United States Department of the Interior
National Park Service

National Register of Historic Places Registration Form

1. Name of Property

historic name Shawnee Steam Plant

other names/site number Shawnee Fossil Plant, SHF/ McN-372

Related Multiple Property NA

2. Location

street & number 7900 Metropolis Lake Road NA not for publication

city or town West Paducah NA vicinity

state Kentucky code KY county McCracken code 145 zip code 42086

3. State/Federal Agency Certification

As the designated authority under the National Historic Preservation Act, as amended,

I hereby certify that this _X_ nomination ___ request for determination of eligibility meets the documentation standards for registering properties in the National Register of Historic Places and meets the procedural and professional requirements set forth in 36 CFR Part 60.

In my opinion, the property _X_ meets ___ does not meet the National Register Criteria. I recommend that this property be considered significant at the following level(s) of significance:

__ national _X_ statewide __local

Applicable National Register Criteria:

_X_A ___B ___C ___D

Signature of certifying official/Title Date

State or Federal agency/bureau or Tribal Government

In my opinion, the property _X_ meets ___ does not meet the National Register criteria.

Signature of commenting official **Craig Potts** Date

State Historic Preservation Officer **Kentucky Heritage Council/State Historic Preservation Office**
Title State or Federal agency/bureau or Tribal Government

4. National Park Service Certification

I hereby certify that this property is:

___ entered in the National Register ___ determined eligible for the National Register
___ determined not eligible for the National Register ___ removed from the National Register
___ other (explain:)

Signature of the Keeper Date of Action

Shawnee Steam Plant
Name of Property

McCracken County, KY
County and State

5. Classification

Ownership of Property
(Check as many boxes as apply.)

- [ ] private
- [ ] public - Local
- [ ] public - State
- [X] public - Federal

Category of Property
(Check only **one** box.)

- [ ] building(s)
- [X] district
- [ ] site
- [ ] structure
- [ ] object

Number of Resources within Property
(Do not include previously listed resources in the count.)

Contributing	Noncontributing	
8	12	buildings
		object
		site
11	2	structure
19	14	**Total**

Name of related multiple property listing
(Enter "N/A" if property is not part of a multiple property listing)

N/A

Number of contributing resources previously listed in the National Register

N/A

6. Function or Use

Historic Functions
(Enter categories from instructions.)

INDUSTRY/energy facility

Current Functions
(Enter categories from instructions.)

INDUSTRY/energy facility

7. Description

Architectural Classification
(Enter categories from instructions.)

MODERN MOVEMENT/International Style

Materials
(Enter categories from instructions.)

foundation: Concrete
walls: Brick
Metal/Aluminum; Metal/Steel
roof: Asphalt; Synthetics/Rubber
other:

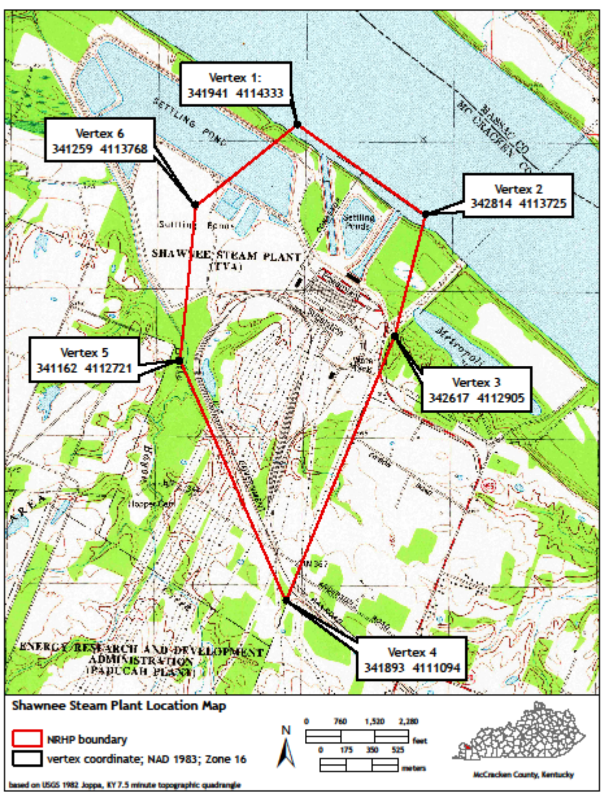
Narrative Description

Summary Paragraph

The Shawnee Steam Plant (McN-372), hereafter abbreviated as SHF (TVA's abbreviation for Shawnee Fossil Plant), is located on the south bank of the Ohio River at 7900 Metropolis Lake Road, approximately 13 miles downstream from Paducah, Kentucky and the mouth of the Tennessee River. The facility generates electricity through coal-fired, steam-generating furnaces that power a series of ten turbo-generator units. The first unit at SHF began operation in 1953, and the final unit came online in 1956. The NRHP boundary contains 684.14 acres with a total of 33 resources. Nineteen resources are considered contributing resources, including the powerhouse (Resource 1), which anchors the historic district. The remaining contributing resources (Resources 2-19) are original support buildings and structures that facilitate the transfer of coal, water, and the resultant electricity through the facility. Smaller storage buildings and maintenance facilities which date to the original construction of SHF are also considered contributing. Fourteen resources were erected after the close of the Period of Significance (1965) and are considered noncontributing.

Narrative Description

The SHF facility is located on the south bank of the Ohio River. The plant is accessible by water via a barge facility along the Ohio River, by rail via an offshoot of the Paducah and Illinois Railroad on the south side of the property, and by highway via Kentucky State Highway 305 (TVA 1969:1). The SHF reservation boundary, which encompasses 2,720 acres, has remained the same since the time of its construction in 1951 (see quad map, below, and maps at the end of the form). The property is bounded to the south by the West Kentucky State Wildlife Management Area and the Energy Research and Development Administration, to the west by heavily wooded areas interspersed with agricultural fields, to the north by the Ohio River, and to the east by agricultural fields, wooded areas, and light residential development.



USGS quad map with boundary

1961 aerial photograph

SHF was designed by TVA's Civil Design Branch, in cooperation with outside contractors Charles T. Main, Inc., Dravo Corporation, Custodis Construction Company, and Aake F. Hedman and

Associates (TVA 1969:2-3). The ability to accommodate a large number of annual visitors factored prominently in the design and layout of the powerhouse and immediate grounds. Accordingly, the main entrance and visitors' reception areas within the powerhouse (Resource 1) office wing were arranged to facilitate the movement of large numbers of people without disruption to normal plant operations. This was accomplished by designing a visitors' corridor through the boiler room to the overlook balcony in the turbine room (TVA 1969:15). The visitors' reception area was accessed by a landscaped parking area, once located on the north side of the office wing, that is no longer extant. The SHF landscaping program was designed to improve the general appearance of the grounds immediately surrounding the powerhouse (Resource 1). Approximately 20 acres of the surrounding land was planted with Bermuda grass and a variety of shrubs and trees (TVA 1969:299). In addition, Kentucky 31 fescue was planted over construction areas to control erosion and erase scars on the landscape. Roughly 100 acres of floodplain, stretching from the powerhouse to the Ohio River, was planted with cottonwood, green ash, red gum, red maple, willow, and willow oak seedlings (TVA 1969:299-300).

According to TVA, the design of SHF closely followed that of TVA's Johnsonville and Widows Creek steam plants, located in Humphreys County, Tennessee and Jackson County, Alabama, respectively. Although those facilities' primary exterior material consisted of aluminum panels, maroon-colored surface-coated steel panels were employed in the construction of SHF, as the use of aluminum was restricted at the time of its construction (TVA 1969:15). The SHF powerhouse (Resource 1) was also distinguished from its TVA predecessors by the incorporation of freestanding concrete smokestacks, rather than steel roof-supported stacks. A network of access roads and driveways forms a loop around the powerhouse, connecting to coal-handling facilities and auxiliary buildings and structures.

The facility is anchored by the powerhouse (Resource 1), which is oriented on an east-west axis. Coal enters the powerhouse on its west side from the coal storage yard (Resource 13), after passing through various coal-handling facilities (Resources 4, 7, 15, 29) located west and south of the powerhouse. Rail transport facilities (Resources 8, 9, 10, 11, 20, 33) are located south of the powerhouse, along the rail line. Buildings and structures associated with water transport and management are located on the north side of the facility and include Resources 3, 16, 17, 18, 19, 25, and 26. Modern deionization tanks (Resource 31) are located northeast of the powerhouse. Electricity produced at SHF leaves the powerhouse's turbo-generator bay and enters the switchyard (Resource 12), positioned south of the powerhouse. The electricity is managed by the Central Electrical Control Building (Resource 2), which is situated between the powerhouse (Resource 1) and switchyard (Resource 12). A cluster of six storage buildings (including Resources 14 and 33) are located south of the switchyard and additional modern storage buildings (Resource 33) are scattered across the SHF property.

Resource 1. Powerhouse. 1951-1956. *Contributing building*.

Facing northeast, the SHF powerhouse is a multi-story building divided into four main sections: the office bay; service bay; boiler bay for Units 1–10; and the turbo-generator bay. The building is oriented lengthwise on an east-west axis and encompasses approximately 7 acres (TVA 1969:14). The powerhouse is composed of structural steel and rests on a reinforced concrete foundation. The reinforced concrete foundation created a rigid platform for the turbo-generators and was designed to prevent problems associated with deflection, distortion, and vibration. Each section of the powerhouse is capped by a flat roof composed of asphalt and felt built-up roofing material over rigid insulation on precast concrete slabs and cellular steel decking (TVA 1969:309). Interior rooms are divided by brick and/or tile walls that are supported by floors composed of concrete and steel floor grating. Exterior treatment of the office and service (ground level) area and the turbo-generator bays consists of a buff-gray brick veneer over an exposed steel frame. The second story of the office and service bay and the boiler bays for Units 1–10 are clad in ribbed metal sheeting.

Visitors gain access to the powerhouse via the north elevation of the office bay, which is attached to the southeast elevation of the boiler bay housing Units 1–10. The façade of the two-story office bay is characterized by an exterior of buff-gray brick veneer on the first story that is marked by a glass-wall entrance containing a pair of metal/glass doors. Located east of the entrance is a series of 12 window openings containing a pair of single-pane, awning aluminum sashes that are shaded by a projecting canopy. To the west of the main entrance is a bay largely clad with a brick veneer and adorned with an inscription composed of aluminum characters which read: “SHAWNEE STEAM PLANT”. This bay is topped by a band of six, awning-type metal-sash windows that provide natural light to the interior lobby staircase.

The second story of the façade is divided into seven bays that are separated by the exposed steel framing of the building. Each bay contains six pairs of vertically positioned windows featuring single pane awning metal sashes. Located below each window arrangement is a gray-colored insulated steel panel that originally featured an exterior face of yellow porcelain enamel. An additional bay, positioned west of the inscription, cantilevers off the building and includes two sets of windows above gray-colored panels.

The interior of the visitors’ lobby is characterized by walls clad with a veneer of Norman-size brick (11-5/8" by 3-5/8" by 2-1/4"), floors covered with a precast terrazzo tile, and ceilings covered with dry wall (TVA 1969:309). A dedication inscription along the south wall reads:

BUILT FOR THE PEOPLE OF THE UNITED STATES OF AMERICA 1951 - 1953

A dogleg staircase composed of terrazzo tile is positioned on the west wall and provides access to the second floor. From there, visitors have access to the viewing gallery overlooking the turbines housed in the turbo-generator bay. As the name implies, the office bay contains offices for the operational staff, chemical laboratories, restrooms, and office storage. The interior spaces within the office bay are dressed with plastered walls, vinyl tile floors, and acoustical tile ceilings (TVA 1969:309). The bathrooms in the office bay originally featured ceramic sinks and marble stalls, however, these were replaced with modern materials during a recent renovation to the facility (TVA 1969:309; Thompson 2014).

Attached to the south end of the office wing is the service bay. Together, the section comprising the office bay and service bay measures 204 feet in width by 215 feet in length (TVA 1969:303). The service bay houses an array of repair facilities associated with the daily maintenance of the SHF. These include a steamfitter shop, boiler-maker shop, machine shop, and storage rooms. Other facilities within the service bay include an assembly room, employee restrooms, showers, and locker rooms. The repair shops are connected by an interior overhead mono-rail system that allows for heavy equipment to be transported to the various shops (TVA 1969:129). In addition, the machine shop features a 5-ton overhead traveling crane (TVA 1969:134).

In an effort to "promote efficiency and reduce maintenance", interior spaces within the service bay consist of exposed structural steel framing, flooring composed of dark terra cotta-colored concrete in work areas, and walls of unglazed facing tile (TVA 1969:129). Located at the south elevation of the service bay is a truck unloading dock that is shielded by a projecting canopy supported by steel outriggers. To help facilitate the unloading of material, the dock is equipped with a 2-ton electric hoist jib crane (TVA 1969:133). Architecturally, the service bay contains one aboveground floor and a basement. Storages areas within the service bay are characterized by concrete floors and walls composed of concrete blocks (TVA 1969:129).

Connected along the northeast elevation of the office and service bay is the boiler bay section of the powerhouse that services Units 1–10. This portion of the powerhouse measures 853 feet wide, 141 feet long, and 99 feet high and contains multiple interior levels. The boiler bay houses boilers, coal bunkers, conveyors, feed water heating equipment, draft fans, and five unit control rooms featuring large plate glass windows that allow for viewing of the adjoining turbo-generator bay. The exterior of the boiler bay is marked by a veneer of gray-faced brick along the ground level with the upper portions clad with maroon-colored corrugated, insulated metal panels. Fenestration on the boiler bay is limited to a vertical row of aluminum ventilating sash windows that provide light for the stair landings positioned at the east and west elevations. Situated along the north and south elevations is a continuous aluminum ventilation hood, which runs the length of the building. The treatment of the interior walls consists of a glazed facing tile base topped with painted metal panels. Connected to the boiler bay are ten reinforced concrete smoke stacks with brick lining, located near the northeast elevation of the boiler bay. Each stack rises 250 feet high and measures 22 feet, 8 inches in diameter at grade level and 14 feet in diameter at the top (TVA 1969:27, 308). The stacks served the boilers found in this section of the powerhouse and were originally connected to the boiler bay by a draft system containing a series of air pre-heaters and soot blowers.

Beginning in the mid-1970s, TVA initiated plans to upgrade SHF in response to new federal standards regarding air emissions and to improve the overall operating efficiency of the plant. As part of this multi-decade program, TVA retired the 10 original smokestacks and replaced them with two new smokestacks, which currently flank the powerhouse complex. The new smokestacks are composed of reinforced concrete and rise 800 feet from ground level. The installation of the new smokestacks resulted in the removal of the original draft system equipment once located between the boiler bay and original smokestacks (visible north of the powerhouse). In addition, the construction of the new smokestacks resulted in the demolition of an original employee parking lot in order to accommodate the draft system that connected the new smokestacks to the boiler bay.

The final section of the powerhouse is the one-story turbo-generator bay, which measures 822 feet in length and 120 feet in width. As the name implies, this section contains the ten turbo-generators for Units 1–10 and also houses two 90-ton overhead traveling cranes that are used for the repair and maintenance of turbo-generators (TVA 1969:308). This section of the powerhouse is defined by exterior walls clad with a buff-gray brick veneer that are relieved by exposed steel columns and roof spandrels. Fenestration is limited to the south elevation, which is composed entirely of glass blocks set in a metal frames. Both the east and west elevations are marked by large overhead metal doors that provide access points for heavy trucks. Originally, these bay entrances also were accessible by rail, however the rail spurs have been removed by TVA. The interior of the turbo-generator bay is highlighted by the exposed steel frame of the building and features walls clad with glazed tile and ceilings covered with acoustical steel panels. The floors within the turbo-generator bay are covered with “Greytone” quarry tile. The visitor overlook balcony is positioned along the east wall (TVA 1969).

Changes to the property since the Period of Significance include the addition of the two new smokestacks to SHF in the late 1970s, which altered the original appearance of the powerhouse. In addition to the construction of the 13-story boiler building (Resource 32, ca. 1985), the most notable change to the powerhouse includes the installation of exterior air “scrubber” equipment and associated baghouse that largely conceals the entire length of the north elevation of the boiler bay. According to TVA, the baghouse was constructed between 1975 and 1981, and the modern air “scrubber” equipment was installed in the late 1990s (Thompson 2014).

Resource 2. Central Electrical Control Building. 1951-1953. *Contributing building*.

Located south of the powerhouse, the L-shaped, one-story building houses the control room, offices, employee lockers and restrooms, an instrument repair shop, and the load dispatcher’s office. Architecturally, the building is divided between a lower portion dressed with veneer of buff-gray brick and an upper portion clad with ribbed metal siding that features the building designation in stainless steel characters. As with the powerhouse office bay, the Central Electrical Control Building includes exposed structural steel framing, roof spandrels and single-pane awning sash windows set in aluminum sashes. Facing north, the façade includes a recessed entrance covered with full-height plate glass windows set in aluminum frames that flank a pair of glass-aluminum doors.

Resource 2: Central Electric Control Building

Resource 3: Barge Unloading Harbor

Resource 3. Barge Unloading Harbor. 1951-1955. *Contributing structure*.

Extending approximately 3,173 feet on the south bank of the Ohio River and supported by a series of 25 mooring cells, the barge unloading harbor is used for docking coal barges and the unloading of coal from river barges. The mooring cells measure 16 feet in diameter and are composed of cylindrical-shaped steel sheets filled with gravel and sand. Each cell is capped with concrete and linked together by a steel walkway bridge. Centrally positioned within the harbor are two unloading cranes and a hopper structure that rest atop supporting pile cells. The steel-frame hopper building is clad with ribbed metal siding and capped with low-pitch gable metal roof. Fenestration consists of single-pane metal sash awning windows located on each elevation. Attached to the east and west elevations of the hopper building is an inclined belt conveyor (BC) (BC-11 and BC-12) that transports coal from a hopper located beneath the coal unloading cranes. Originally designed with one unloading crane, TVA expanded the barge unloading harbor in 1954 and 1955 to include additional mooring cells and another unloading crane. Each of the unloading cranes features a 9-ton capacity grab bucket that was used to extract coal from the barges and place it into the hoppers.

Resource 4. Crusher Building. 1951-1953. *Contributing building.*

The crusher building is a steel-frame structure that features a concrete slab foundation, an exterior clad with a combination of buff-gray brick at its base and ribbed metal siding in the upper portion, and a flat roof. This structure is connected to BCs 1, 2, and 5. The crusher building is located west of the powerhouse and is designed to screen and crush coal before it is delivered to the powerhouse. The east elevation of the building includes a large overhead bay door, with the building designation in stainless steel characters to the north of the door. Attached to the west elevation is a one-story steel-frame extension clad with a buff gray brick veneer and punctuated by an overhead metal bay door on the north and south elevations.

Resource 4: Crusher Building

Resource 5: Yard Equipment Maintenance Bldg.

Resource 5. Yard Equipment Maintenance Building. 1951-1953. *Contributing building*.

Located west of the powerhouse, the yard equipment maintenance building contains storage and repair shops for SHF vehicles. The one-story steel-frame structure features a concrete foundation, an exterior clad with a veneer of yellow brick, and a flat roof. Overall, the building features six bays topped by a ribbon of single pane, fixed, metal sash windows near the roof-wall junction. Five of the six vehicle bays along the east elevation include rolling overhead metal doors, with one bay in-filled with brick. Attached to the west elevation is a two-story extension that houses storage rooms and electrical equipment. In addition, the building features a one-story carpenter shop attached to the south elevation. Lastly, a one-story employees' service wing is connected to the north elevation of the building. Fenestration on the employees' service wing consists of glazed metal doors and a series of single-pane metal awning sash windows.

Resource 6. Hydrogen Trailer Ports A and B. 1951-1953. *Contributing structures*.

Hydrogen trailer ports A and B are respectively located southeast and southwest of the powerhouse. These structures house trailers loaded with hydrogen tanks used in the operation of SHF. Each structure consists of one concrete end wall topped with a short canopy roof. The trailer port deck is composed of concrete and is flanked by metal guard rails that support an overhead jib crane used to load and unload hydrogen tanks.

Resource 6: Hydrogen Trailer Ports

Resource 7: Belt Conveyors

Resource 7. Belt Conveyors. 1951-1953. *Contributing structures*.

A series of 12 belt conveyors (BC-1–BC-12) were originally constructed at SHF to deliver coal to the powerhouse via rail and barges. In addition, the BC network featured both elevated and underground conveyors designed to facilitate the transfer of coal from the coal yard to the powerhouse at a rate ranging between 900 and 1200 tons per hour (TVA 1969:256). The authors of this nomination observed that all twelve of the original BCs are extant, however BC-2, BC-11, and BC-12 are no longer used, as the facility no longer receives coal via river barges. Elevated BCs are supported by a series of reinforced concrete trusses and columns that range in width from 42” to 54” (TVA 1969:256). The conveyor bridges were originally clad with asbestos metal siding; however, the siding was replaced with ribbed metal sheeting within the past twenty years.

Resource 8. Rotary Car Dumper and Hopper Building. 1951-1953. *Contributing building*.

Located southwest of the powerhouse, the rotary car dumper and hopper building is positioned over two railroad tracks and serves as a location to unload coal delivered to SHF by rail. Inside the building, coal is unloaded from rail cars by either the rotary car dumper or by manual unloading into a hopper that transfers the coal to the crusher building (TVA 1969:246). The control mechanism for the car dumper is located in an attached two-story wing that is clad with a buff-gray brick veneer. Flanking the central block are two gable-roof wings that were added to the building ca. 2000. The steel-frame building sits on a concrete foundation and features an exterior clad in maroon-colored ribbed metal sheeting. Attached to the north elevation of the structure is a one-story sample preparation building that features a flat roof and an exterior clad with a veneer of buff-gray brick and exposed structural steel. Window fenestration includes a series of single-light metal awning sashes located primarily on the north elevation. The sample preparation building houses offices and labs that are used to analyze the coal delivered to SHF. In addition, the building includes restrooms and showers (TVA 1969:249).

Resource 8: Rotary Car dumper

Resource 10: Empty Storage Yard

Resource 9. Hopper Storage Building. 1951-1953. *Contributing building*.

Located north of the rotary car dumper and hopper building (Resource 8), is a concrete block storage building that is capped by a gabled roof covered with asphalt shingles. The structure includes an opening on the west elevation that contains a swinging wood door.

Resource 10. Empty Storage Yard. 1951-1953. *Contributing structure*.

Located southwest of the powerhouse on the west side of the rail loop, the empty storage yard is a component of the rail-unloading facility and provided storage space for a maximum of 346 empty rail cars. The yard consists of one open track and seven storage tracks (TVA 1969:246).

Resource 11. Loaded Storage Yard. 1951-1953. *Contributing structure*.

Located south of the powerhouse on the east side of the rail loop, the loaded storage yard is a component of the rail-unloading facility and provided storage space for a maximum of 420 full rail cars. The yard consists of one open track and eight storage tracks (TVA 1969:245).

Resource 12. Switchyard. 1951-1953. *Contributing structure*.

Located south of the powerhouse (Resource 1) is a 161-kV switchyard that features 26 36-foot-long bays of standard wide-type steel-frame structures upon which powerline carrier equipment is mounted. The switchyard runs parallel to the powerhouse, along an east-west axis. The switchyard feeds power from the plant into the TVA electrical grid; 10 lines from the switchyard run directly to a substation at the Atomic Energy Commission's Paducah plant (TVA 1969:202).

Resource 11: Loaded Storage Yard

Resource 12: Switchyard (Photo 35)

Resource 13. Coal Storage Yard. 1951-1953. *Contributing structure*.

The coal storage yard is located west of the powerhouse and encompasses approximately 62 acres. The storage yard has the capacity to store an amount of coal needed to power all ten units for 97 days while running at 100 percent capacity (TVA 1969:269).

Resource 14. Switchyard Storage Building. 1951-1953. *Contributing building*.

Located southeast of the powerhouse, the one-story steel-framed switchyard storage building sits on a raised concrete block foundation. The upper portion of the building is clad with ribbed metal sheeting and the building features a flat roof covered with metal. The north-facing façade features a metal overhead door, and a series of two-light awning-type metal-sash windows are located on the east and west elevations.

Resource 13: Coal Storage Yard

Resource 14: Switchyard Storage Building

Resource 15. Reclaim Hopper. 1951-1953. *Contributing structure*.

Located west of the powerhouse, adjacent to the coal storage yard, the reclaim hopper is a steel-frame structure that is clad on three elevations with copper bearing steel. The hopper is equipped with steel bar grating and two duplex unit sump pumps for coal collection (TVA 1969:237, 386). The structure is open on its east elevation and transfers coal from the coal storage yard onto an underground conveyor leading towards the powerhouse.

Resource 16. Discharge Channel. 1951-1953. *Contributing structure*.

Located north of the powerhouse, the discharge channel runs northwest across the floodplain to the Ohio River. The excavated channel is approximately 2,450 feet in length and 94 feet in width at its bottom. The sides of the channel are protected by a 12-inch-thick layer of riprap atop a 6-inch filter blanket. A weir constructed of steel sheet pile cells controls the minimum water elevation of the channel (TVA 1969:152, 349).

Resource 15: Reclaim Hopper

Resource 16: Discharge Channel

Resource 17. Intake Channel. 1951-1953. *Contributing structure*.

Located north of the powerhouse, the intake channel supplies water from the Ohio River to the intake structure (Resource 19), and eventually, to the powerhouse (Resource 1). The excavated channel is approximately 2,000 feet in length and 94 feet in width at its bottom. The sides of the channel are protected by a 12-inch thick layer of riprap atop a 6-inch filter blanket (TVA 1969:152).

Resource 18. Water Treatment Plant. 1951-1953. *Contributing building*.

Located north of the powerhouse, the two-story water treatment plant building sits on a concrete foundation, has an exposed steel frame, and is clad in light tan brick veneer. The building's flat roof is covered in metal. A pair of metal swinging doors are centrally placed on the south elevation. Six pairs of single-light fixed metal sashes stretch from the doorway to the roof-wall junction. A band of metal-sash windows, with a one-light fixed-sash window over a one-light awning-type window, are located near the roofline, and steel block letters reading "WATER SUPPLY" are situated on the southern elevation near the roof-wall junction. A steel fascia plate is also situated at this juncture on every elevation. The building houses the electrical control room for the pumping station and softens water prior to use by the boilers. In addition, the building supplies domestic water for all buildings at the facility.

Resource 17: Intake Channel

Resource 18: Water Treatment Plant

Resource 19. Intake Structure. 1951-1953. *Contributing structure*.

Located north of the powerhouse, the intake structure features intake tunnels that channel water to the plant. Constructed of reinforced concrete, the intake structure includes trash racks designed to keep debris from entering the plant. Located on top of the structure are a series of circulating pumps and screen wash pumps. The intake structure is topped by a 30-ton gantry crane with a 30-ton electric hoist.

Changes to the Property Since the Period of Significance

Resource 20. Tractor Shed. Ca. 2000. *Non-contributing building*.

Located north of the Rotary Car Dumper and Hopper Building, the tractor shed is a prefabricated structure composed of a gambrel metal roof supported by a series of metal posts.

Resource 19: Intake Structure

Resource 21: Guardhouse

Resource 21. Guard Shelter. Ca. 1970. *Non-contributing building*.

Located east of the powerhouse is a disused security house. The steel-frame structure features a concrete slab foundation, an exterior clad with gray brick veneer, and gable metal roof. The building includes a metal-glass door on the west elevation. The remaining elevations are pierced by single-pane windows set within steel frames.

Resource 22. Guard Shelter. Ca. 2000. *Non-contributing building.*

Located southeast of the powerhouse is the current guard shelter. The prefabricated metal building features an exterior clad with vinyl siding and a gable roof covered with asphalt shingles. The building includes a metal door on the southwest elevation. The remaining elevations are marked by single-pane windows.

Resource 23. Switchyard Maintenance Building. Ca. 1990. *Non-contributing building.*

Located adjacent to the north boundary of the SHF switchyard, the switchyard maintenance building is a steel-frame structure that features a concrete slab foundation, an exterior clad with metal siding, and a front-gabled roof covered with metal. Facing north, the façade is marked by a centrally-placed bay entrance containing an overhead metal door. The central bay is flanked by a single metal door to the east and a pair of metal doors to the west that are shielded by a shed-roof door hood.

Resource 22: Guard Shelter

Resource 23: Switchyard Maintenance Building

Resource 24. Sand Filter Buildings. Ca. 2000. *Non-contributing buildings*.

Located northwest of the powerhouse, the sand filter buildings are three prefabricated steel-frame structures that each feature a poured concrete foundation, an exterior clad in ribbed metal sheeting, and a low-pitch gable roof. The easternmost building features a two-story bay at its east end. Fenestration includes two-light sliding vinyl sashes and two-over-two double-hung metal-sash windows and overhead and pedestrian doors.

Resource 25. Chlorination Building. Ca. 2000. *Non-contributing building*.

Located north of the powerhouse, atop the intake structure, the chlorination building is a steel-frame structure that features a continuous concrete foundation, an exterior clad in ribbed metal sheeting, and a low-pitch gable roof covered with metal. Two louvered vents on the north elevation provide ventilation, and doors on the north and east elevations provide access to the building.

Resource 24: Sand Filter Buildings

Resource 25: Chlorination Building

Resource 26. Demineralization Building. Ca. 1990. *Non-contributing building.*

Located north of the powerhouse, adjacent to the intake structure, the demineralization building is a steel-frame structure that features a continuous concrete foundation, an exterior clad in ribbed metal sheeting, and a low-pitch gable roof covered with metal. A pair of metal and single-pane glass doors on the south elevation provides access to the building. A small shed-roof addition is attached to the west elevation and is clad in ribbed metal sheeting.

Resource 27. Temporary Office Building. Ca. 2014. *Non-contributing building*.

Located north of the powerhouse, adjacent to the powerhouse (Resource 1) baghouse, the temporary office building is a prefabricated structure clad with metal sheeting and features a flat roof. A wood-frame entry porch is attached to the south elevation and is shielded by a gable roof covered with asphalt shingles. Fenestration includes two-over-two double-hung vinyl-sash windows.

Resource 26: Demineralization Building

Resource 27: Temporary Office Building

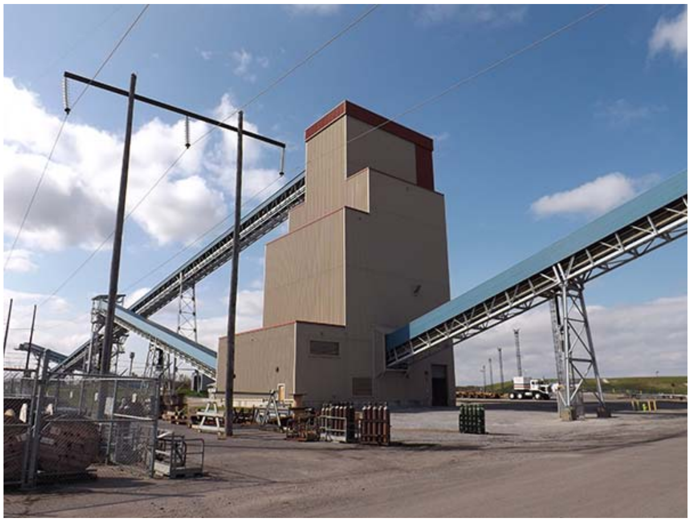
Resource 28. Ash Disposal Facility. Ca. 2000. *Non-contributing structure*.

Located west of the powerhouse, within the coal yard drain basin area, the steel-frame ash disposal facility is clad with ribbed metal sheeting and features a continuous concrete foundation. The flat roof is topped with four cylindrical steel silos. The facility collects fly ash from Units 1-9, treating it with water. The flyash is then loaded onto trucks and hauled to the ash landfill. Three open bays on the west elevation provide vehicular access to the building. Two silos once treated fly ash from Unit 10 and are no longer in use.

Resource 29. Limestone Conditioner Building. Ca. 1980. *Non-contributing building*.

Located southwest of the powerhouse, the limestone conditioner building once screened and crushed raw limestone prior to its transfer to Unit 10. As Unit 10 is no longer in service, the limestone conditioner building is also no longer in use. The steel-frame, multi-story building features a continuous concrete foundation, an exterior clad in ribbed metal sheeting, and a flat roof. Metal overhead doors on the north and south elevations provide drive-through vehicular access; pedestrian doors are located on the east and south elevations.

Resource 28: Ash Disposal Facility



Resource 29: Limestone Conditioner Bldg.

Resource 30. Baghouse Maintenance Building. Ca. 1975. *Non-contributing building*.

Located southwest of the powerhouse, the Baghouse Maintenance Building provides storage for equipment maintenance. The one-story building sits on a concrete foundation, is steel-framed, and clad in ribbed metal sheeting. The low-pitch gabled roof is also covered in metal. Fenestration is limited to metal overhead doors on the north and west elevations (providing vehicular access) and one metal pedestrian door on the east elevation.

Resource 31. Deionization Tanks. Ca. 2000. *Non-contributing structures*.

Located northeast of the powerhouse, the Deionization tanks remove ionic and mineral material from water through a distillation process. The two cylindrical tanks sit atop a poured concrete foundation, are clad in steel sheeting, and are capped with a dome roof.

Resource 30: Baghouse Maintenance Bldg.

Resource 31: Deionization Tanks

Resource 32. Boiler Building. Ca. 1985. *Non-contributing building*.

The 13-story boiler building was designed to increase the electrical output of the powerhouse (Resource 1). Located at the northwest corner of the powerhouse, the new boiler bay is a steel-frame structure clad with maroon-colored corrugated, insulated metal panels. Coal is delivered to the new boiler bay by a network of above-ground conveyors from the Hopper Building (Thompson 2014).

Resource 33. Storage Buildings. Ca. 1980-Ca. 2010. *Non-contributing buildings.*

Located on the grounds of SHF are 19 modern storage buildings that were constructed ca. 1980-2010. The prefabricated steel-frame buildings each feature an exterior clad with metal sheeting and a concrete slab foundation. Thirteen of the storage buildings feature a gabled roof covered with metal sheeting, and the remaining storage building features a flat roof covered with metal sheeting.

Resource 33: Cluster of 4 Storage Buildings

Resource 33: Cluster of 6 Storage Buildings

Shawnee Steam Plant
Name of Property

McCracken County, KY
County and State

8. Statement of Significance

Applicable National Register Criteria
(Mark "x" in one or more boxes for the criteria qualifying the property for National Register listing.)

- [X] A Property is associated with events that have made a significant contribution to the broad patterns of our history.
- [ ] B Property is associated with the lives of persons significant in our past.
- [ ] C Property embodies the distinctive characteristics of a type, period, or method of construction or represents the work of a master, or possesses high artistic values, or represents a significant and distinguishable entity whose components lack individual distinction.
- [ ] D Property has yielded, or is likely to yield, information important in prehistory or history.

Criteria Considerations
(Mark "x" in all the boxes that apply.)

Property is:

- [ ] A Owned by a religious institution or used for religious purposes.
- [ ] B removed from its original location.
- [ ] C a birthplace or grave.
- [ ] D a cemetery.
- [ ] E a reconstructed building, object, or structure.
- [ ] F a commemorative property.
- [ ] G less than 50 years old or achieving significance within the past 50 years.

Areas of Significance
(Enter categories from instructions.)

INDUSTRY

Period of Significance

1951-1965

Significant Dates

1951

1956

Significant Person
(Complete only if Criterion B is marked above.)

N/A

Cultural Affiliation

N/A

Architect/Builder

Tennessee Valley Authority Civil Design Branch

Charles T. Main, Incorporated

Dravo Corporation

Custodis Construction Company

Aake F. Hedman and Associates

Period of Significance (justification)

The period of significance begins in 1951, the year construction began at Shawnee Steam Plant, and continues through 1956, when Unit 10, the facility's final unit, was completed and began commercial operation, and ends at the conventional 50-year point in the past, 1965.

Criteria Considerations N/A

Statement of Significance

Summary Paragraph

The Shawnee Steam Plant (McN-372), hereafter abbreviated as SHF (TVA's abbreviation for Shawnee Fossil Plant), meets National Register Criterion A and is significant at the state level in the area of Industry for its historical association with TVA's post-World War II development of its fossil steam plant program in the Commonwealth of Kentucky. The district's Period of Significance begins in 1951, when funds for the plant were originally authorized. With all electricity-generating units online by 1956, SHF is the first fossil plant constructed by TVA in the Commonwealth of Kentucky. The facility's main purpose was to fill the national defense industry's escalating demand for power, particularly at the Atomic Energy Commission's (AEC) Paducah uranium enrichment plant. Meeting the AEC's demand exceeded the electric generating capabilities of TVA's existing hydroelectric facilities. Additionally, by the 1950s, residential use of electricity in the Tennessee Valley had risen to twice that of the rest of the nation (Martin 1957:364-365). TVA's steam-driven electric-generating plant program became an integral component of their plan to meet increased demand, so much so that by 1956, 70 percent of the Authority's power was generated in coal-burning steam plants (Wildavsky 1962:10). The district's Period of Significance terminates in 1965, the conventional 50-year point in the past, but continues to be significant as a working component of the TVA steam plant program.

Historic Context: The Tennessee Valley Authority Steam Plant Program

The headwaters of the Tennessee River lie in the Blue Ridge Mountains of southwestern Virginia and western North Carolina, where the Tennessee's primary tributaries, the Holston and French Broad, originate. The rivers converge at the city of Knoxville to form the main stem of the Tennessee River, which courses through eastern Tennessee and gathers the waters of the Clinch and Little Tennessee, as well as the Hiwassee and Ocoee rivers. The Tennessee flows southwest through northern Alabama, then turns abruptly north to pass again through Tennessee, and finally onward into Kentucky and its confluence with the Ohio River at Paducah. The drainage basin of the Tennessee River and its tributaries covers some 40,000 square miles in a watershed that includes parts of seven states and a stream flow that accounts for 25 percent of the Ohio's discharge into the Mississippi River at Cairo, Illinois (Clapp 1955:17).

A 630-mile journey on the Tennessee River, from Knoxville to Paducah, is achieved through the navigation of a "chain of inland lakes" impounded by "great and beautiful dams" (Pritchett 1943:4). Although the river is among the most comprehensively managed in the nation today, it caused devastating flood damage throughout the Tennessee Valley in the early-twentieth century. The effects of the flooding were especially exacerbated by widespread agricultural practices, such as the stripping of hillside forest cover and the planting of soil depleting row crops, predominantly corn, cotton, and tobacco. When the heavy rains characteristic of the region fell on the exposed land, the valley's rich topsoil was washed away, resulting in severe sheet erosion and gullies (Pritchett 1943:34; TVA 1983:9).

The transformation of the river system had been a concern of the federal government long before the creation of the Tennessee Valley Authority (TVA) in 1933. For early settlers of the Valley, the chief impediment to navigating the entire length of the river was Muscle Shoals in northern

Alabama. While the river was navigable to flatboats for 300 miles above and below that point, at Muscle Shoals, the river dropped 100 feet over 20 miles (Martin 1957:353). The river's flow was highly variable, alternating between impassable rapids and shallows so low as to afford a person the ability to cross the river on foot (TVA 1983:6). In 1824, Secretary of War John C. Calhoun recommended to President Monroe that the construction of a canal around Muscle Shoals was a matter of national importance (US Army 1890:2,114). Bypassing this natural obstruction with a series of canals was not only a strategic military decision, it would also facilitate trade between eastern population centers and the rapidly expanding western frontier.

That same year came the landmark Supreme Court decision, *Gibbons v. Ogden*, which held that the federal government's power to regulate interstate commerce encompassed the power to regulate navigation. Consequently, Congress passed the nation's first internal improvement act later that year, which granted 400,000 acres of land to Alabama as a means of financing improvements at Muscle Shoals for river navigation. Canal construction was only partially completed, however, with anticipated transportation improvements remaining unrealized (Martin 1957:353; Lewis 2013:194).

Efforts to improve navigation along the Tennessee River accelerated with the advent of the river steamboat in the 19th century. Three separate canals had been constructed at Muscle Shoals by 1890. The last of these was begun in 1875 and incorporated a canal built in 1837 by the U.S. Army Corps of Engineers. While the canal was championed as the longest steamboat canal in the world, railroads had largely supplanted steamboats by the time it was opened, and the endeavor ceased operations in 1918 (Toplovich 1998:945). World War I reanimated the Muscle Shoals dilemma in the form of ammunitions manufacture. President Woodrow Wilson chose Muscle Shoals as the location for two nitrate munitions plants and a hydroelectric facility to supply the power needed for production. Moreover, the construction of Wilson Dam would solve the age-old navigation problem by burying the shoals below the waters of the newly created Lake Wilson. The war ended just as the nitrate plants became operational, leaving the $130 million facilities idled (TVA 1983:5).

The pending disposal of the Muscle Shoals facility by the federal government would play a significant role in the creation of the TVA. While Senator George Norris of Nebraska worked to block the sale of the site to industrialist Henry Ford, who had bid only $5 million for the site, noted conservationist Gifford Pinchot rallied public opposition to the sale by emphasizing the importance of protecting natural resources (TVA 1983:6). Pinchot had served as chief forester under President Theodore Roosevelt and developed what would become the underlying principles of the TVA while on a horseback ride in February of 1907:

> The forest and its relation to streams and inland navigation, to water power and flood control; to the soil and its erosion; to coal and oil and other minerals; to fish and game; and many another possible use or waste of natural resources—these questions would not let me be. […] Suddenly the idea flashed through my head that there was a unity in this complication that the relation of one resource to another was not the end of the story. […] Seen in this new light, all these separate questions fitted into and made up the one great central problem of the use of the earth for the good of man (Garnsey 1950:274-275).

On January 20, 1933, newly elected President Franklin Delano Roosevelt, accompanied in part by Senators George Norris, Hugo Black, and Cordell Hull, made a personal inspection of Muscle Shoals. The following day, Roosevelt called for the wide-ranging development of the entire river system for navigation, flood control, and power generation, as was advocated by Senator Norris in 1926. Roosevelt expanded upon Norris's earlier proposal by encompassing "regional planning to conserve natural and human resources in one comprehensive enterprise" (King 1959:267). A little more than five weeks after taking office, President Roosevelt delivered a message to Congress calling for the creation of the TVA. After noting that the Muscle Shoals development was only a small portion of the Tennessee River's potential usefulness to the nation, he went on to state that:

> Such use, if envisioned in its entirety, transcends mere power development; it enters the wide fields of flood control, soil erosion, afforestation, elimination from agricultural use of marginal lands, and distribution and diversification of industry. In short, this power development of war days leads logically to national planning for a complete watershed involving many States and the future lives and welfare of millions. It touches and gives life to all forms of human concerns. I, therefore, suggest to the Congress legislation to create the Tennessee Valley Authority—a corporation clothed with the power of government but possessed of the flexibility and initiative of a private enterprise (US Congress, House1933).

In response, Congress passed the TVA Act of 1933, which President Roosevelt signed into law on May 18, 1933, marking it as a signature piece of the president's New Deal program. Economic conditions within the Tennessee Valley were dire prior to the establishment of TVA. In 1930, for example, 75 percent of the Valley's population of 2.3 million lived in rural areas, and 51 percent were either farmers or members of farm families. Of the 13 million acres of cultivated land in the region, 85 percent was damaged by soil erosion. Adult illiteracy was twice the national average, and for those over the age of ten, the inability to read or write was four times higher in the Valley than in the rest of the nation. Annual farm income stood at $639 compared to a national average of $1,835. Sixty percent of the farmers subsisted on an annual farm income of under $500, while 20 percent realized less than $250 per year. In Norris, Tennessee, the average annual income was only $100. Only four percent of farms had electricity, and three percent had running water. Tuberculosis, typhoid, and infant mortality rates were markedly higher than in the rest of the country, and one out of every three persons in northern Alabama was affected by malaria (TVA 1989). As a region marked by grinding poverty, inadequate education, and environmental degradation, the Tennessee Valley was ripe for redevelopment, which was something the architects of the president's New Deal initiatives knew well. The preamble of the TVA Act of 1933 set forth the broad purpose of the newly created Authority:

> An Act to improve the navigability and to provide for the flood control of the Tennessee River; to provide for reforestation and the proper use of marginal lands in the Tennessee Valley; to provide for the agricultural and industrial development of said valley; to provide for the national defense by the creation of a corporation for the operation of Government properties at and near Muscle Shoals in the State of Alabama, and for other purposes (16 U.S.C. § 831).

Unlike most federal agencies, TVA is an independent public corporation that was originally administered by a three-member board of directors appointed by the president. Each member was confirmed by the U.S. Senate and received a nine-year renewable term. TVA's first board of directors consisted of chairman Arthur E. Morgan, a civil engineer with a national reputation for innovative dam design; director Harcourt Morgan, an authority in agricultural science and president of the University of Tennessee, Knoxville; and director David Lilienthal, an attorney and specialist in utility law (King 1959:276; Morgan 1974).

TVA's early years of operations, from 1933 until the end of World War II, were characterized by mission planning and infrastructure development, with Lilienthal emerging as a pivotal figure in the agency's growth and success. Serving as a director from 1933 to 1941, and as the board's chairman until 1946, Lilienthal envisioned and implemented a system of centralized power production by the TVA, with distribution handled by various municipal electric utilities and rural electric cooperatives. Political scientist Erwin C. Hargrove noted that Lilienthal championed electrical power to the people of the Valley by casting the TVA as an ally in a "grass roots democracy," understanding that low-cost, easily accessible electrical power equated to high demand: "The ideology of action at the grass roots level by a multipurpose public authority, which Lilienthal fashioned, grew out of TVA experience and became a resource for internal cohesion and sense of purpose as well as a justification for TVA autonomy within the federal government" (Hargrove 1994:4). Lilienthal was also instrumental in fending off a number of legal challenges to TVA's power program by private utilities. In an example of how deftly he could argue TVA's position, consider the following passage taken from an article he authored in 1939, titled *Electricity: The People's Business*:

> So when T.V.A. lets water through these dams in pursuance of its constitutional functions with respect to navigation and the control of floods, the question is not whether power *should* be developed—*the power is there* by the mere fact that water is falling. The question is whether the power in that falling water shall be harnessed and utilized in the form of electricity by putting the water through turbines and generators, or whether that power shall be allowed to go to waste (Lilienthal 1939:62).

Privately owned utility companies soon realized that Lilienthal's plan of TVA power distribution through public boards and cooperatives posed a lethal threat to their continued existence (Wheeler 1998:960). During the ensuing years, legal battles were waged between advocates of public and private control of electric power production and distribution. In *Ashwander v. TVA*, 297 U.S. 288 (1936), the Alabama Power Company sued the TVA, claiming that the federal government was establishing a power-generating empire under the pretext of providing flood control and navigation improvements, and that the Authority's actions were detrimental to the private utility's shareholders. While the TVA did not prevail in the lower court, both the 5th Circuit Court of Appeals and the Supreme Court ruled in TVA's favor, holding that the agency could market the power produced at Wilson Dam in any way justified by its total program. Chief Justice Hughes argued that because the dam was originally built in order to produce munitions for national defense, the government does not violate the Constitution by selling the excess electricity it produces (Martin 1957:355; Oyez 2011).

In May of 1936, Tennessee's largest utility company, Tennessee Electric Power Company (TEPCO), along with eighteen other private utility companies, filed a lawsuit against the TVA, challenging the constitutionality of the agency's power program. A temporary injunction was granted, which prevented the Authority from negotiating any new contracts or constructing any new facilities within the claimed service area of TEPCO and the other complainants until a final resolution of the case was reached (Pritchett 1943:71). The U.S. District Court for the Eastern District of Tennessee handed down a major victory for the TVA, ruling that the production and sale of hydroelectric power was directly related to flood control and navigation, which the agency was statutorily directed to provide, and that its activities were constitutional under the commerce clause and for national defense. The Supreme Court, by a vote of 5 to 2, upheld the lower court's decision by refusing to hear the case on the grounds that TEPCO lacked legal standing to sue. *Tennessee Electric Power Co. v. TVA*, 306 U.S. 118 (1939), marked the last significant challenge to the legality of TVA's scope of operations (Martin 1957:355-356).

Soon after the Court's decision, TEPCO began negotiating the sale of its assets to TVA. These assets included all of the company's hydro- and steam-powered plants, transmission line corridors, substations, and various pieces of property earmarked for the construction of additional hydroelectric dams. Some of the more notable TEPCO facilities that were acquired by TVA included the Ocoee 1 and 2 Dams in Polk County and Great Falls Dam situated along the White and Warren Counties' boundary line in Tennessee and Blue Ridge Dam in Fannin County, Georgia (Wheeler 1998:960). Later in 1939, TVA sold former TEPCO distribution systems to regional cooperatives and membership associations located in Middle Tennessee, the Sequatchie Valley, and the Upper Cumberland region to manage and service substations and transmission lines (Chattanooga-Hamilton Bicentennial Library n.d.). Although TVA would eventually develop its own legacy in the Tennessee Valley, the efforts of private companies, such as TEPCO, established the groundwork in electrical generation and infrastructure that allowed TVA to advance its programs. Through the efforts of these companies, electricity was introduced to the Tennessee Valley in the early twentieth century, forever transforming homes and workplaces through newly devised electric household appliances and powered machinery.

Within months of the TVA Act becoming law, the agency undertook an ambitious program of dam construction, starting with Norris Dam near Knoxville, Tennessee. Previous private and public studies had investigated potential sites on the Clinch River near Cove Creek for TVA's first dam. The sites were studied specifically in conjunction with efforts to develop a hydroelectric facility at Muscle Shoals, Alabama. The Norris Dam project, named for Senator George Norris, who was instrumental in the passage of the enabling legislation, was put into motion as TVA's first capital project (TVA 1940). This was soon followed by the completion of Wheeler, Pickwick, and Guntersville dams between 1936 and 1939 (TVA 2012). By the late 1930s, despite an effort to maintain a policy of neutrality, it became increasingly evident to the Roosevelt administration that mounting international tensions in Europe and Asia would include the United States either as a belligerent or as a supplier of war materials to its Allies. According to studies by the Advisory Commission to the Council of National Defense and the Federal Power Commission, the demand for electricity by the agricultural and industrial sectors would extend beyond TVA's capacity to produce power by 1942. As a result, Congress authorized TVA to pursue an aggressive plan to construct a series of hydroelectric facilities to meet the anticipated power demands of the aluminum industry, primarily the Aluminum Corporation of America (ALCOA), and large-scale military projects (TVA 1983:19). Hydroelectric dams completed at the outset of World War II included the Cherokee (1940), Chatuge (1941), Ocoee No. 3 (1941), Fontana (1942), and Douglas (1942) dams. In addition, TVA constructed its first coal-fueled steam power plant, Watts Bar Steam Plant (demolished in 2011) in 1942 in Rhea County, Tennessee (TVA 2007).

The 1939 *Tennessee Electric Power Co. v. TVA* decision permitted the TVA to purchase private utilities in the region, which included hydroelectric facilities, as well as steam plants. A significant implication of that decision meant TVA was authorized to operate steam plants for the production of electrical power (Folmsbee et al. 1969:536). Prior to that time, the use of steam to power generating plants did not figure prominently in TVA's overall planning. However, with the onset of World War II and the increased demand for electricity from war industries, TVA began to turn to steam power as an alternative source of energy to fuel its facilities. As an interim measure, TVA utilized former TEPCO steam-powered facilities located at Hales Bar, Nashville, and Parksville. In addition, TVA acquired the Fourth Street Generating Station in Memphis from the Memphis Generating Company. The completion of Watts Bar Steam Plant marked a turning point in TVA's approach to electrical production as it was the first coal-powered facility commissioned by the agency (TVA 1964).

By 1945, TVA had dramatically transformed the physical and economic landscape of the Tennessee Valley region through the construction of seven dams along the Tennessee River and nine tributary dams. Kentucky Dam, completed in 1944, was "the largest and one of the last monuments to the New Deal" in Kentucky (Blakey 1986:139). The dam is more than 1.5 miles in length and impounds the largest artificial lake in the Eastern United States, extending 184 miles in a southerly direction through Kentucky and Tennessee (TVA 1951:113-114). In all, TVA dams had created some 14,000,000 acre-feet of flood storage and a nine-foot-deep navigation channel on the Tennessee River from Knoxville to Paducah. The new dam system, in concert with hydroelectric and coal-fired steam and internal combustion plants, generated a 127-percent increase in kilowatt production and serviced 668,752 households by 1946 (Wheeler 1998:960).

During this initial period of construction, TVA acquired approximately 1,100,000 acres of land, which led to the displacement of roughly 72,000 people from their homes (Wheeler 1998:960). The evacuation process, though scrupulously handled by TVA agents, who at times drove entire families on tours of available farmland, left many struggling to cope with the reality of their newfound situation (Creese 1990:95). Compounded by the harsh economic circumstances of the Great Depression, the conception of the federal government burying the family farm under a hundred feet of river water was more than some could bear or even rationally process. Historian Walter L. Creese provides a number of unsettling accounts of families displaced by the construction of Norris Dam:

> William Henry Hawkins, who owned the land on which Norris Dam was built, laid a circle of brush around his house and ignited it when TVA agents drew near to confer with him, burning his house to the ground. A series of similar anecdotes were told about older people becoming confused and resorting to suicide and other extreme measures when their land was taken by the TVA" (Creese 1990:97).

However, of the great number of persons removed from their land, many later acknowledged that while they had opposed relocation at first, their economic situation had ultimately been much improved as a result of the process (Wheeler 1998:960).

In addition to greatly increasing electrical production, TVA established over 7,000 demonstration farms that instructed farmers on new erosion control and agricultural practices. Direct benefits to the region included a significant rise in per capita income, which increased to 61 percent of the national average in 1953, and the near eradication of malaria. Between 1933 and 1958, nearly $2.1 billion were spent in the Tennessee Valley alone (Wheeler 1998:960). TVA's early objectives of improving navigation and flood control on the Tennessee River had been realized. Its related mission of regional development would have to adjust to the new demands of a booming postwar economy, particularly as the agency had, in point of fact, become a power company (Hargrove 1994:4). Throughout the 1950s, TVA's activities in natural resources management and developmental efforts faded in significance, as state and local governments established or expanded their own agencies, such as departments of conservation, forestry, agriculture, or recreation (Martin 1957:376).

As late as 1950, TVA's large hydroelectric dams produced fully 90 percent of the power required to meet demands, with steam plants providing only supplemental power during dry periods. Yet, having become the sole provider of electricity in the Valley, the TVA found itself under increasing pressure to keep up with demand. The situation was exacerbated by the escalating power needs of the defense industry arising from the Korean Conflict and was worsened by the fact that by the early 1950s, the agency had essentially exhausted the power generating capacity of the Tennessee River (Martin 1957:364). Consequently, Congress authorized over $1 billion for the construction of an additional series of coal-powered steam plants (Wheeler 1998:961). The first to be constructed was Widows Creek in Alabama, a 675,000-kilowatt facility begun in 1950, followed by five more plants by 1953, generating a total capacity of 5,175,000 kilowatts (King 1959:284-285). The need to increase electrical production for future demands was fueled by the Atomic Energy Commission (AEC), whose power consumption increased from less than 14 percent of TVA's total sales in 1950 to 56 percent in 1956. AEC facilities in Oak Ridge, Tennessee, and Paducah, Kentucky, were consuming power at a higher rate than many states (Wildavsky 1962:10). Hargrove explains that "the reasons for TVA's turn toward becoming a power company were more complex than the advent of the Cold War. But it certainly was the case that the electricity requirements of the AEC installations gave TVA a powerful argument with Congress in its requests for appropriations to build steam plants" (Hargrove 1994:63). Moreover, the average residential use of electricity in the TVA area had risen to twice that of the rest of the nation, though the price paid by its consumers was less than half the national average (Martin 1957:364-365). TVA's steam plant program was an integral part of the plan to fulfill these increased demands, so much so that by 1956, 70 percent of the Authority's power was generated in coal-burning steam plants (Wildavsky 1962:10).

Shawnee Steam Plant Property History

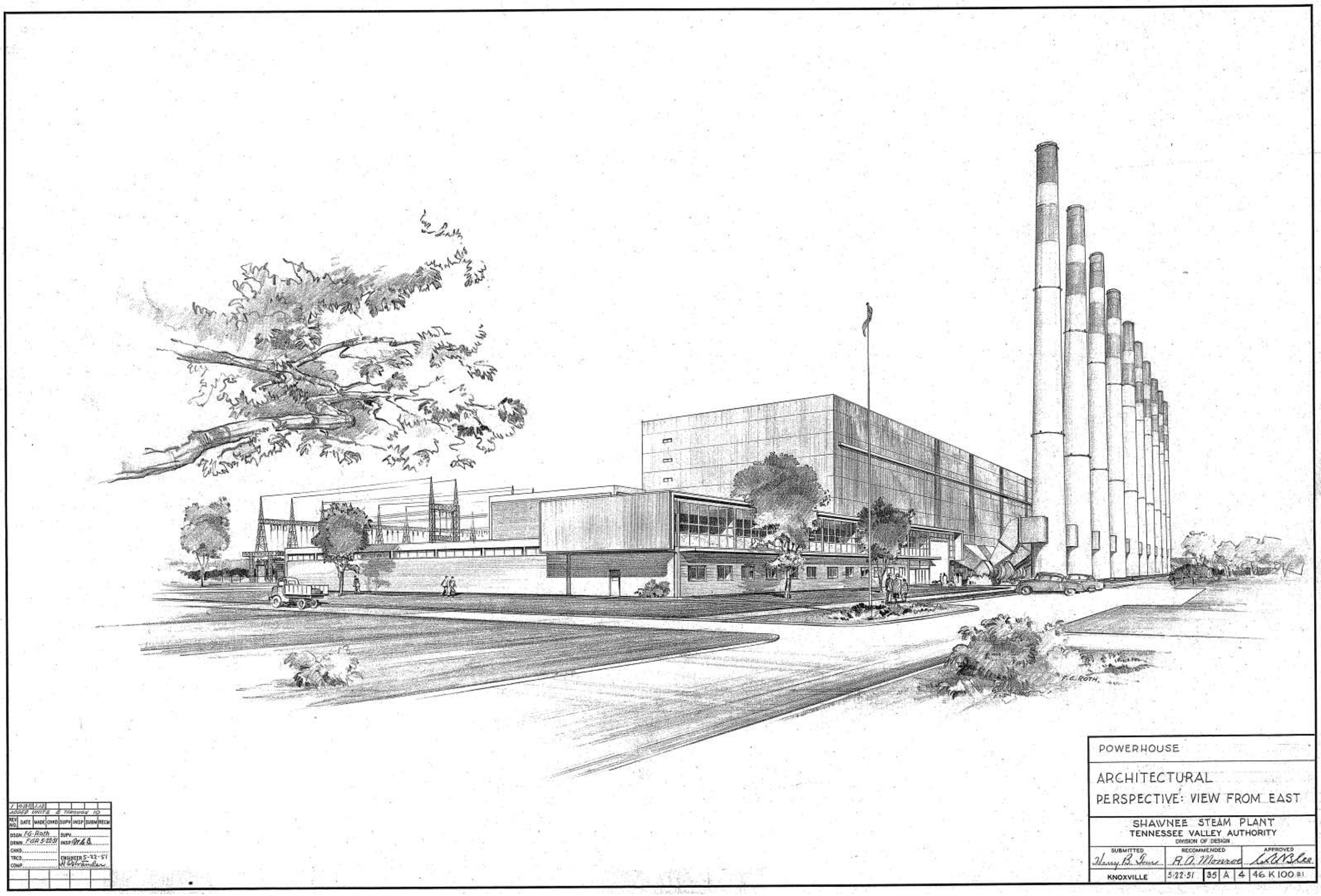
In the fall of 1950, the AEC requested TVA to supply 1,000,000 kilowatts of power for their new gaseous diffusion plant to be built at Paducah, Kentucky. A few months later, the AEC announced that it had also accepted a proposal by a private utility company to supply half the power required for the new AEC plant (Clapp 1955:46). This newly formed company, Electric Energy, Inc. (EEI) would build its own steam plant at Joppa, Illinois, directly across the Ohio River from the present location of TVA's Shawnee Steam Plant, which was sited on the south bank of the Ohio River approximately 13 miles downstream from the mouth of the Tennessee River (King 1959:285; TVA 1969). Former TVA Chairman Gordon Clapp observed, "The announcement that the power supply for the AEC Paducah plant was to be divided between TVA and Electric Energy, Inc., was hailed by critics of the Authority as a contest between public and private enterprise" (Clapp 1959:46). In what would become popularly known as the "Ebasco Fiasco," the private power company exceeded construction cost estimates by millions of dollars and was many weeks delayed in completing its first unit. TVA, on the other hand, brought its first unit into operation on April 9, 1953, with construction completed on time and within budget (King 1959:285). Shawnee's second unit came online June 21, 1953, the third on October 10, 1953, and the fourth went into operation on January 8, 1954 (TVA 1969). In the interim, EEI terminated its construction and engineering contract with Ebasco Services on July 31, 1953, "in order to permit reorganization of the construction project so that the station can be completed on a more efficient and economical basis" (Clapp 1959:48). As one newspaper observed, "...reports from Paducah, Ky., indicate that the power trust is strong on promise and weak on delivery of adequate power for the AEC at reasonable rates. The huge AEC uranium separation plant near there is 'crying for more power' from TVA's Shawnee steam plant" (Florence Times, 7 April 1954:3).

Paducah is located within McCracken County, Kentucky, which had a population of 49,137 in 1950 (United States Census Bureau 1995). Construction of the Shawnee Steam Plant, as well as the AEC and EEI facilities, required the labor of thousands of workers, with the influx resulting in housing shortages and other pressures in the city of Paducah. Many Paducahans realized added income by renting out rooms in their houses to plant workers. Dr. Ray Mofield of Murray State University recalled that “Before 1950, a good sleeping room could be rented for $4 or $5 a week. This soon rose to $10, and later, the better locations were getting $15 a week. Finally, in October 1951, the government ordered rent control” (Robertson 2014:92). Many workers lived outside the city in rapidly proliferating trailer parks, while hundreds more were housed in dormitory-style buildings at the Shawnee Steam Plant site (Robertson 2002:101). Upon completion of the steam plant, camp buildings and contents were advertised for sale by the TVA Disposal Section. A newspaper notice listed “nine wood frame dormitories; cafeteria building; community building; wash house; thirty-seven house trailers; beds, bedding, cafeteria kitchen equipment, china, glassware, and silverware” available for purchase through sealed bids (Kentucky New Era, 21 May, 1955:8).

Even as the Shawnee Steam Plant was being built, the increasing demand for power drove the TVA to bolster its already large expansion program. Although nearly 700 megawatts of new generation went into service in 1952, forecasts indicated that production capacity would need to rise from a total of 3,181 megawatts in 1952 to 9,600 megawatts by 1956. The AEC requested the TVA to produce 1,000 megawatts of additional production at Oak Ridge and 705 megawatts at Paducah. In order to meet this demand, Shawnee would add four more generation units for a total of ten. With a combined generating capacity of 1,350 megawatts, Shawnee was set to become the nation’s largest generating plant (Whitehead 2006:41). Shawnee Steam Plant held this title until the completion of TVA's Kingston Steam Plant in Roane County, Tennessee, in 1955 (Sarasota Herald-Tribune 1954).

TVA sold in excess of 10 billion kilowatt-hours in 1953, with revenue topping $100 million. With power consumption growing, TVA brought another 1,500 megawatts of new generation into production in 1954, which included the first unit at Shawnee. TVA revenue grew by some 30 percent that year, to $139 million. For the first time in TVA’s history, the generation of electricity by steam plants exceeded that of hydroelectric production, by a total of 17.1 to 12.8 billion kilowatt-hours (Whitehead 2006:42). By 1955, the AEC was consuming half of the electricity produced by TVA. A substantial amount of that production was generated by the Shawnee Steam Plant, and it was the burning of coal that fueled the steam plants. While the TVA had required only 1.2 million tons of coal in 1950, by 1955 it was consuming 12 million tons of coal per year. The agency had become the chief source of federal electricity, as well as the largest coal customer in the nation. In order of magnitude, the coal was extracted from mines in western Kentucky, Tennessee, Illinois, Virginia, and eastern Tennessee (Creese 1990:120;TVA1959:13).

Funds for the first four units at Shawnee Fossil Plant (SHF) were initially authorized on January 6, 1951. An artist's rendering, next page, depicts the proposed design of the SHF powerhouse. Units 5 and 6 were authorized July 5, 1952, and Units 7-10 were authorized ten days later (TVA 1969:2-3). As earlier stated, Units 1-3 became operational in 1953. Units 4-7 came online in 1954, 8-9 in 1955, and finally, Unit 10 in October 1956 (TVA 1969:3) Each unit was rated for 135,000 kilowatts, with a total plant capacity of 1,350,000 kilowatts. Overall, every unit was designed to consume approximately 58 tons of coal per hour, and the plant consumed 4,100,000 tons annually. The final cost of the facility was $216,500,000 (TVA 1969:307-308).



Artist's rendering of the proposed SHF powerhouse.

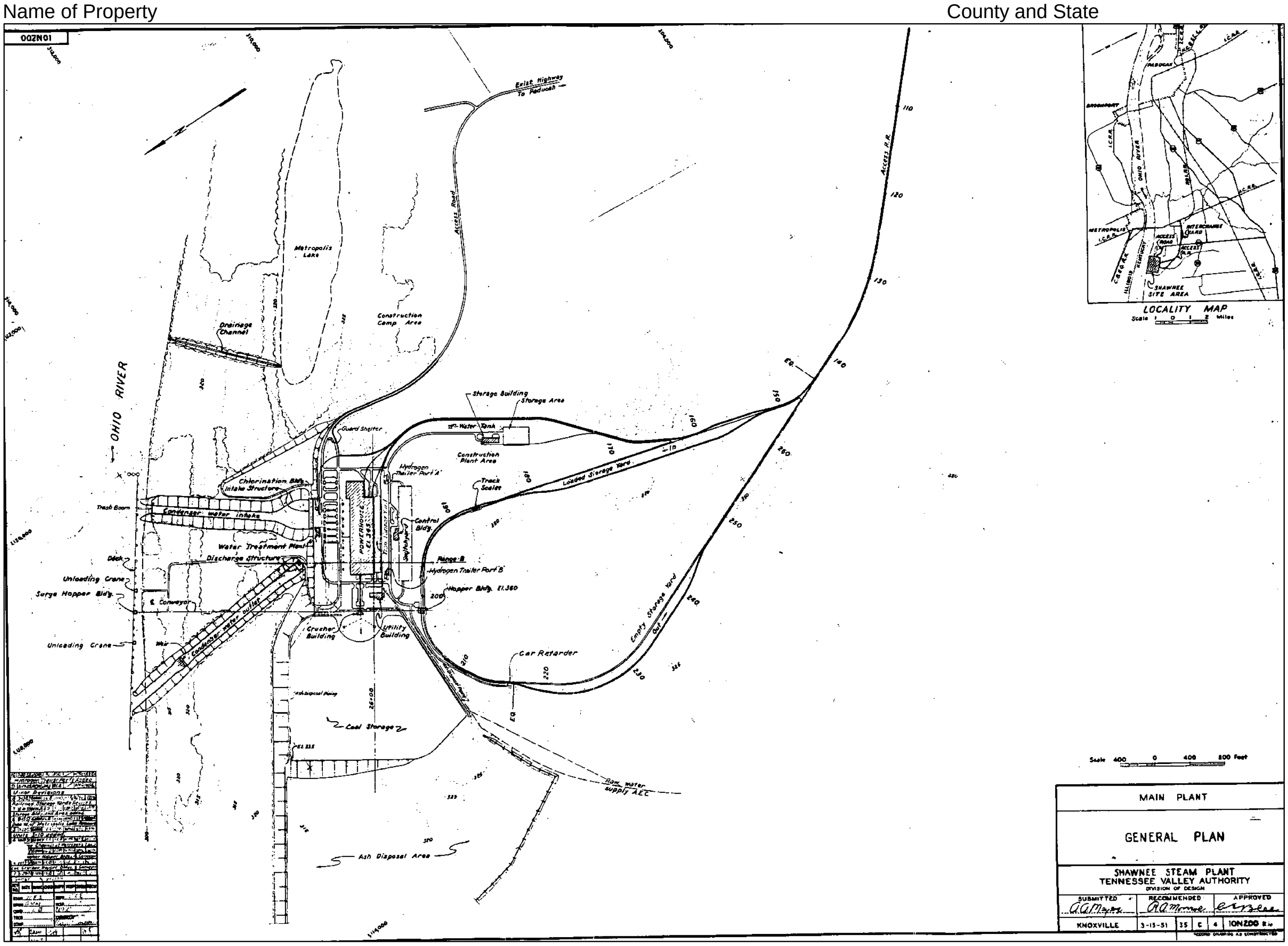
The TVA Civil Design Branch (CDB) was experiencing a heavy workload when funding was authorized for the construction of SHF, forcing the contracting of construction design drawings to external consultants, including Charles T. Main, Inc., Dravo Corporation, Custodis Construction Company, and Aake F. Hedman and Associates (TVA 1969:2-3). The CDB maintained control over the final design, and provided specifications for the facility's overall layout. By 1952, the CDB was able to resume work on SHF's design.

Construction of the SHF was a monumental effort; a volume of 3,000,000 cubic yards of earth was excavated for the plant's footprint. The project required 25,000 tons of structural steel, 157,000 square feet of galbestos siding, and 2,657,000 masonry units for the powerhouse alone, as well as 262,000 cubic yards of concrete for the entire plant (see next page; TVA 1969:308). The powerhouse, which contains the generators and furnaces, was supported by an array of auxiliary support buildings and structures, each serving an integral role in the overall operation and maintenance of the facility (see general plan, page 29). These included the coal crusher building, coal storage yard, water intake structure and treatment plant, barge unloading harbor complex,

Construction of the SHF powerhouse, 1952. **Installation of SHF's first boiler drum, 1952**

switchyard, and elevated belt conveyor system.

The process of electricity production at the completed Shawnee Steam Plant began with the receipt of coal for the furnaces via rail and river barge. When coal arrived at the facility, coal-handling operations were conducted to the west of the powerhouse to minimize interference with other plant operations and to reduce the effects of coal dust on the powerhouse and switchyard.



General plan of original structures at SHF (TVA 1969:189).

Coal entering by rail (historically, approximately one-third of the facility's coal) was delivered by the Illinois Central and Chicago, Burlington, and Quincy railroad lines on the south end of the facility through the loaded storage yard, which had a capacity of 420 rail cars. The entering cars' speed was controlled by an automatic car retarder (TVA 1969:245). The loaded cars were transferred to the hopper building, containing the rotary car dumper, which turned the rail cars upside down to dislodge their contents. The dumper could process 18 cars per hour, with a 70-ton capacity per car. Incoming coal was sampled at that time (TVA 1969:246, 342). The coal was moved from beneath the railroad hopper building on a belt conveyor to the top of the crusher building. The belts moved at a speed of 470 feet per minute and could transfer 1200 tons of coal per hour (TVA 1969:342).

Barges were docked at the harbor, with mooring cells situated on the south bank of the Ohio River, north of the powerhouse. Situated on the 3,173-foot unloading dock were the surge hopper building's two unloading cranes. Each crane featured a 9-ton clamshell bucket and was capable of moving 900 tons of coal per hour (TVA 1969:236). The dock, initially 2,473 feet long with a single unloader crane, was extended in 1955 and the second crane was added at this time (TVA 1969:233-234). Barge-transported coal was carried by a 54-inch-wide inclined belt conveyor to the top of the surge hopper building and the crusher building.

The crusher building was fitted with screening and crushing equipment for sizing the coal. In the crusher building, coal was deposited on vibrating, double-decked screens that sifted the fine coal from large pieces (larger than 1 1/4 inch). Two flextooth crushers reduced the larger coal from its delivered size to a firing size of 1 1/4 inches or less (TVA 1969:254, 370). Once the coal was crushed, it was delivered either to the powerhouse by a pair of parallel conveyors or to the cantilever stocking-out conveyor, which deposited the coal into the coal storage yard (TVA 1969:254). The yard encompassed 62 acres, and had the capacity to store 97 days worth of coal (TVA 1969:269). From the stockpile to the reclaiming hoppers, the coal was handled by rubber-tired, self-loading mobile equipment (TVA 1969:232-233). When the coal was ready for delivery from the storage area to the powerhouse furnaces, it was fed into two reclaim hoppers, which transferred the coal via an underground conveyor to a transfer house located near the powerhouse. The coal was then transferred to 42-inch-wide horizontal belt conveyors to the powerhouse. The conveyor system was managed by a control room situated at the top of the crusher building (TVA 1969:254).

The coal entered the top section of the powerhouse via the conveyor belts and was deposited into the three coal bunkers, where it is subsequently delivered into the pulverizers. After the coal was pulverized, it was introduced to the furnaces to heat the boiler water. The facility's radiant, cyclone-fired, water-cooled pressurized furnaces were provided by The Babcock & Wilcox Co. Each had a rated capacity of 1,000,000 pounds of steam per hour at a temperature of 1,003°F, and a guaranteed efficiency rate of 88.3 percent (TVA 1969:314). Each furnace stood 95 feet tall, 45 feet wide, and 24 feet deep, with a heating surface that consisted of a 14,770-square-foot boiler. Each furnace was designed with primary and secondary superheaters and two Ljungstrom regenerative air preheaters that assisted in regulating the temperature of the steam. The draft system was composed of a series of forced and induced draft fans that introduced preheated air to the furnaces. Economizers preheated the boiler water via heat transfer coils, and three circulating pumps fed water to each boiler through single-pass elements (TVA 1969:39, 314). The accumulated soot and fly ash were collected and exhausted from the furnaces into ten 250-foot-tall stacks constructed of reinforced concrete; each stack tapered to 14 feet in diameter at its opening (TVA 1969:308). The furnace slag and fly ash reinjection and sluice system then conveyed the resulting coal ash through a pipe to the ash disposal area west of the plant.

The steam generated from the heating coils was driven through pipes to the turbine room, where it powered the Westinghouse Electric Corp. turbogenerators at 3,600 RPM (TVA 1969:309). Once the steam passed through the turbo-generators, it was sent to condenser units located below the floor and converted back to water with the aid of cooling water drawn from the Ohio River. The cooling water used at SHF was brought into the facility's intake structure by the condenser water intake channel. The water then passed to the treatment plant before it was delivered to the turbine room (TVA 1969:174). At the treatment plant, debris was filtered out through the use of 20 trashracks and 20 travelling screens. Water was discharged from each unit through 78-inch diameter concrete pipes which led to an open channel that discharged the water into the Ohio River (TVA 1969:148). The electricity generated by the turbines was then sent to the transformers located at the south side of the powerhouse. The energy was then sent to an adjoining switchyard and into TVA's power grid where it was delivered to various substations. The electricity was regulated by TVA personnel from interior control rooms. The main control building was centrally located between the transformer yard and the switchyard in order to avoid excessively long cable runs, while being sufficiently distant from the powerhouse to avoid excessive noise and vibration (TVA 1969:213).

Aerial image from September 1961 showing the completed SHF facility; view is northeast.

March 1965 image of the completed SHF powerhouse; view is northwest.

Two new smokestacks were added to the SHF powerhouse in the late 1970s, and construction of the baghouse equipment, along the powerhouse's north elevation, was completed by 1981 (see below). Modern air “scrubber” equipment was later installed in the late 1990s (Thompson 2014). The Shawnee Steam Plant currently generates approximately 8 billion kilowatt-hours of electricity per year, which is enough to supply 540,000 homes. Shawnee’s tenth production unit was converted from coal to an atmospheric fluidized-bed boiler in the early 1980s and was idled in 2010. TVA is presently considering the feasibility of converting Unit 10 into a biomass powered generator unit (TVA 2015b).

The addition of two smokestacks and baghouse equipment to SHF (1979).

TVA shifted toward nuclear-powered electrical production in the 1960s. Construction of Browns Ferry nuclear plant commenced in 1967, followed by nuclear plants at Sequoyah in 1970, Bellefonte in 1974, and Watts Bar Unit 1 began commercial operation in May 1996 (Wheeler 1998:961; TVA 2015a). Currently nearing completion is the Unit 2 reactor at the Watts Bar Nuclear Plant in Spring City, Tennessee, which will be the nation's first new nuclear energy production facility in the 21st century (TVA 2015c). In 2011, TVA's coal-fired and combustion-turbine units produced about 81.4 billion kilowatt-hours of electricity and accounted for approximately 57 percent of TVA's power production (TVA 2013).

Evaluation of Significance within the context of "The Tennessee Valley Authority Steam Plant Program"

The Shawnee Steam Plant was constructed to fulfill rising electric power needs for federal defense efforts, and is significant as TVA's first steam plant constructed in the Commonwealth of Kentucky. SHF was only the agency's third steam plant, making SHF also significant as one of the earliest components of the TVA steam plant network. With the Tennessee River no longer to able to increase its electrical output, TVA turned toward steam power to supplement its electrical grid. Growing demands by the defense industry were exacerbated by the Korean Conflict and worsened by the near-exhaustion of the Tennessee River's power-generating capacity, while at the same time, residential use of electricity became more commonplace, putting further strain on TVA's existing network of hydroelectric dams. As late as 1950, steam plants provided only supplemental power during dry periods, however having become the sole provider of electricity in the Valley, the TVA found itself under increasing pressure to keep up with demand. SHF was constructed to relieve pressure on the agency's hydroelectric system and to be the primary electricity supplier for the AEC's plant in Paducah.

With a combined generating capacity of 1,350 megawatts, Shawnee was briefly the nation's highest-capacity generating plant, until the completion of the TVA's Kingston Steam Plant in 1955. By that year, the generation of electricity by TVA's steam plants exceeded that of hydroelectric production, by a total of 17.1 to 12.8 billion kilowatt-hours (Whitehead 2006:42). Additionally, the AEC was consuming half of the electricity produced by TVA. A substantial amount of that production was generated by the Shawnee Steam Plant. The plant serves as a physical manifestation of TVA's rapid expansion and increase in power production in the 1950s, which led to the agency seeking methods of power production away from the Tennessee River. Furthermore, the construction of SHF established TVA as a major presence in Kentucky, marking the shift away from private utility companies toward the production and dissemination of electricity by the federal government.

Evaluation of the Integrity of the Shawnee Steam Plant's significance in light of its current physical condition

The SHF is a cohesive complex of industrial buildings and structures used in the production of electricity that retains sufficient integrity of location, setting, design and materials, workmanship, feeling, and association for listing in the National Register of Historic Places. Significant under Criterion A, the property's integrity primarily lies with its **association** with TVA's steam plant program as the agency's first steam plant in the state of Kentucky, explored within the historic context discussed above. As a functioning steam plant, SHF retains a high level of **integrity of feeling**. The ongoing production of electricity through the use of coal-fired turbo-generators provides a historic sense of the property's period of significance.

SHF retains a high level of **integrity of location** and **setting**. The complex remains in its original location on the south bank of the Ohio River, approximately 13 miles downstream from the city of Paducah and the mouth of the Tennessee River. All extant contributing resources are in their original locations, retaining the spatial relationship between the complex-anchoring powerhouse (Resource #1) and auxiliary buildings and structures. The facility's location and setting were critical for the delivery of coal to the plant by barge, train, and truck. The Ohio River provided a steady and abundant water supply, necessary for the boilers, as well as cooling mechanisms, within the powerhouse. Proximity to the AEC's Paducah plant allowed for swift transmittal of electricity for federal defense purposes. SHF's historic setting has largely remained unaltered, with the exception of modern coal ash settling ponds to the northwest of the plant's original core. The surrounding area is largely comprised of cleared agricultural fields interspersed with dense woods.

The district retains a high level of **integrity of design, materials,** and **workmanship**. Contributing resources to the district have remained largely unaltered, with the exception of the replacement of the original asbestos siding that once clad the belt conveyors (Resource #7). SHF has been modified over the past 40 years through the construction of new auxiliary buildings and air emission equipment designed to increase the plant's generating capacity while remaining in compliance with increasing emission standards set by the United States Environmental Protection Agency (EPA). These modifications include the construction of two 800-foot smokestacks ca. 1975, the installation of modern "scrubber" equipment to the north elevation of the powerhouse (Resource #1) boiler bay, and the installation of modern full stream (fabric filler) particulate emissions control devices (known as baghouses). These new mechanisms and structures are attached to the exterior of the powerhouse (Resource #1), but have not diminished the historical significance of the SHF. The district's contributing resources continue to retain their original appearance and continue to convey the history of the complex through their integrity of design, materials, and workmanship.

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Previous documentation on file (NPS):

____preliminary determination of individual listing (36 CFR 67 has been requested)
____previously listed in the National Register
____previously determined eligible by the National Register
____designated a National Historic Landmark
____recorded by Historic American Buildings Survey #____________
____recorded by Historic American Engineering Record # __________
____recorded by Historic American Landscape Survey # ___________

Primary location of additional data:

_X_ State Historic Preservation Office
____Other State agency
_X_ Federal agency
____Local government
____University
____Other
Name of repository: **Tennessee Valley Authority**

Historic Resources Survey Number (if assigned): McN-372

10. Geographical Data

Acreage of Property 684.14

UTM References (NAD 1983)

	Zone	Easting	Northing
1	16	341941	4114333
2	16	342814	4113725
3	16	342617	4112905
4	16	341893	4111094
5	16	341162	4112721
6	16	341259	4113768

Verbal Boundary Description (Describe the boundaries of the property.)
The boundary of the Shawnee Steam Plant Historic District is shown on the accompanying maps entitled "Shawnee Steam Plant Location Map", which is based on the 1982 USGS Joppa, Kentucky 7.5-minute topographic quadrangle and also on 2014 ESRI/DigitalGlobe aerial imagery. The boundary is delineated by the polygon whose vertices are located at the following NAD 1983 UTM reference points: 1. 16 341941 4114333, 2. 16 342814 4113725, 3. 16 342617 4112905, 4. 16 341893 4111094, 5. 16 341162 4112721, and 6. 341259 4113768. The National Register boundary for the Shawnee Steam Plant includes 20 building resources and 13 structure resources bounded by the Ohio River, Tennessee Valley Authority service roads, and modern coal ash settling ponds. The 684.14-acre tract encompasses the central complex of buildings and structures historically associated with Shawnee Steam Plant's period of significance.

Boundary Justification (Explain why the boundaries were selected.)
The NRHP nomination boundary includes the historic core of the Shawnee Steam Plant complex and all extant buildings and structures associated with the facility's original construction. The historic district boundary does not encompass the entire reservation boundary, which presently includes modern coal ash settling ponds to the west of the complex's historic core. The area selected for listing retains the highest concentration of buildings and structures that remain extant and largely unaltered since the early 1950s.

11. Form Prepared By

name/title Meghan Weaver/Preservation Planner; Ted Karpynec/Sr. Preservation Planner; David Sprouse/Historian

organization Tennessee Valley Archaeological Research date August 14, 2015

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city or town Nashville state TN zip code 37215

e-mail mweaver@tvaresearch.com; tkarpynec@tvaresearch.com; dsprouse@tvaresearch.com

Photographs:

Name of Property: Shawnee Steam Plant (same for all photos)
City or Vicinity: West Paducah (same for all photos)
County: McCracken (same for all photos)
State: Kentucky (same for all photos)
Photographer: Meghan Weaver, Tennessee Valley Archaeological Research (same for all photos)
Date Photographed: October 31, 2014 (same for all photos)

Description of Photograph(s) and number:
All digital images labeled as follows: KY_McCracken County_Shawnee Steam Plant Historic District_00#.tif

1. Powerhouse (Resource 1) south and east elevations; view is northwest.
2. Powerhouse (Resource 1) south and west elevations and belt conveyor system (Resource 7); view is northeast.
3. Powerhouse (Resource 1) office wing façade; view is southeast.
4. Powerhouse (Resource 1) office wing façade and south elevation; view is southwest.
5. Powerhouse (Resource 1) lobby south wall with dedication.
6. Powerhouse (Resource 1) lobby north wall.

7. Powerhouse (Resource 1) lobby staircase.
8.Powerhouse (Resource 1) lobby mural.
9. Powerhouse (Resource 1) second floor interior hallway.
10. Powerhouse (Resource 1) service bay; view is northwest.
11. Powerhouse (Resource 1) boiler bay and original smokestacks; view is west.
12. Powerhouse (Resource 1) turbo-generator and boiler bays; view is northwest.
13. Powerhouse (Resource 1) turbine room interior; view is west.
14. Powerhouse (Resource 1) modern baghouse equipment and smokestack; view is southeast.
15. Modern boiler building (Resource 32) and belt conveyor system (Resource 7); view is northeast.
16. Central Electrical Control building (Resource 2) north and east elevations; view is southwest.
17. Central Electrical Control building (Resource 2) north and west elevations; view is southeast.
18. Barge Unloading Harbor (Resource 3); view is southeast.
19. Barge Unloading Harbor (Resource 3) mooring cells; view is northwest.
20. Barge Unloading Harbor (Resource 3) hopper structure and unloading crane detail; view is southeast.
21. Crusher building (Resource 4) south and east elevations; view is northwest.
22. Yard Equipment Maintenance building (Resource 5) south and east elevations; view is northwest.
23. Yard Equipment Maintenance building (Resource 5) south and west elevations; view is northeast.
24. Hydrogen Trailer Port A (Resource 6); view is northwest.
25. Hydrogen Trailer Port B (Resource 6); view is northeast.
26. Belt conveyor system (Resource 7), BC-2; view is north.
27. Belt conveyor system (Resource 7), BC-2; view is northwest.
28. Belt conveyor system (Resource 7); view is south.
29. Stocking-out conveyor (Resource 7); view is west.
30. Belt conveyor system (Resource 7); view is north.
31. Rotary Car Dumper and Hopper building (Resource 8), Hopper Storage building (Resource 9), and Tractor Shed (Resource 20); view is southwest.
32. Rotary Car Dumper and Hopper building (Resource 8), Hopper Storage building (Resource 9), and Tractor Shed (Resource 20); view is southeast.
33. Empty Storage Yard (Resource 10); view is southwest.
34. Loaded Storage Yard (Resource 11); view is southeast.
35. Switchyard (Resource 12); view is west.
36. Coal Storage Yard (Resource 13); view is northwest.
37. Switchyard Storage building (Resource 14) north and west elevations; view is southeast.
38. Reclaim Hopper (Resource 15) and belt conveyor system (Resource 7); view is northwest.
39. Discharge Channel (Resource 16) with BC-2 of the belt conveyor system (Resource 7) in the background; view is northwest.
40. Intake Channel (Resource 17); view is north.
41. Water Treatment Plant (Resource 18) south and east elevations; view is northwest.
42. Intake Structure (Resource 19) upper area with gantry crane and circulating pumps; view is northwest.
43. Intake Structure (Resource 19) and Water Treatment Plant (Resource 18) north and west elevations; view is southeast.
44. Guard Shelter (Resource 21) north and west elevations; view is southeast.
45. Guard Shelter (Resource 22) south and west elevations; view is northeast.
46. Switchyard Maintenance building (Resource 23) north and west elevations; view is southeast.
47. Sand Filter buildings (Resource 24) south and west elevations; view is northeast.
48. Chlorination building (Resource 25) north and east elevations; view is southwest.
49. Demineralization building (Resource 26) south and west elevations; view is northeast.
50. Temporary Office building (Resource 27) south and east elevations; view is northwest.
51. Ash Disposal Facility (Resource 28); view is northwest.
52. Limestone Conditioner building (Resource 29) north and east elevations and belt conveyor system (Resource 7); view is southwest.
53. Baghouse Maintenance building (Resource 30) north and east elevations; view is southwest.
54. Deionization Tanks (Resource 31); view is northeast.
55. Two storage buildings (Resource 33); view is north.
56. Storage building (Resource 33); view is southwest.
57. Two storage buildings (Resource 33); view is northeast.

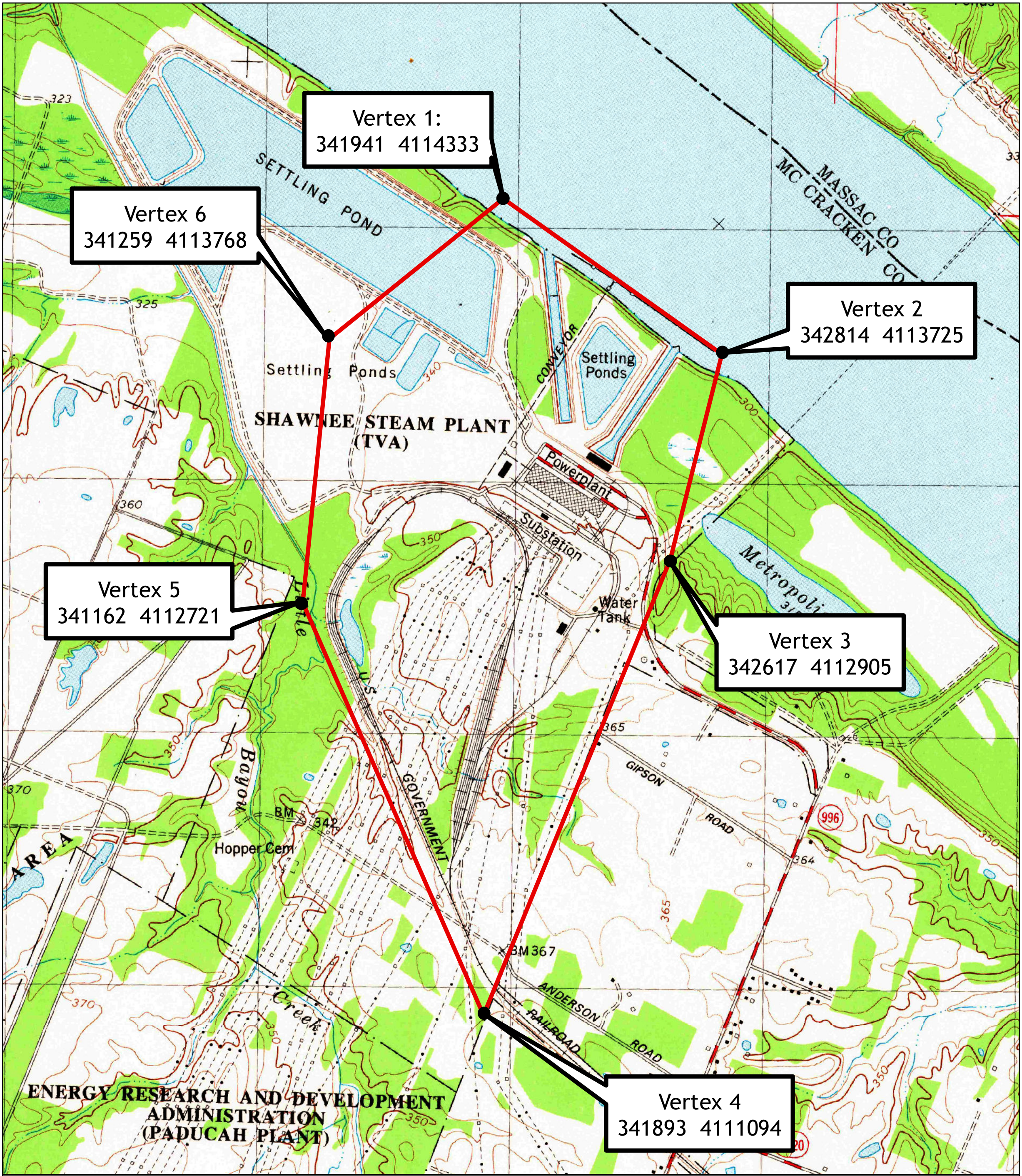
58. Storage building (Resource 33); view is north.
59. Storage building (Resource 33); view is northeast.
60. Storage building (Resource 33); view is northeast.
61. Storage building (Resource 33); view is southwest.
62. Cluster of four storage buildings (Resource 33); view is southeast.
63. Cluster of six storage buildings (Resource 33); view is northwest.

Property Owner:

name ______

street & number ______ telephone ______

city or town ______ state ______ zip code ______



Shawnee Steam Plant Location Map

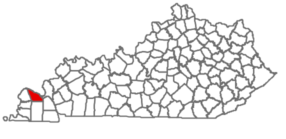
NRHP boundary

vertex coordinate; NAD 1983; Zone 16

N

0 760 1,520 2,280 feet

0 175 350 525 meters



McCracken County, Kentucky

based on USGS 1982 Joppa, KY 7.5 minute topographic quadrangle

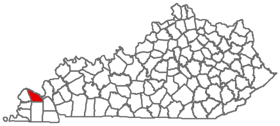
Shawnee Steam Plant Location Map

NRHP boundary

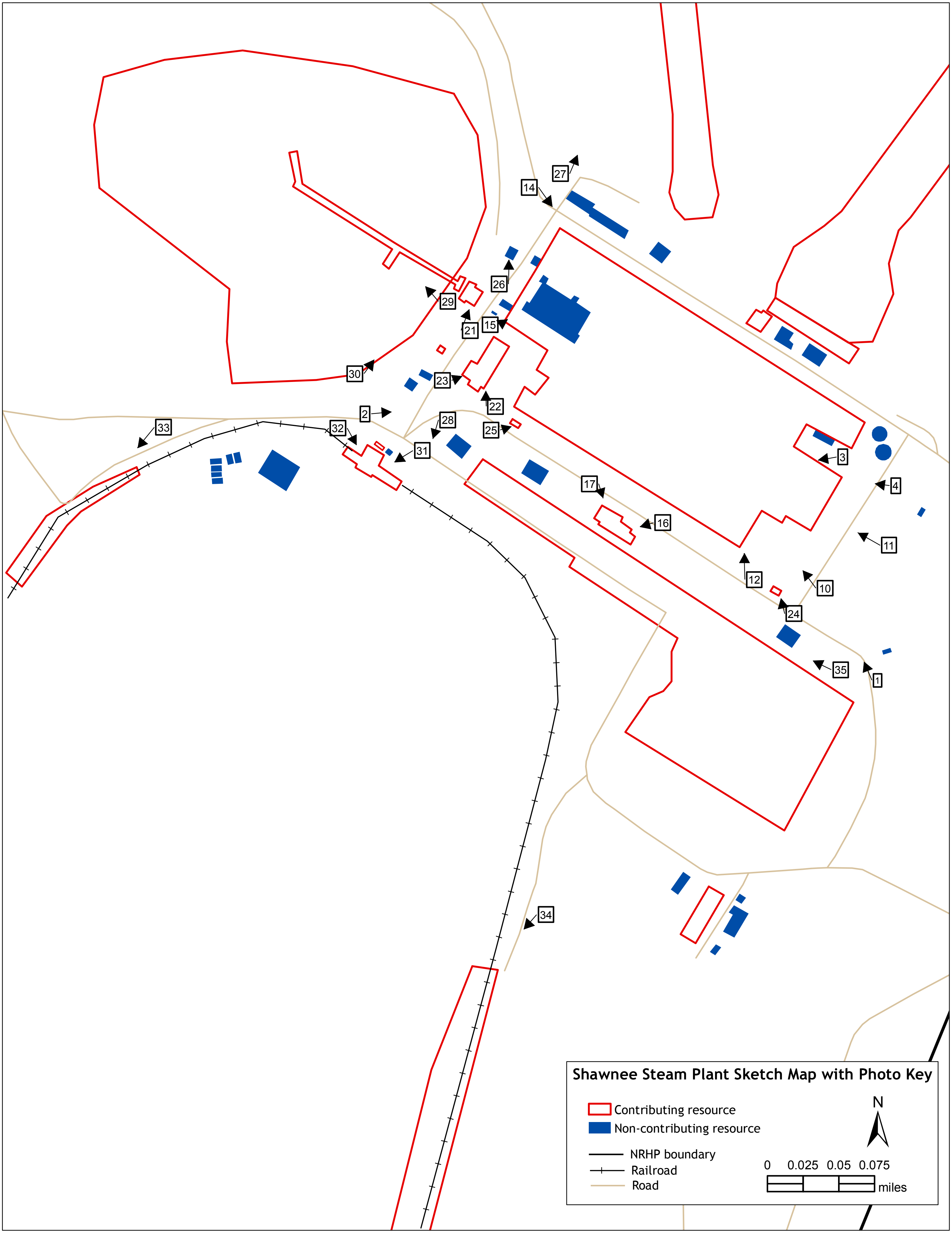
N

0 870 1,740 2,610 feet

0 190 380 570 meters



McCracken County, Kentucky



Shawnee Steam Plant Sketch Map with Photo Key
Contributing resource
Non-contributing resource
NRHP boundary
Railroad
Road
N
0 0.025 0.05 0.075
miles
1
2
3
4
10
11
12
14
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16
17
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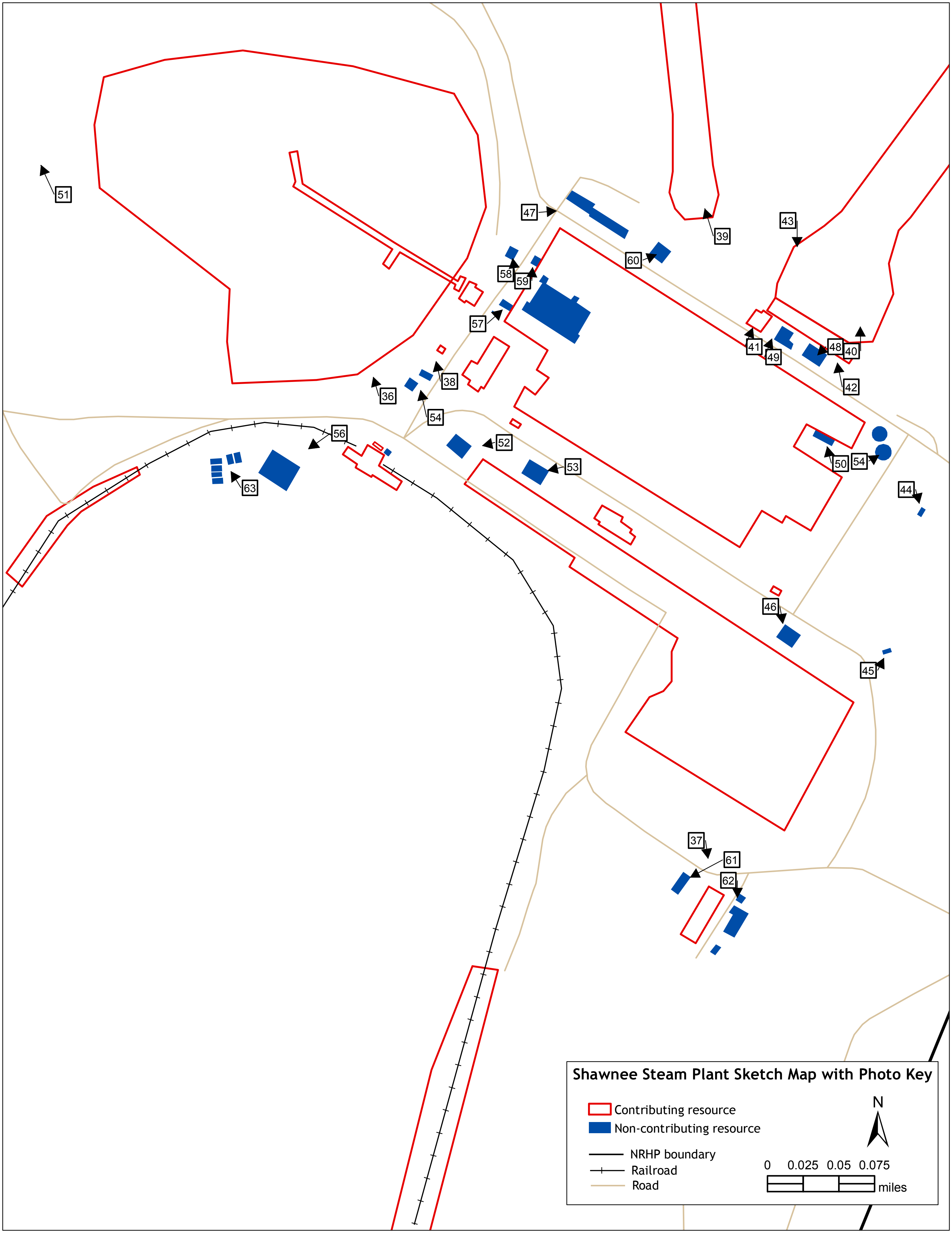

Shawnee Steam Plant Sketch Map with Photo Key
Contributing resource
Non-contributing resource
NRHP boundary
Railroad
Road
N
0 0.025 0.05 0.075
miles
51
47
39
43
60
58
59
57
41
49
48
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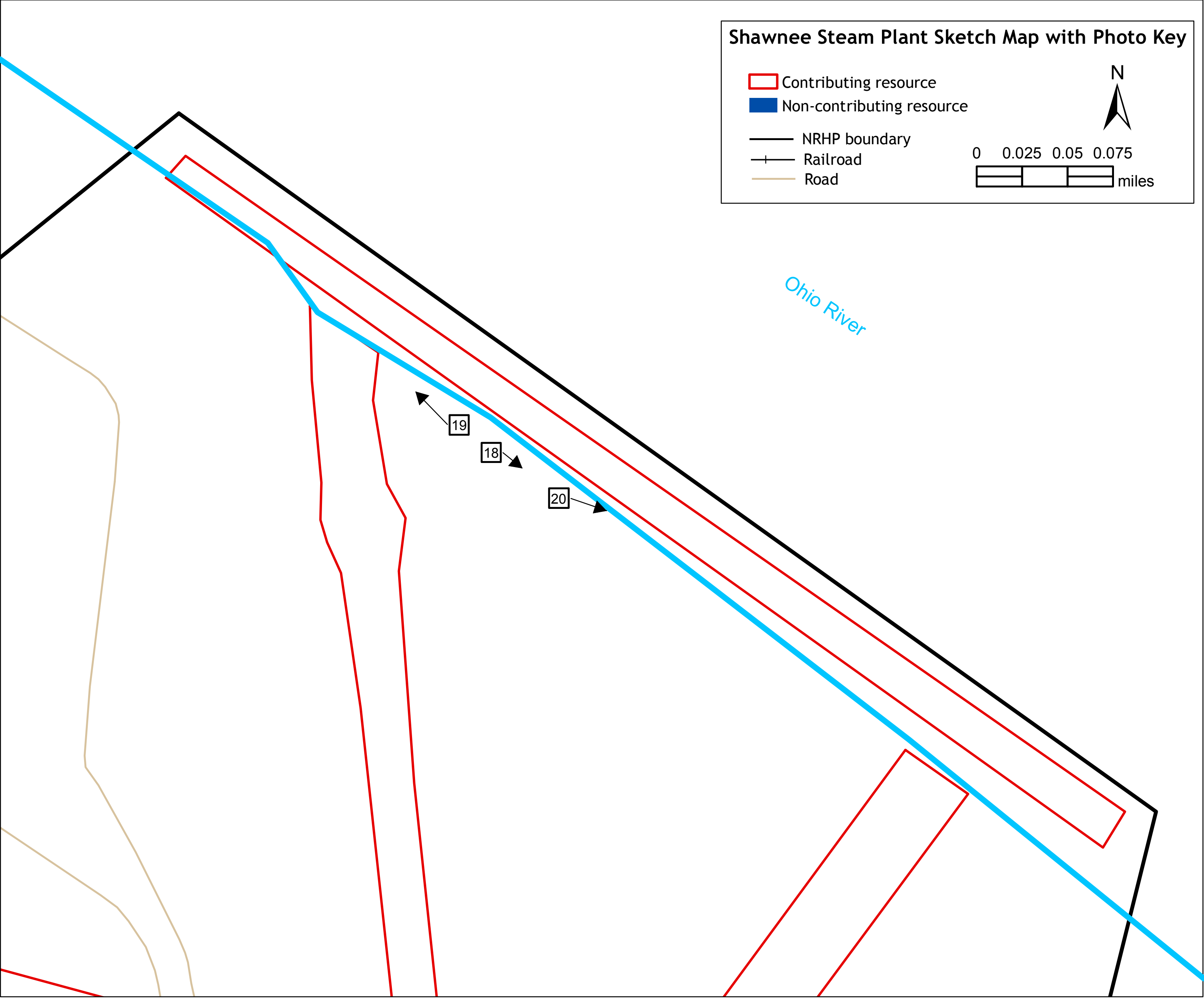
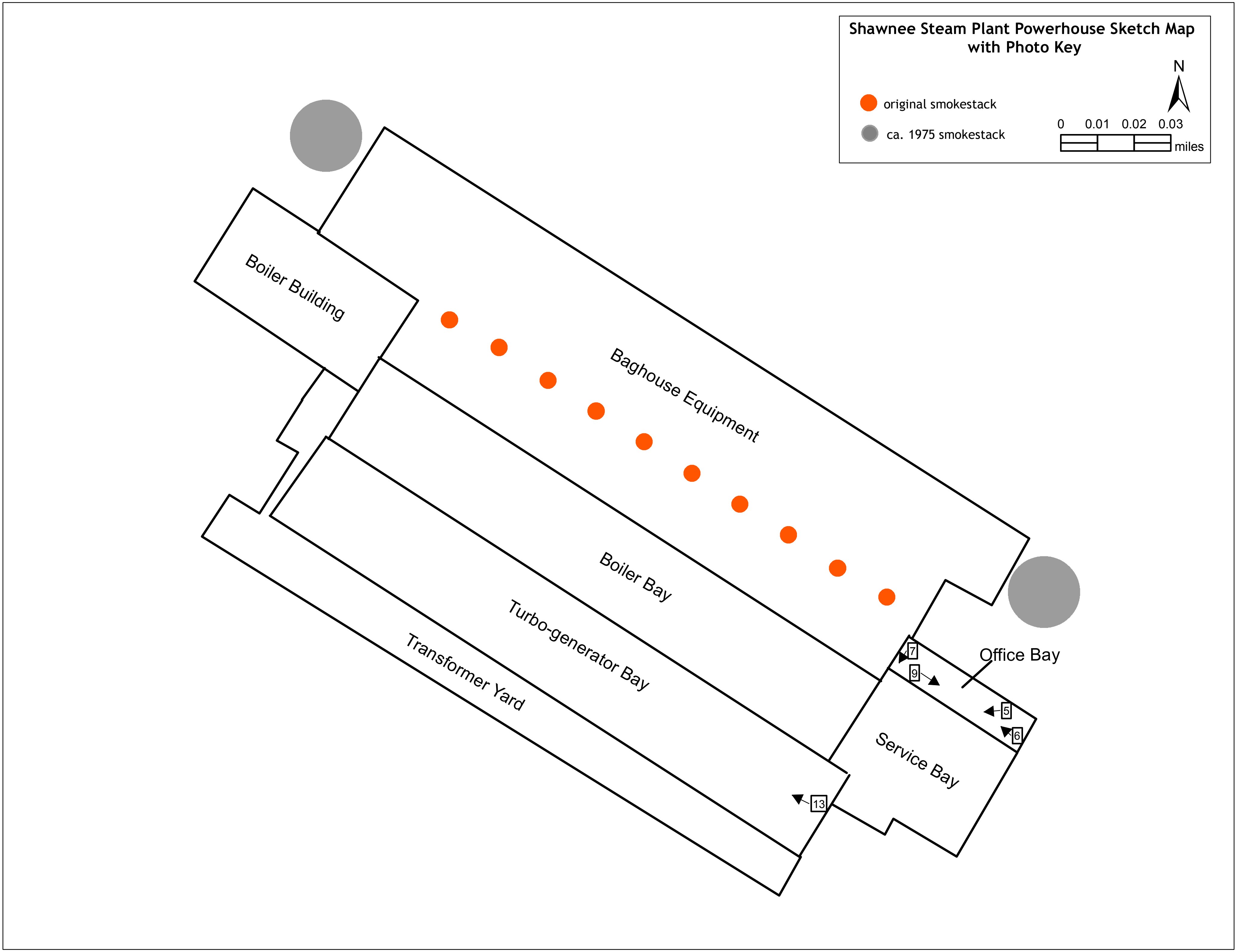
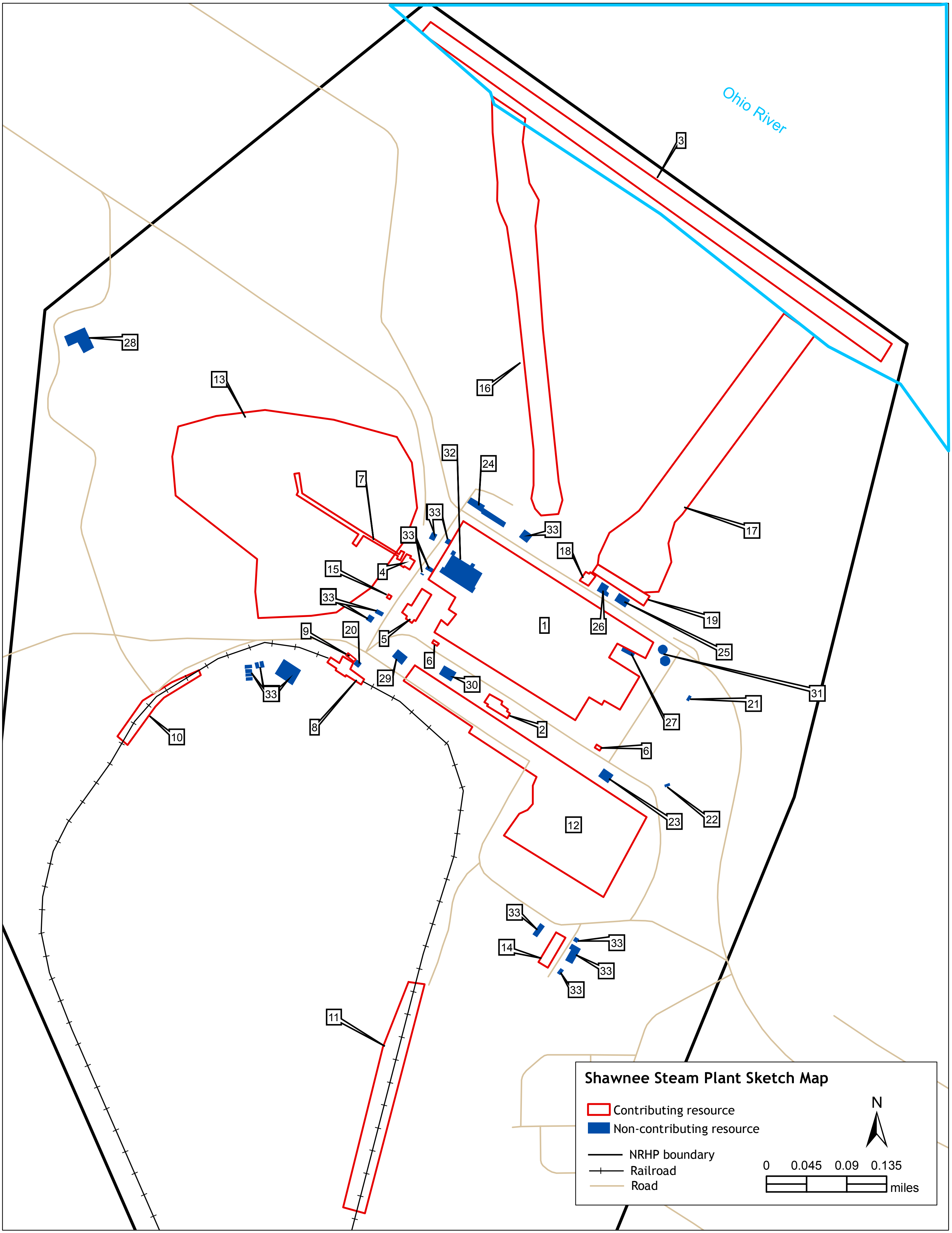


Shawnee Steam Plant Sketch Map with Photo Key
Contributing resource
Non-contributing resource
NRHP boundary
Railroad
Road
N
0
0.025
0.05
0.075
miles
Ohio River
19
18
20


Shawnee Steam Plant Powerhouse Sketch Map with Photo Key
original smokestack
ca. 1975 smokestack
N
0
0.01
0.02
0.03
miles
Boiler Building
Baghouse Equipment
Boiler Bay
Turbo-generator Bay
Transformer Yard
Office Bay
Service Bay
7
9
5
6
13


Shawnee Steam Plant Sketch Map
Contributing resource
Non-contributing resource
NRHP boundary
Railroad
Road
0
0.045
0.09
0.135
miles
N
Ohio River
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
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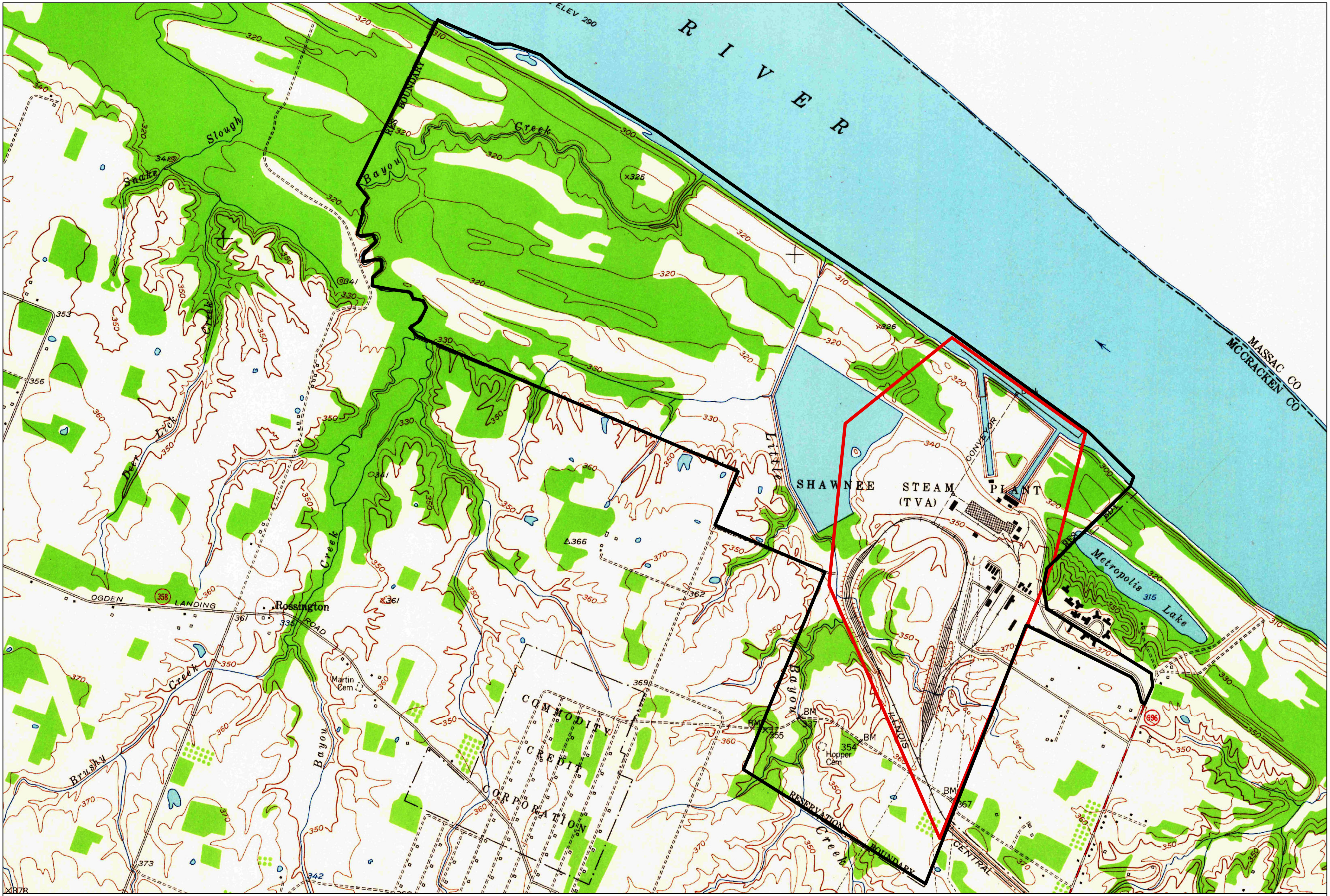


Shawnee Steam Plant Reservation-1954

reservation boundary

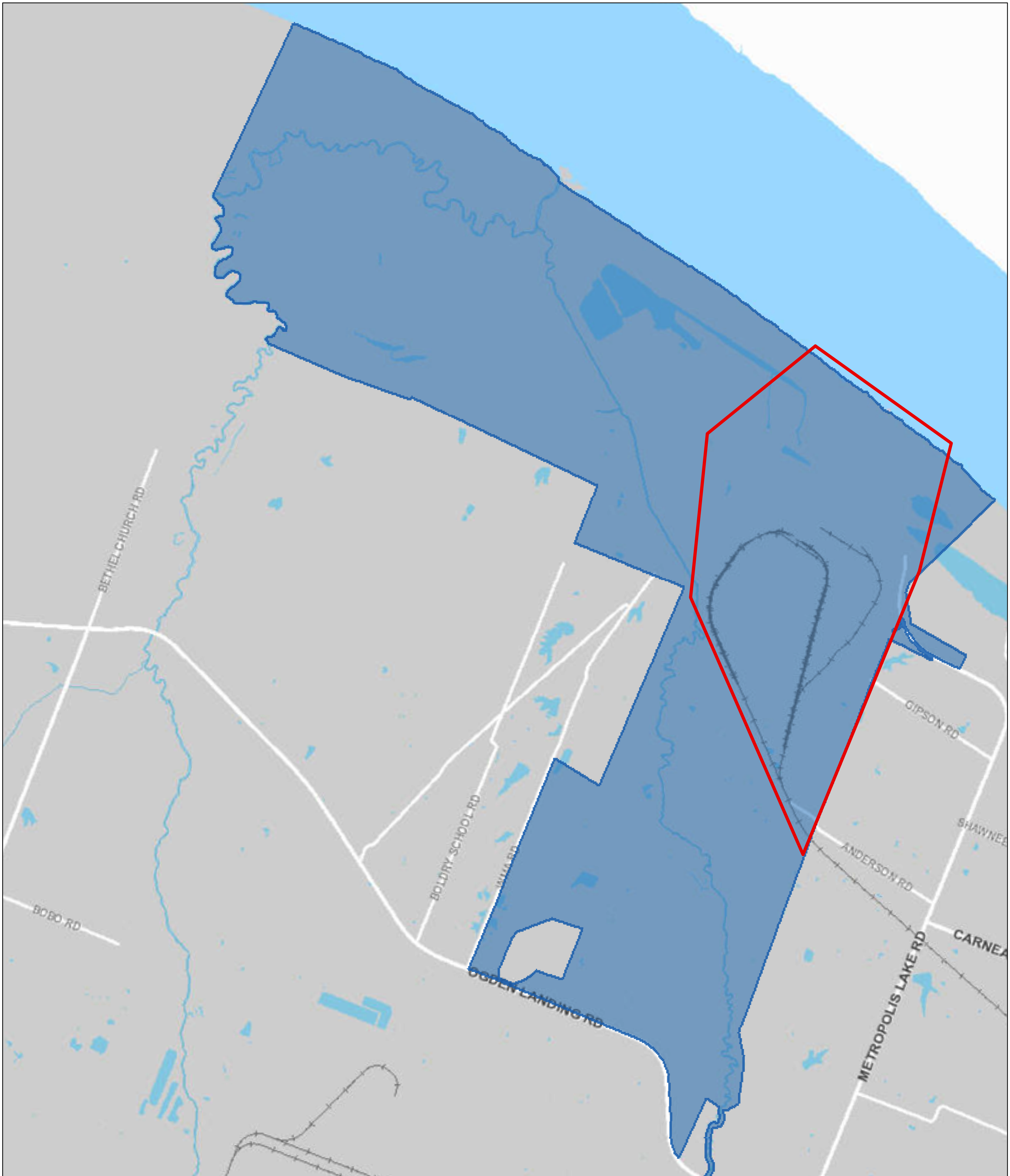
NRHP boundary

N

0 2,000 4,000 6,000 feet

0 450 900 1,350 meters

based on USGS 1954 Joppa, KY 7.5 minute topographic quadrangle



McCracken County Tax Map

Shawnee Steam Plant Historic District NRHP boundary

N

0 2,000 4,000 6,000 feet

0 440 880 1,320 meters