

3.8 Historic and Cultural Resources

3.8.1 Cultural Resources

Cultural resources are defined as any prehistoric or historic district, site, building, structure, or object considered important to a culture, subculture, or community for scientific, traditional, religious, or any other reason. When these resources meet any one of the National Register Criteria for Evaluation (NRCE) (36 CFR 60.4), they may be termed historic properties and thereby are potentially eligible for inclusion on the National Register of Historic Places (NRHP).

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

Two preliminary Phase I archaeological surveys have been completed on the DOE reservation and were used in the preparation of the *Environmental Assessment Reindustrialization Program at the Portsmouth Gaseous Diffusion Plant, Piketon, Ohio* (DOE 2001b). The combined surveys covered 836 ha (2,066 acres) in Quadrants I through IV (Figure 3.4.1-1 [located in Appendix D of this Environmental Report]). There are few prehistoric archaeological resources at the site. Whether this is indicative of the local prehistoric upland settlement pattern or is a consequence of the extensive land disturbance associated with development of the site is not known. In contrast, historic archaeological resources at the site are relatively abundant, conspicuous, and undisturbed due to the nature and development of the plant.

Dobson-Brown et al. (1996) developed a predictive model of archaeological resource locations at the site based on variations in modern plant communities, topography, and soils, and on the location of previously identified archaeological resources in a 6.5 km (4 mi) literature review study area radius around the plant (DOE 2001b).

Survey methods in Quadrants I and II included visual inspection, surface collection, and hand excavation of shallow, less than 13 cm (less than 5 in.), shovel test pits. Similar shovel test pits inside the Perimeter Road area did not identify archaeological resources and indicated that this area has been highly disturbed.

Survey methods in Quadrants III and IV consisted of visual inspection, surface collection, hand-excavated shovel tests to 30 cm (12 in.) in depth in high-probability areas lacking significant disturbance and less than 15 percent slope. Additionally, hand-excavated deep shovel tests (greater than 30 cm or 12 in.) were accompanied by 2 cm (0.75-in.)-diameter hand-coring in three areas in Quadrant IV along Little Beaver Creek. Portions of Quadrants I and II that were not investigated during the preliminary Phase I archaeological survey were also investigated by shallow shovel tests.

The combined Phase I archaeological surveys identified 38 archaeological resources. Nine of the resources contain prehistoric components. Five are identified as prehistoric isolated

finds. Two are identified as prehistoric lithic scatters. Two contain prehistoric and historic components: a prehistoric isolated find in an historic cemetery and a prehistoric lithic scatter and historic farmstead. These sites are located in Quadrants I, II, and IV. No archaeological resources have been identified in Quadrant III. Thirty of the archaeological resources are associated with historic-era properties located within the site. Fifteen are remnants of historic farmsteads. Seven are scatters of historic artifacts or open refuse dumps. Two are isolated finds of historic artifacts. Four are remnants of the DOE reservation structures. Two are historic cemeteries. One of the historic cemeteries has an associated chapel and remnant of an observation tower.

The draft cultural resource report (Schweikart et al. 1997) determined that 22 of the archaeological resources do not meet the NRCE. Insufficient data were collected at the remaining 14 archaeological components and two historic-era cemeteries, one of which (33 Pk 189; PIK-206-9) includes an associated historic archaeological component, to determine whether they meet the NRCE (DOE 2001b).

3.8.2 Architectural Historic Resources

Two architectural historic surveys have also been completed at the site (Dobson-Brown et al. 1996; Coleman et al. 1997). The combined surveys covered an approximate 1,497 ha (3,700 acre) area and identified several structures that may have historical significance.

A draft historic context for the DOE reservation has also been prepared. This historic context is broken into four development periods for the site: Development Period 1 (1900-51), Development Period 2 (1952-56), Development Period 3 (1957-78), and Development Period 4 (1979-85). In the draft architectural survey report (Coleman et al. 1997), recommendations were made concerning which buildings and structures were considered contributing and noncontributing resources to the historic property. DOE will evaluate these recommendations in conjunction with the State Historic Preservation Office (SHPO) to determine which buildings and structures are considered historic properties under the NHPA and whether any of the properties are eligible for inclusion in the NRHP.

3.9 Visual/Scenic Resources

The dominant view shed in the vicinity of the DOE reservation consists of support facilities, transmission lines, open and forested buffer areas, marginal farmland, limited residential areas, and densely forested hills.

The DOE reservation consists mainly of a 1,497 ha (3,700 acre) fully developed industrial area. The majority of the industrial area is centrally located within a fenced 223 ha (550 acre) Controlled Access Area. Within this area are approximately 190 facilities as well as utility structures, water towers, and auxiliary facilities that support site activities. A second, large developed and fenced area covering about 81 ha (200 acres) contains the facilities built in the early 1980s for the GCEP. The grounds are maintained as lawns, and support various species of grasses and herbaceous divots. These facilities are generally not visible off the DOE

sensitive noise resources are located in the immediate vicinity of the site, no adverse noise impacts are expected (DOE 2001b).

Decontamination and Decommissioning

Sound levels from facility decontamination and decommissioning activities would be expected to dissipate to background levels by the time they reach the DOE property boundary, and because no sensitive noise resources are located in the immediate vicinity of the site, no adverse noise impacts are expected.

PGDP Impacts

Noise impacts from UF₆ operations would cease when UF₆ operations cease. Noise impacts of D&D are examined in the DOE Final EIS.

4.8 Historic and Cultural Resources Impacts

Impacts to cultural resources were determined by consultations with the SHPO and previously conducted cultural surveys to identify the existence of historic and cultural resources and assessing impacts. The environmental analysis is based on a 7 million SWU plant bounding the impacts of a 3.5 million SWU plant.

4.8.1 No Action Alternative

Under the No Action Alternative, the commercial centrifuge project would not be deployed on the DOE reservation in Piketon, Ohio. USEC would continue operations at PGDP to produce and market uranium enrichment services to its domestic and foreign customers. The United States Enrichment Corporation would continue to lease and operate existing facilities and associated lands at the Piketon DOE reservation and PGDP.

The No Action Alternative would have no or minimal effects on cultural resources at both PGDP and the Piketon DOE reservation. No land-disturbing activities would occur; therefore, disturbance of historical, cultural, or archaeological resources would not result. No facilities would be removed; therefore, no effects to potential historical places, including potential Cold War associated facilities, would result. However, modification to buildings for safety or production purposes may require consultation with the State Historical Preservation Office. Any potential cultural or historical resource consultation would be handled through DOE because DOE owns the facilities and the United States Enrichment Corporation is the lessee.

4.8.2 Paducah Gaseous Diffusion Plant Siting Alternative

Under this alternative, a large 1,231,172-ft² building would be constructed and used for the commercial centrifuge project at PGDP. Because of the projected size and magnitude of the construction, some areas or support structures may be located near a designated historic or cultural resource on the PGDP DOE reservation. Should this occur, engineered protective measures (e.g., fences, concrete walls, isolation trenches, etc.) would be instituted during

construction and operational phases to protect the designated area(s) from any potential damage. The ACP would be sited in the northeast corner of the PGDP DOE reservation, which is devoid of cultural or historic resources; therefore, impacts to PGDP cultural or historic resources would be unlikely.

Because construction activities involve the disturbance of existing site profiles, human remains could conceivably be discovered in the suitable PGDP area, although this is highly unlikely. The historical occupation and use of the existing PGDP DOE reservation is well documented. If human remains were found during construction and refurbishment activities associated with this siting alternative, USEC will comply with the *Native American Graves Protection and Repatriation Act* regulations. This includes up to a 30-day work stoppage should human remains inadvertently be encountered during construction.

4.8.3 Proposed Action

Siting the ACP in Piketon, Ohio would require construction of some new process buildings and support facilities. Many of the existing buildings will be refurbished to support the proposed project. Construction and refurbishment activities will be conducted in areas known to be devoid of cultural and historical resources; therefore, no projected impacts as a result of the commercial centrifuge project are expected.

Because construction activities will disturb existing site profiles, human remains could conceivably be found in the area of the Proposed Action, but this is highly unlikely. The historical habitation and use of the existing DOE reservation is well documented. If human remains should be found during construction and refurbishment activities associated with the Proposed Action, USEC will comply with the *Native American Graves Protection and Repatriation Act* regulations. This includes up to a 30-day work stoppage in the event of the inadvertent discovery of human remains during the construction and refurbishment phase of the Proposed Action.

The DOE reservation is an industrial site that has been used to enrich uranium since the 1950s. Gaseous diffusion technology has been used for such enrichment through out the life of the GDP. In the 1980s a centrifuge plant was constructed and centrifuge technology was demonstrated at the DOE facilities. The ACP will utilize the existing centrifuge plant constructed in the 1980s and will also utilize an area adjacent to the existing plant for construction of additional centrifuge process and support buildings. USEC reviewed 36 CFR 800.5 to determine whether there is an adverse effect due to the construction of new buildings for the ACP.

- There will be no introduction of visual, atmospheric or audible elements that diminish the integrity of the property's significant historic features. Under the Proposed Action, existing and new facilities used for uranium enrichment would be used for the commercial centrifuge uranium enrichment project. Noise levels would be consistent with previous uranium enrichment activities. Ground disturbance and exterior renovation would be temporary. Refurbishment of existing facilities and construction of new uranium enrichment process buildings would be consistent with existing site

architectural features. Neither these changes nor the new construction would alter the existing visual characteristics of the site or environs; thus, no impacts to visual/scenic resources would occur.

- Restoration, rehabilitation, new construction and operation of the ACP will be consistent with nationally recognized standards and subject to regulatory oversight by the NRC. Construction and refurbishment activities will be conducted in previously disturbed areas devoid of cultural and historical resources where neglect and deterioration are recognized qualities.
- A lease agreement between the DOE and the United States Enrichment Corporation is currently in place concerning the temporary lease of certain facilities in support of the American Centrifuge Lead Cascade. An agreement between the DOE and the United States Enrichment Corporation will be entered into for the ACP. The lease agreement has legally enforceable restrictions and conditions to ensure the long-term preservation of the property.
- There are no known areas of historic significance that will be disturbed by the construction of the new ACP buildings.
- There are no known American Indian religious or cultural areas on site that could be potentially disturbed by new ACP construction activities.

Decontamination and Decommissioning

Decommissioning activities will be conducted in areas known to be devoid of cultural and historical resources; therefore, no projected impacts as a result of the decontamination and decommissioning are expected. Changes to existing facilities and destruction of buildings would be evaluated for historic and cultural resources impacts.

PGDP Impacts

There will be no impacts to cultural resources at PGDP due to implementation of the Proposed Action.

Consultation letters with the NRHP are provided in Appendix B in this ER.

4.9 Visual/Scenic Resources Impacts

Visual and scenic resources were assessed by evaluating impacts of new ACP buildings constructed on the DOE reservation. The environmental analysis is based on a 7 million SWU plant bounding the impacts of a 3.5 million SWU plant.