receiving and Inspection |
| 038 | PIK-82-12 | X-750A | Garage Storage Bldg. |
| 041 | PIK-85-12 | X-300A | Process Monitoring Bldg. |
| 042 | PIK-86-12 | X-743 | Lumber Storage Facility |
| 043 | PIK-87-12 | X-710 | Technical Service Bldg. |
| 044 | PIK-88-12 | X-710B | Explosion Test Facility |
| 045 | PIK-89-12 | X-710A | Technical Service Gas Manifold Shed |
| 048 | PIK-92-12 | X-540 | Exchange Telephone Bldg. |
| 052 | PIK-96-12 | X-760 | Chemical Engineering Bldg. |
| 053 | PIK-97-12 | X-770 | Mechanical Test Bldg. |
| 054 | PIK-98-12 | X-600 | Steam Plant |
| 106 | PIK-150-12 | X-109A | Personnel Monitoring Bldg. |
| 113 | PIK-157-12 | X-342A | Feed Vaporization and Fluorine Generation Facility |
| 114 | PIK-158-12 | X-342B | Fluorine Storage Bldg. |
| 128 | PIK-172-12 | X-615 | Sanitary Sewage Treatment Facility |
| 144 | PIK-188-12 | X-605H, X-605I, and X-605J | Booster Pump House and appurtenances, Chlorinator Bldg., and Diesel Generator Bldg. |
| 147 | PIK-191-12 | X-611 | Water Treatment Plant Chemical Bldg. and Mixing and Settling Basins |
| 148 | PIK-192-12 | X-611C, (unnumbered, and X-611D) | Water Treatment Plant Filter Bldg. (Chlorine Bldg. and Recarbonation Bldg.) |
| 154 | PIK-198-9 | Undocumented | Undocumented Water Pipeline Bldg. near Little Beaver Creek |

AL = architectural location

GCEP = Gas Centrifuge Enrichment Plant

OHI = Ohio Historic Inventory

SNM = special nuclear material

Table 5. Portsmouth facility additions: period of development 3 (1957–1978)

| AL no. | OHI no. | Portsmouth no. | Portsmouth name |
|---|------------|---|--|
| Environmental Monitoring Buildings | | | |
| 009 | PIK-53-12 | X-701E | Neutralizing Bldg. |
| 089 | PIK-133-12 | X-230J2 | South Environmental Sampling Bldg. |
| 132 | PIK-176-12 | X-230J3 | West Environmental Sampling Bldg. |
| Warehouses and Process Support Buildings | | | |
| 001 | PIK-45-12 | X-633-2C | Cooling Tower |
| 005 | PIK-45-12 | X-633-2D | Cooling Tower |
| 014 | PIK-58-12 | X-105 | Maintenance Bldg. |
| 020 | PIK-64-12 | X-700A | Air Conditioning Equipment Bldg. |
| 024 | PIK-68-12 | X-720B | Radio Base Station Bldg. |
| 025 | PIK-69-12 | X-640-2 | Elevated Water Tank |
| 049 | PIK-93-12 | X-100B | Air Conditioning Equipment Bldg. |
| 069 | PIK-113-12 | Undocumented | Undocumented Guard Booth |
| 082 | PIK-126-12 | X-614D, X-6614E, X-6614G, X-6614H (two) and X-6614J | Sewage Lift Stations |
| 090 | PIK-134-12 | XT-801 | South Office Bldg. |
| 110 | PIK-154-12 | Undocumented | Two undocumented booths in X-745E Yard |
| 112 | PIK-156-12 | X-344A | Toll Enrichment Facility |
| 115 | PIK-159-12 | X-344B | Maintenance Storage Bldg. |
| 117 | PIK-161-12 | X-344C, X-344E, and X-344F | Hydrofluoric Acid Storage Bldg., Gas Ventilation Stack, and Safety Bldg |
| 119 | PIK-163-12 | X-108H | Pike Avenue Portal |
| 122 | PIK-166-12 | X-640-1 | Recirculating Water Pump House |
| 124 | PIK-168-12 | X-108E and X-748 | Construction Entrance Bldg. and Truck Scale Facility |
| 127 | PIK-171-12 | X-616 | Liquid Effluent Control Facility |
| 129 | PIK-173-12 | X-744S, X-744T, and X-744U | Warehouses |
| 139 | PIK-183-12 | X-752 | Warehouse |
| 141 | PIK-185-12 | X-744W | Surplus and Salvage Warehouse |
| 146 | PIK-190-12 | X-612 | Elevated Water Tank |
| 151 | PIK-195-12 | Undocumented | Undocumented Pipeline from Water Treatment Plant to X-611B Sludge Lagoon |
| 156 | PIK-200-9 | Undocumented | Undocumented Earthen Barricade |

AL = architectural location
OHI = Ohio Historic Inventory

Table 6. GCEP facility and later buildings: period of development 4 (1979–present)

| AL no. | OHI no. | Portsmouth no. | Portsmouth name |
|--|------------|-------------------------------------|---|
| 070 | PIK-114-12 | X-3002 | GCEP Process Bldg. #2 |
| 071 | PIK-115-12 | X-3012 | GCEP Process Support Bldg |
| 072 | PIK-116-12 | X-3001 | GCEP Process Bldg. #1 |
| 073 | PIK-117-12 | X-7727H | GCEP Transfer Corridor |
| 079 | PIK-123-12 | X-3346 | Waste Handling and Storage Facility (GCEP Feed and Withdrawal Facility) |
| 096 | PIK-140-12 | X-7725 and X-7726 | Hazardous Waste Storage Bldg. (GCEP Recycle/Assembly Bldg. and GCEP Training and Test Facility) |
| GCEP Administration Complex | | | |
| 060 | PIK-104-12 | X-7721 | Maintenance, Stores, and Training Facility |
| 061 | PIK-105-12 | X-1020 | Plant Emergency Operations Center |
| 062 | PIK-106-12 | X-1007 | Fire Station |
| 063 | PIK-107-12 | X-112 | Data Processing Bldg. |
| 065 | PIK-109-12 | X-1000 | Administration Bldg. |
| 066 | PIK-110-12 | X-3000 | Electronic Maintenance Facility |
| GCEP Vehicular and Pedestrian Portals | | | |
| 059 | PIK-103-12 | X-1107BV | Interplant Portal |
| 064 | PIK-108-12 | X-1107BP | Administrative Portal – Pedestrian |
| 080 | PIK-124-12 | X-1107FP | South Portal – Pedestrian |
| 081 | PIK-125-12 | X-1107FV | South Portal – Vehicular |
| 086 | PIK-130-12 | X-1107AV | Administration Portal – Vehicular |
| 125 | PIK-169-12 | X-1107DV, X-1107DP | Northeast Portal – Vehicular and Northeast Portal – Pedestrian |
| 159 | PIK-203-12 | X-1107EV, X-1107EP | Northwest Portal – Vehicular and Northwest Portal – Pedestrian |
| Other Buildings and Structures Intended as GCEP Support | | | |
| 074 | PIK-118-12 | X-6644 | Fire Water Pump House |
| 075 | PIK-119-12 | X-6613 | Sanitary Water Storage Tank |
| 076 | PIK-120-12 | X-6643-I | Fire Water Storage Tank 1 |
| 077 | PIK-121-12 | X-6643-II | Fire Water Storage Tank 2 |
| 078 | PIK-122-12 | X-5000, X-5001, X-5001A, X-5001B | GCEP Switch House, Switchyard, Valve House and Oil Pumping Station |
| 083 | PIK-127-12 | X-751 | Mobile Equipment Garage |
| 087 | PIK-131-12 | XT-847 | GCEP Construction Warehouse |
| 097 | PIK-141-12 | X-7725A | GCEP Waste Accountability Facility |
| 130 | PIK-174-12 | X-6619 | Sewage Treatment Facility |
| Environmental Monitoring Buildings | | | |
| 007 | PIK-51-12 | X-623 | East Groundwater Treatment Facility |
| 056 | PIK-100-12 | X-621 | Coal Pile Runoff Treatment Facility |
| 085 | PIK-129-12 | X-622 | South Groundwater Treatment Facility |
| 088 | PIK-132-12 | X-617 | South pH Adjustment Facility |
| 092 | PIK-136-12 | X-230J-7 | East Environmental Monitoring Station (Liquid Effluent System) |
| 094 | PIK-138-12 | X-624 | Little Beaver Groundwater Treatment Facility |
| 095 | PIK-139-12 | X-625 | Groundwater Treatment Facility |
| 133 | PIK-177-12 | X-230J5 | West Environmental Monitoring Station |
| 142 | PIK-186-12 | X-618 | North Holding Pond Storage Bldg. |
| 149 | PIK-193-12 | X-230J6 | Northeast Environmental Monitoring Station |
| 152 | PIK-196-12 | Undocumented | Undocumented Sludge Lagoon Environmental Monitoring Station |
| Warehouses and Process Support Buildings | | | |
| 006 | PIK-50-12 | X-343 | Feed Vaporization and Sampling Facility |
| 015 | PIK-59-12 | X-744L | Maintenance and Stores Warehouse |
| 022 | PIK-66-12 | X-705D | Heating Booster Pump Bldg. |

Table 6. GCEP facility and later buildings: period of development 4 (1979–present) (continued)

| AL no. | OHI no. | Portsmouth no. | Portsmouth name |
|---------------|----------------|-------------------------------|--|
| 023 | PIK-67-12 | X-345 | Special Nuclear Material Storage Bldg. |
| 026 | PIK-70-12 | X-720C | Paint and Oil Storage Bldg. |
| 034 | PIK-78-12 | X-104A | Indoor Firing Range |
| 051 | PIK-95-12 | X-109C | Personnel Monitoring Trailer |
| 055 | PIK-99-12 | X-600B | Steam Plant Shop Bldg. |
| 091 | PIK-135-12 | X-120 | South Weather Station |
| 093 | PIK-137-12 | X-624-1 | Recirculating Water Pump House |
| 105 | PIK-149-12 | X-740 | Waste Oil Storage Bldg. |
| 111 | PIK-155-12 | Undocumented | Undocumented Shed in X-745C Yard |
| 116 | PIK-160-12 | Undocumented | Undocumented Mobile Office behind X-344A |
| 118 | PIK-162-12 | X-334 | Transformer Storage and Cleaning Bldg. |
| 126 | PIK-170-12 | X-106B (new) | New Fire Training Bldg. |
| 131 | PIK-175-12 | X-744N, X-744P, and X-744Q | Warehouses |
| 140 | PIK-184-12 | X-744B | Salt Storage Bldg. |
| 143 | PIK-187-12 | X-230J9 | North Environmental Storage Bldg. |
| 145 | PIK-189-9 | X-735A | Landfill Utility Bldg. |
| 150 | PIK-194-12 | X-114A (old) | Former Firing Range |
| 153 | PIK-197-9 | X-114A (new) | Firing Range (new) |

AL = architectural location

GCEP = Gas Centrifuge Enrichment Plant

OHI = Ohio Historic Inventory

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