United States Department of the Interior National Park Service

amendment.

onal Register of Historic Places Continuation Sheet	Name of Property
	County and State
number Page	Name of multiple property listing (if applicable
SUPPLEMENTARY LISTING RI	ECORD
NRIS Reference Number: 100001472	Date Listed: 8/14/2017
Property Name: Nickajack Hydroelectric Project (TVA Hydroe	electric System, 1933-1979 MPS)
County: Marion	State: TN
This property is listed in the National Register of Historic Place nomination documentation subject to the following exceptions notwithstanding the National Park Service certification includes the National Park Service certification	, exclusions, or amendments,
Signature of the Keeper	Date of Action

The TVA FPO and the Tennessee State Historic Preservation Office was notified of this

National Park Service

# National Register of Historic Places Registration Form

JUN 3 0 2017

This form is for use in nominating or requesting determinations for individual properties and districts. See instructions in National Register Bulletin, How to Complete the National Register of Historic Places Registration Form. If any item does not apply to the property being documented onter "NA" for "pot applicable." For functions, architectural classification, materials, and areas of significance, enter only categories and subcategories from the instructions.

1. Name of Property	
Historic name Nicka	ijack Hydroelectric Project
Other names/site number	Nickajack Dam
Name of related multiple property listing	Historic Resources of the Tennessee Valley Authority Hydroelectric Project, 1933-1979
2. Location	
Street & Number: City or town:  Not For Publication:	3490 TVA Road  State: Tennessee County: Marion  N/A Vicinity: N/A Zip: 37347
3. State/Federal Agency (	Certification
	X meets does not meet the National Register Criteria. I recommend that this cant at the following level(s) of significance: national
Signature of certifying St. Program M	g official/Title:  Date  Date  Proposition of History of Federal  Proposition of Tribal Government  Date  Proposition of Tribal Government  Description of Tribal Government
In my opinion, the property  Signature of Comme	A las hell I had
Deputy State Historic Tennessee Historical C	
Title:	State of Federal agency/bureau or Tribal Government

Iame of Property		Marion County, Tennessee County and State	
4. National Park Service Certificat	tion		
I hereby certify that this property is:			
entered in the National Regis	ter		
determined eligible for the N			
determined not eligible for th			
removed from the National R			
other (explain)			
		22 III a 13	
Lud South		8-14-2017	
Signature of the Keeper		Date of Action	
5. Classification			
Ownership of Property	Cate	egory of Property	
(Check as many boxes as apply.)	(C	Theck only one box.)	
Private	Ви	ailding(s)	
Public – Local	Di	istrict X	
i done Zocai	Di		
Public – State	Sit	te	
Public – Federal X	St	ructure	
1 10.00			
	Ol	bject	
Number of Resources within Pro	pperty		
(Do not include previously listed			
Contributing	Noncontributin		
5	7	buildings	
1	1	sites	
4	1	structures	
0	0	objects	
		Total	

Nickajack Hydroelectric Project	Marion County, Tennessee
Name of Property	County and State
6. Function or Use	
Historic Functions (Enter categories from instructions) INDUSTRY/PROCESSING/EXTRACTION/ Energy Facility	Current Functions (Enter categories from instructions) INDUSTRY/PROCESSING/EXTRACTION/ Energy Facility
RECREATION AND CULTURE/Outdoor Recreation	RECREATION AND CULTURE/Outdoor Recreation
TRANSPORTATION/Water-related	TRANSPORTATION/Water-related
7. Description	
Architectural Classification (Enter categories from instructions.) No Style OTHER: Hydroelectric Dam	
Materials: Principal exterior materials of the property:	CONCRETE: STEEL: GLASS: ROCK: FARTH

# **Narrative Description**

The Nickajack Hydroelectric Project was constructed from 1964-1967 by the Tennessee Valley Authority (TVA). It located 424.7 miles from the mouth of the Tennessee River in Marion County in the southeastern Tennessee, eighteen miles west of Chattanooga and two miles northwest of the junction of the state lines of Tennessee, Georgia, and Alabama. The nearest town is Jasper, (2010 pop. 3,279), Tennessee. The primary purpose for construction of the Nickajack project was to replace the existing Hales Bar Dam in order to improve navigation on the Tennessee River. The Nickajack Dam impounds the 10,730-acre, Nickajack Reservoir (also called Nickajack Lake) at elevation 634 feet above sea level. The Chickamauga Dam is forty-six miles upstream; the Guntersville Dam is seventy-five miles downstream from the Nickajack Dam. The terrain near the dam site varies from a 1,100-foot floodplain that abruptly rises to a twenty-five to thirty-foot shelf, on the right side of the dam; on the left side of the dam is a 600-foot floodplain extending to a steep ridge that forms the left abutment. The river channel is 1,100 feet wide at the dam@s axis. The Tennessee Valley watershed

<sup>2</sup> Ibid., 19.

<sup>&</sup>lt;sup>1</sup> Tennessee Valley Authority, *The Nickajack Project: A Comprehensive Report on the Planning, Design, Construction, Initial Operations, and Costs, Technical Report No. 16*, (Washington, D.C.: U.S. Government Printing Office, 1972), 1, 32.

Nickajack Hydroelectric Project	Marion County, Tennessee
Name of Property	County and State

comprises 40,910 square miles; of that, 21,870 square miles are above the Nickajack site. Average rainfall over this area from 1890 to 1959 measured fifty-one inches, with a high of sixty-four inches in 1957 and a low of thirty-seven inches in 1925.3 Based on this rainfall and run-off data at recording stations, the average flow of 38,000 cubic feet per second was computed for the Nickajack site. Ten TVA storage reservoirs above Nickajack provide flood regulation for sixty-one percent of this area. The manipulation of water levels across the system allows the TVA to achieve optimum capacity at individual power plants.

The project takes its name from the eighteenth-century town of Nick-a-jack, which is thought to derive from Jack Civil, a free African-American man. Civil was the leader of a band composed of Cherokee and Creek Indians, whites, and a few African Americans, who went by the name Chickamauga.<sup>4</sup> The town of Nickaiack was located one-and-one-half miles upstream from the modern project site.

#### **INVENTORY**

The Nickajack Hydroelectric Project consists of the dam, two navigation locks, the dam spillway, the powerhouse, earth embankments, and the switchyard (see Photos 1-3).

#### 1. Nickajack Dam, 1967 (Contributing Structure)

The ninety-five-foot high Nickajack Dam has an overall crest length of 3,767 feet. Nickajack Dam is a combination concrete gravity and earth embankment structure with a concrete overfall-type spillway.<sup>5</sup> At the chosen site for the axis of the dam, the Tennessee River is 1.100 feet wide. The spillway is located in the approximate center of the riverbed. The width of the river resulted in a spillway 482.5 feet wide using ten fortyfoot-square gates and ten piers seven-and-one-half feet in width. The piers support an operating deck at an elevation of 649 feet. The piers are equipped with steel ladders to access the gates, and the deck has steel railing. The piers are designed to resist unbalanced lateral forces from hydrostatic pressure when one gate is open and an adjacent gate is closed. The upstream seventeen feet of pier carries the unbalanced load as a cantilever mass from the weir mass. The top of the spillway gates is at elevation 635 feet. Each spillway gate has an individual fixed-type chain hoist; the spillway gates are operated remotely from the Chickamauga facility, a unique operational feature within the TVA system. The spillway rises to a maximum seventy-nine feet from foundation to deck. The spillway profile is an ogee overfall section with the crest at elevation 595 feet. Below the crest, the downstream face of the weir slopes to a flat apron with a notched end sill and staggered baffle blocks. Earth embankments were constructed from impervious materials at the site. Their top level was set at elevation 655 feet, based on maximum anticipated flood level ten feet lower. The locks are accessed across the right (north) embankment; access to the powerhouse is via a berm on the downstream side of the left (south) embankment (see Photo 4). The damøs earth embankments account for 2,418.4 linear feet of the total length. The left embankment is 515.4ø in length and has a maximum height of sixty-seven feet. The right bank is 1,903 feet long and ninety-six feet high maximum. The dam includes a 100-foot non-overflow concrete section tying to the left embankment. Between the spillway and the powerhouse is a twenty-two-and-

<sup>&</sup>lt;sup>3</sup> Ibid., 1, 19.

<sup>&</sup>lt;sup>4</sup> United States Army Corps of Engineers website http://www.lrn.usace.army.mil/Locations/NavigationLocks/ TennesseeRiver/Nickajack.aspx accessed May 18, 2015.

<sup>&</sup>lt;sup>5</sup> Commonly, dam design includes a section that permits the overflow of water from the reservoir (the spillway) and other sections that do not allow the passage of water (non-overflow). Together, these sections contribute to the total length of the dam structure that impounds the reservoir. A gravity type dam is one constructed of concrete or stone and uses the sheer weight of the structure to resist the horizontal pressure of the water pushing against it. Gravity dams are designed in sections that are independently stable.

United States Department of the I	Interior	
National Park Service / National 1	Register of Historic Places	<b>Registration Form</b>
NPS Form 10-900	OMB No.	1024-0018

Nickajack Hydroelectric Project	Marion County, Tennessee
Name of Property	County and State

one-half-foot-long trashway at a maximum height of seventy-nine feet. The trashway has a single opening, fifteen feet wide.<sup>6</sup>

#### 2. Powerhouse, 1967 (Contributing Building)

The powerhouse is an indoor type superstructure of structural steel frame with exterior walls of concrete with embedded rock (*see Photo 5*). The rectangular-plan powerhouse has a flat roof of concrete and steel and a continuous band of horizontal, single-light, fixed clerestory windows. The building lacks any other fenestration. On the south elevation is a pedestrian door of solid metal with a corrugated metal canopy and a large bay that has an overhead-track, metal door. These entrance open into the main level of the powerhouse. There are four sub-structure floors below this level. The south elevation is divided into nine vertical sections, with the garage bay in the second and third sections from the southwest corner and the pedestrian entrance in the center section (*see Photo 6*). The west and east elevations each consist of five bays, divided by narrow, metal, louvered, vertical strips. Each bay consists of six vertical sections as on the façade. A gantry crane is located on the west elevation, and the deck of the crane has metal railing all around. Below the deck, the powerhouse substructure is visible on this elevation. It is constructed of smooth concrete and consists of twelve gates for discharge of water from the powerhouse intake (see *Photo 7*).

The intake is a reinforced concrete structure divided into four blocks, seventy-eight feet long by forty-three feet wide, connecting with the unit blocks to become gravity-type structures forming an integral part of the dam. In addition to forming the waterways, the intake provides space for the generator leads and electrical equipment. The waterways for each turbine include three openings, seventeen feet, eight inches wide; their height varies from forty-three-and-one-half feet at the entrance to thirty-seven-and-one-half feet at the slot gate to thirty-three-and-one-half feet at the downstream end. The thirty-ton capacity gantry crane from Hales Bar Dam was installed at Nickajack to handle the intake gates. On one leg of the gantry crane is a ten-ton capacity job crane to handle stoplogs and trashracks.<sup>7</sup>

The north elevation is divided into nine vertical sections and has metal lettering spelling, NICKAJACK. On this elevation, the substructure of the powerhouse is visible. These lower levels are construction of smooth concrete (see Photo 8).. Adjacent to the powerhouse on this elevation is the dam spillway to the north. At the east end of the north elevation is an entrance with a single-light glass and metal door flanked by fixed single-light sidelight. The name NICKAJACK also appear in aluminum letters beside the entrance (see Photo 9). This entrance is accessed from the deck of the gantry on the east elevation by descending stairs with metal railing and a concrete wall surrounding the small landing at the entrance. The east elevation deck has metal railing all around the crane deck (see Photo 10).

The northern entrance accesses an interior, small balcony with metal stairs descending to the floor of the generator room. The southern entrances access the interior of the powerhouse on a mezzanine that overlooks the open-plan generator room (see Photos 11 and 12). The mezzanine is the main floor level and has employee facilities including a restroom with an original solid metal door with louvers, original marble stalls and glazed tile floor (see Photo 13). Because the Nickajack project is remotely operated from Chickamauga, the site has minimal employee facilities in the powerhouse. The mezzanine and generator room floor have original glazed tiles, and the interior walls are exposed structural steel and concrete panels (see Photo 14). The powerhouse is equipped with an overhead 240-ton capacity bridge crane, supported by steel frames (see Photo 15).

-

<sup>&</sup>lt;sup>6</sup> Ibid., 19, 32, 37, 40, 47, 51, 56.

<sup>&</sup>lt;sup>7</sup> Ibid, 65.

United States Department of the Inte	erior
National Park Service / National Reg	gister of Historic Places Registration Form
NPS Form 10-900	OMB No. 1024-0018

Nickajack Hydroelectric Project	Marion County, Tennessee
Name of Property	County and State

The powerhouse has four (4) 24,300-kw turbines, two purchased new and two relocated from Hales Bar Dam, which was constructed by private enterprise in 1913 and acquired by TVA in 1939. The relocated units (1 and 2) consist of Kaplan turbines rated at 34,000HP at thirty-six-foot net head and 69.2 revolutions per minute and vertical shaft generators with a normal rating of 27,000 kva or 24,000kw at 0.9 pf. Units 3 and 4 have fixedblade turbines rated at 33,600HP at thirty-three-foot net head and seventy-five revolutions per minute and generators similar to units 1 and 2. Each of the four units discharges 9800 cubic feet per second at rated head and capacity. Selection of capacity power was determined by the limited storage capacity of Nickajack Reservoir and the proximity of the facility to Chickamauga and Guntersville facilities, operating generally in tandem. Unit 1 is located at the south end of the generator room, and unit 4, at the north end, where a metal staircase leads up to the northern entrance balcony (see Photo 16).9

One level below the generator room floor is the machine shop (see Photo 17) and pipe corridor. It is on this level that the turbine pits can be accessed via descending metal staircases (see Photo 18) The floor below the machine ship and pipe corridor contains the air tank storage room and the tunnel to the switchyard.

## 3. Switchyard, 1967 (Contributing Structure)

The switchyard is located on a filled area of the left floodplain downstream from the left embankment (see Photo 19). On opening of the facility, the switchyard had a fenced area of 205 feet by 344 feet, with additional grading for future expansion. The initial installation consisted of a five-bay 161-kv switching structure, two (2) 13.8/161-kv single-phase main transformer banks, and equipment for three 161-kv transmission lines. 10 The switchyard steel-frame equipment rests on a gravel and earth surface.

#### 4. Switchyard, Concrete Building, ca. 2010 (Non-Contributing Building)

At the switchyard is a 1993 one-story building with a flat roof and split-face concrete block walls. At the roofline is a course of tile. The building has a solid metal door on the south elevation and a large, metal, louvered vent on the east elevation (see Photo 20).

# 5. Switchyard, Metal Building, ca. 1990 (Non-Contributing Building)

At the switchyard is a 2010 pre-fabricated metal building with corrugated vertical metal siding and a gable-front roof of metal. The main (east) façade has a large bay opening with an overhead-track metal door. The north elevation has two solid metal pedestrian doors.

#### 6. Navigational Locks, 1967 (Contributing Structure)

The navigational locks are located close to the right (north) bank of the river at a right angle to the axis of the dam. The auxiliary lock has a chamber 110 feet wide and 600 feet long (see Photo 21). It has a normal lift of forty-one feet. The main lock measures 110 feet by 800 feet. The locks consist of concrete walls and have metal railing on the deck. TVA was responsible for the layout and design of the navigational locks, in consultation with the U.S. Army Corps of Engineers. The top of the lock chamber wall is at an elevation of 645 feet with the chamber floor is at an elevation of 579 feet. The upper lock gate consists of two structural steel leaves. When the gate is closed, the leaves form a three-hinged arch for support of the water load. Each gate leaf measures sixty-one feet, nine-and-seven-eighths inches wide by twenty-one feet, one inch in height and is framed horizontally with a skin plate on the upstream face. The lower lock gate consists of two structural steel leaves

<sup>&</sup>lt;sup>8</sup> Ibid., 64, 81, 89.

<sup>&</sup>lt;sup>9</sup> Ibid., 64, 71

United States Department of the Inte	erior
National Park Service / National Reg	gister of Historic Places Registration Form
NPS Form 10-900	OMB No. 1024-0018

Nickajack Hydroelectric Project	Marion County, Tennessee
Name of Property	County and State

with each gate leaf measuring sixty-one feet, nine-and-seven-eighths inches wide by fifty-eight feet, three inches in height and also has a skin plate of low-alloy steel on the upstream side. The machinery for opening and closing the lock gates consists of four units, one for each leaf of the two gates. When opening gates, the control of each motor operates at eighty-five percent of the leaf travel, then a limit switch applies brakes to slow the gate movement before the motor is restarted to low speed; this process avoids jerking the gate and machinery. When closing the gates, the control of each motor operates at fifteen percent of the leaf travel, then a limit switch shifts the motor to high speed. The opening and closing time is approximately two-and-one-half minutes. For filling and emptying the chamber there are culverts measuring fourteen feet high by twelve feet wide, with floors at elevation 575 feet. Segmental valves in the culverts control the flow of water.<sup>11</sup>

# 7. Lock Control Building 1, 1967 (Contributing Building)

At the east end of the lock is a small, one-story control building with a flat roof and concrete foundation. The walls are brick on the lower half with fixed, metal-frame windows above. There is a single-light glass and metal door both the east and west elevations. There is a sliding-track window next to each door. On the north elevation, there is an original water fountain fixture (*see Photo 22*).

# 8. Lock Control Building, 2 1967 (Contributing Building)

At the west end of the lock is a one-story control building with a flat roof and concrete foundation. The walls are brick on the lower half with fixed, metal-frame windows above. There is a single-light glass and metal door both the east and west elevations. There is a sliding-track window next to each door. On the north elevation, there is an original water fountain fixture.

#### 9. Lock Operation Building, 1967 (Contributing Building)

The original lock operation building is one-story and has a hip roof of standing-seam metal installed ca. 2000 (see Photo 23). The rectangular-plan building has exterior walls of textured concrete and rectangular, fixed windows with metal panels above and below. The façade (south) has two original single-light glass and metal doors, each with a panel above. To the outside of each door is a fixed, single-light window, each with a panel above and below. On the east elevation there are two similar windows with similar panels. The west elevation is the same as the east elevation. The north elevation has three similar windows with similar panels. The interior has original terrazzo floors and glazed tile walls. The interior has an office space and conference room, as well as storage closets The interior door to the conference room is single-light glass and metal design with a louvered panel (see Photo 24).

# 10. Lock Visitor Building, 1967 (Contributing Building)

This is a one-story building of concrete construction. Its façade (south) has a single-light glass and aluminum door flanked by paired, full-height, vertical fixed, single-light windows. The upper façade has a wide concrete course above the entrance that is cantilevered over the exterior walls. Along the roofline is a metal railing (see Photo 25). The flat roof of the building has a concrete surface that originally served as a viewing platform for visitors. The other elevations are concrete walls with no fenestration. The interior consists mainly of an open room with plaster walls, linoleum tile floors, and dropped acoustical tile ceilings (see Photo 26). On the interior west wall is an enclosed space with a solid metal door, not accessible to visitors. The plaza area has aggregate concrete walkways and square curb display boxes featuring artistic displays of engineering equipment (see Photo 27). There are wayside exhibits with interpretive material about TVA multi-purpose mission.

\_

<sup>&</sup>lt;sup>11</sup> Ibid, 121-23.

Nickajack Hydroelectric Project	Marion County, Tennessee
Name of Property	County and State

#### 11. Lock Maintenance Building, 1985 (Non-Contributing Building)

This is a one-story building of split-faced concrete block and a flat roof. The three garage bays have overhead-track doors with horizontal metal panels. Above the bays, the upper walls have vertical concrete panels. The façade (east) has four bays, three with garage doors, and one with a recessed pedestrian entrance, which has a solid metal door with structural glass blocks flanking and above the entrance (*see Photo 28*). The south elevation has a central, recessed entrance. To either side, there are banks of structural glass blocks. The west elevation has no openings.

#### Maintenance Base – 3 resources

### 12. Maintenance Office/Garage Building, 1985 (Non-Contributing Building)

The maintenance office/garage building is one-story in height with a flat roof with metal coping and exterior walls of vertical, grooved concrete panels. The main façade (north) has a projecting metal canopy supported by steel brackets. The building has a standing seam metal, flat roof. On the east and south elevations are pedestrian entrances with projecting side walls. On the west elevation are three garage bays and a loading dock bay with overhead metal track doors (*see Photo 29*).

#### 13. Storage Building, 1985 (Non-Contributing Building)

This is a small, concrete block storage building with a steel door (see Photo 30).

### 14. Hazardous Materials Storage Shed, 1985 (Non-Contributing Structure)

This is an open-air hazardous material storage shed with a flat roof and walls of concrete and chain link metal gates.

#### 15. Restroom 1, 1970 (Non-Contributing Building)

West of the powerhouse, this is a one-story building of split-faced concrete block, a poured concrete foundation, and a flat roof with metal coping and a vinyl beltcourse below the roofline. The building consists of two asymmetrical sections connected by a covered breezeway. The restroom section has two entrances, each with a solid steel door and a single-light transom above. The entrances are in the inner breezeway (east) wall of the west section, under the breezeway. On the east section rear (south) elevation there are double doors of solid metal (see Photo 31).

# 16. Restroom 2, 1970 (Non-Contributing Building)

This is a one-story building of split-faced concrete block and a hip roof of crimped metal. The main façade has a concrete exterior wall and two entrances, each with a solid steel door.

# 17. Picnic Area 1, 1967 (Contributing Site)

The Nickajack project was designed with picnic and recreational areas for visitors. West of the powerhouse is an original picnic area. It also has five original, concrete picnic benches and tables on concrete pads (*see Photo 32*).

#### 18. Picnic Area 2, 1984 (Non-Contributing Site)

A second picnic area was developed in 1984 located northeast of the locks. There are concrete picnic tables and benches along the reservoir. There is also a boat launch ramp adjacent to the picnic area (*see Photo 33*).

United States Department of the	Interior
National Park Service / National	Register of Historic Places Registration Form
NPS Form 10-900	OMB No. 1024-0018

Nickajack Hydroelectric Project	Marion County, Tennessee
Name of Property	County and State

19. TVA Road Bridge, 1967 (Contributing Structure)
To access the Nickajack Dam site, the TVA constructed a concrete and steel bridge across the CSX Railroad line. This bridge is just off State Route 156 and is a concrete deck girder bridge supported by two concrete abutments. It has a concrete and asphalt deck and metal hand railing (see Photo 34).

Nickajack Hydroelectric Project	Marion County, Tennessee
Name of Property	County and State
8. Statement of Significance	
Applicable National Register Criteria	Areas of Significance
(Mark "x" in one or more boxes for the criteria	ARCHITECTURE
qualifying the property for National Register	CONSERVATION
listing.)	ENGINEERING
A Dropoutry is associated with avants that have	RECREATION
A Property is associated with events that have made a significant contribution to the broad	SOCIAL HISTORY TRANSPORTATION
patterns of our history.	TRANSPORTATION
B Property is associated with the lives of	Period of Significance
persons significant in our past.	9
	1964-1979
X C Property embodies the distinctive	
characteristics	
of a type, period, or method of construction	Significant Dates
or represents the work of a master, or	1964-1967
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	Significant Person
history.	
	N/A
Criteria Considerations N/A	IV/A
(Mark "x" in all the boxes that apply.)  Property is:	
1 topolity io.	Cultural Affiliation
A Owned by a religious institution or used for	NT/A
religious purposes.	N/A
B removed from its original location.	
C a birthplace or grave.	Architect/Builder
o a charpanet of grave.	Architect: Tennessee Valley Authority; U.S.
D a cemetery.	Army Corps of Engineers
E a reconstructed building, object, or structure.	Builder: Tennessee Valley Authority
F a commemorative property.	
less than 50 years old or achieving	
<b>X</b> G significance within the past 50 years.	

Nickajack Hydroelectric Project	Marion County, Tennessee
Name of Property	County and State

#### **Statement of Significance Summary Paragraph**

The Nickajack Hydroelectric Project meets National Register Criteria A and C for its historical and engineering significance at the state and local levels as an integral part of the Tennessee Valley Authority Hydroelectric Project. Its period of significance is from 1964, when the project commenced, to 1979, the closing date for TVA projects on the Tennessee River and its tributaries. The Nickajack Hydroelectric Project is significant in the improvement of navigation of the Tennessee River, expansion of energy for manufacturing, and improvement of quality of life through transmission of electricity, control of seasonal flooding, and creation of public recreational facilities. The Nickajack Hydroelectric Project was one of twenty-five dam sites constructed by the Tennessee Valley Authority (TVA) for the purpose of generating electrical power from, improving navigation of, and controlling seasonal flooding of the river system of the region. The main objective of the 1933 Tennessee Valley Authority Act was the creation of a continuously navigable nine-foot channel from the mouth of the Tennessee River to Knoxville, as well as flood control, power generation, and public benefits.

The Nickajack Hydroelectric Project is significant at the local and state levels. For conservation, the project is significant for it role in flood control and prevention of erosion of agricultural lands. The project significance in engineering is reflected in TVAs overall plan for an integrated system of river management through site-specific designs tested on scaled models. The project is significant in recreation because of the extensive outdoor opportunities it fostered. Nickajack was significant in social history for its role in the rise of integrated land use planning. Lastly, it is significant in transportation for contributing to the 652-mile navigable waterway on the Tennessee River, contributing to increased commercial traffic and industry in the region. The Nickajack project also meets criteria consideration G for exceptional significance as part of TVAs overall construction and engineering projects which extended until 1979. The Nickajack Hydroelectric Project meets the registration requirements set forth in the Multiple Property Documentation Form, õHistorical Resources of the Tennessee Valley Authority Hydroelectric Project.ö

#### **Narrative Statement of Significance**

The Tennessee Valley Authority was created under President Roosevelt& New Deal program as part of his õFirst One Hundred Days.ö Roosevelt envisioned õa corporation clothed with the power of government but possessed of the flexibility and initiative of a private enterprise.ö To this end, Congress passed the TVA Act on May 18, 1933. The multi-purpose legislation sought to improve navigation and flood control of the Tennessee River, spur agricultural and industrial development in the Tennessee Valley, and provide for national defense via government facilities in the proximity of Muscle Shoals, Alabama (Sec. 1). The act authorized the TVA corporation to acquire real estate for the construction of dams, reservoirs, power houses, transmission lines, or navigations projects at any point along the Tennessee River and its tributaries (Sec. 4i); establish experimental plants for the manufacture of nitrogen and fertilizers to sell at cost to the United States for military and agricultural purposes (Sec. 5 h and j); to sell surplus power generated at its facilities to accessible municipalities, counties, and states (Sec. 10). The Act also authorized the survey of the Tennessee basin for future conservation, use, and development of natural resources for the benefit of citizens (Sec. 22).

<sup>12</sup> õHistory of the Tennessee Valley Authority,ö at TVA website <a href="http://www.policyalmanac.org/economic/archive/">http://www.policyalmanac.org/economic/archive/</a> tva history.shtml accessed April 16, 2015.

<sup>&</sup>lt;sup>13</sup> Tennessee Valley Authority Act of 1933, at TVA website <a href="http://www.policyalmanac.org/economic/archive/tva\_history.shtml">http://www.policyalmanac.org/economic/archive/tva\_history.shtml</a>, accessed April 16, 2015.

Nickajack Hydroelectric Project	Marion County, Tennessee
Name of Property	County and State

In 1913, the Hales Bar Dam was completed by a private company at mile 431 on the Tennessee River in Marion County. TVA acquired that facility in 1939 as part of the holdings of the Tennessee Electric Power Company, knowing there were deficiencies in the dam that required attention. The TVA undertook corrections to address a persistent foundation leak at Hales Bar Dam in 1940-1943. These repairs seemed effective, at least for a while. Several years later, boils began to appear below the Hales Bar Dam, and the leakage was measured at 2,000 cubic feet per second. TVA undertook another round of repairs in 1962, but the results were unsatisfactory. Concurrently, increased traffic volume on the Tennessee River during the 1950s warranted studies of newer and larger navigational locks on the river. The TVA determined the construction of a new dam at Nickajack, where sound geological conditions existed for a foundation platform, would prove a more prudent course than revamping the Hales Bar facility. In 1963, of The Nickajack Projecto planning report identified the scope of the new facility. In April of that year, the Director of the Bureau of the Budget agreed with TVA@s proposal to replace the Hales Bar Dam with a new one. For fiscal year 1964, the \$4.3 million already allocated for Hales Bar leakage abatement program would instead be transferred to the Nickajack project.<sup>14</sup>

The TVA Board of Directors authorized construction of the Nickajack project on January 9, 1964. Construction commenced April 1 of that year and continued uninterrupted for three and one-half years. TVA acquired 6,222 acres of land for the Nickajack Reservoir, purchasing 118 tracts. Only 500 acres of this area was woodland, with the remainder previously cleared and in agricultural use. Eighty-two families were displaced for the project, of which forty-three were property owners, seventeen were tenants (with some land responsibilities), and twenty-two were renters. Ten of the families operated commercial farms. Due to this small number, TVA did not offer special educational assistance as was typical of previous project relocation processes. The project also caused the displacement of two service stations, two restaurants, two beer taverns, an eight-room motel, and a commercial boat dock.<sup>15</sup>

Total land costs for the project amounted to \$2,837,167, which included acquisition by fee flowage easements, and highway and railroad relocation. The project also required the relocation of sixty graves. Direct construction costs, such as labor, materials, equipment, transportation, totaled \$55,586,662. Indirect construction costs, including accounting, timekeeping, office supplies, and police service, came to \$3,034,180. Design and engineering expenditures, which included salaries and expenses of executive engineers, technicians, and inspectors, amounted to \$6,462,502. These amounts plus other categorized costs brought the total project to \$73,164,258.<sup>16</sup>

In the course of the project, 12.16 miles of local, state and federal highways had to be relocated. Five miles of the Louisville & Nashville (L&N) Railroad was relocated on higher ground, and seven miles of high-voltage transmission lines had to be relocated, as well as telephone and telegraph lines. Four new bridges had to be constructed, one a railroad bridge and one on US Highway 41, the major thoroughfare until the completion of Interstate 24, across the Tennessee River. In the re-building of affected roads, the TVA replaced existing facilities using equivalent standards, with costs of improvements or upgraded provided by the requesting party (i.e., state, city, or county). TVA agreed to transfer the right of way across Nickajack Reservoir land for the construction of Interstate 24. The TVA encouraged the State of Tennessee to construct an access road from I-24 to the dam, to accommodate the visitation TVA anticipated. The access road also connected with a county

<sup>&</sup>lt;sup>14</sup> Tennessee Valley Authority, *The Nickajack Project*, 1, 41, 3.

<sup>&</sup>lt;sup>15</sup> Ibid., 287.

<sup>16</sup> Ibid., 300, 314.

United States Department of the Inte	erior
National Park Service / National Reg	gister of Historic Places Registration Form
NPS Form 10-900	OMB No. 1024-0018

Nickajack Hydroelectric Project	Marion County, Tennessee
Name of Property	County and State

highway through a large area with potential residential development.<sup>17</sup> The road and bridge improvements contributed to an upgrade in local infrastructure, benefitting commerce and quality of life for area residents.

Dam closure occurred December 14, 1967, and the last of four 24,300-kw generating units was placed in operation on April 30, 1968. The construction of the powerhouse reflected TVA¢s emphasis on functionality and it was designed as a simple steel and concrete rectangular box to house the generators and turbines. The exterior is of concrete panels erected on top of a steel structure. There is no fenestration beyond the tall garage bay and pedestrian doors on the south elevation. Due to the simplicity of this design, the powerhouse lacks architectural significance. Since 1968, the Nickajack Hydroelectric Project has been an integral part of TVA¢s operations for flood control, navigation and electrical power generation.

#### SIGNIFICANCE IN CONSERVATION

A 1965 planning report by TVA, Marion County, and the Tennessee State Planning Commission conceded that previous federal dam and reservoir project did not fulfill a complete contribution to resource development, mainly due to the absence of local and state involvement. The report pointed out the need for local planners to participate during the preliminary stages, in the areas of wildlife conservation, industry, commerce, recreation, and shoreline development.<sup>19</sup>

By the early 1960s, TVA¢s efforts of conservation were apparent, promoting growth, development, and stability of the region. Since the 1930s, when 75-100% of topsoil had eroded from some 11 million U.S. acres due to flooding and agricultural use, TVA had worked with state agencies in the conservation of farm and forest lands across the Tennessee Valley. In this area of 21.6 million acres, fifty-nine percent of the land was in forest in 1970, and eighty percent of those forest lands were privately owned. TVA¢s efforts resulted in the reforestation of 1.1 million acres. Between the late 1940s and 1970, total value of forest products manufactured in the Valley increased from \$180 million to \$690 million annually. The potential value was an estimated \$2 billion at that time, and forest industries then employed 55,000 Valley workers.<sup>20</sup>

The fish population in the Hales Bar Reservoir was not representative of the mainstream reservoirs in that its 6,400-acre narrow gorge was not conducive to game fish. The completion of the Nickajack project added 3,800 acres to the reservoir, including shallow, wide coves and other protected areas. The new parameters had the potential to foster an increase in game fish within three or four years, depending on other factors including control of aquatic weeds, carp infestation, and pollution from Chattanooga.<sup>21</sup>

TVA assumed land management responsibilities from the first acquisition of land for a project. The agency planned for and encouraged productive secondary use of idle lands within its reservations. At the Nickajack Reservoir, nineteen tracts were determined suitable for agricultural use. These tracts were rented through a competitive bidding process resulting in the issue of fifteen licenses for agriculture use of 711 total acres. In other open expanses, TVA planted seedlings to encourage wildlife and built nature trails for public enjoyment.<sup>22</sup>

<sup>&</sup>lt;sup>17</sup> Ibid., 140-43.

<sup>&</sup>lt;sup>18</sup> Ibid., 3.

<sup>&</sup>lt;sup>19</sup> Ibid.,, 41, 3.

<sup>&</sup>lt;sup>20</sup> Ibid., 5.

<sup>&</sup>lt;sup>21</sup> Ibid., 311.

<sup>&</sup>lt;sup>22</sup> Ibid., 312.

Nickajack Hydroelectric Project	Marion County, Tennessee
Name of Property	County and State

#### SIGNIFICANCE IN ENGINEERING

The Nickajack Hydroelectric Project is an integral part of the overall engineering design of the TVA system. Nickajack Damøs releases connect to the upper end of the Guntersville Reservoir downstream and provide power to the Guntersville Hydroelectric Project. Above Nickajack Dam, the Nickajack Reservoir extends upstream to the tailwaters of Chickamauga Dam. The releases of Chickamauga Dam provide power to the Guntersville Hydroelectric Project.

Site engineering for the Nickajack Project was primarily performed by TVA¢s Maps and Survey Branch, Division of Water Control Planning. Survey of the site began in March of 1963 with foundation layout and establishing horizontal and vertical control by plotting contour lines for topographical mapping of the reservoir. This preliminary process also included mapping of railroad and highway relocation, shoreline improvement, navigation clearance, land acquisition boundaries, and cave survey. Designing the river channel for re-routing navigation during construction and through the new locks required sounding and probings between river mile 423 and 425. For the dam site, 209 spots were flagged for core drilling and 114 for soil sampling.<sup>23</sup>

The preliminary process illuminated the need for better mapping of the area generally, and 1962 aerial photography was obtained of the project area. The Nickajack project established two firsts in TVA mapping: this was the first project to be planned with the assistance of 100 percent coverage of two-foot interval stereo-compiled photography; secondly, no previous project had precision large scale mapping from the beginning of the project. These two types of mapping resources resulted in cost benefits to many aspects of the project, from land acquisition and boundary survey to cemetery, railroad and highway relocation. For land acquisition, Elevation 634-foot contour (the upper limit of normal pool elevation) and 640-foot contour (the acquisition line) maps were stereo-compiled and traced on property maps, cemetery plats, exploratory cave maps, river-crossing drawings, and vector control maps.<sup>24</sup>

Hydraulic features of the dam were tested in models at the Norris lab. These tested considered site lay-out of structures, the effects of the spillway apron, turbine intake gates, objectionable vortices, wave heights, and velocities, and spillway flow conditions. The test model simulated a two-mile stretch of river. The horizontal scale of 1:150 and a vertical scale of 1:90 resulted in a relatively low distortion factor of 1:7. A radio-controlled model tugboat was utilized in the investigation of navigation issues. Flows of spillway discharges at 40,000, 90,000, 140,000, and 190,000 cubic feet per second (cfs) were simulated, including 40,000 cfs discharge from the powerhouse. Headwater was kept at a constant elevation of 634, while the tailwater was varied. These tests led to a relocation of key features of the project, with the spillway in mid-channel, the powerhouse at the left bank, and the locks at the right bank. This configuration produced the best results upon navigation through the locks.<sup>25</sup>

#### SIGNIFICANCE IN RECREATION

Following World War II, as middle class American households gained wealth and indoor electricity, a byproduct was outdoor leisure time. TVA¢s contribution to recreational activities is noteworthy. The agency¢s hydroelectric projects¢ reservoirs attracted outdoor enthusiasts who enjoyed fishing, boating, camping, and

14

<sup>&</sup>lt;sup>23</sup> Ibid., 275

<sup>&</sup>lt;sup>24</sup> Ibid., 278-79, 282-83.

<sup>&</sup>lt;sup>25</sup> Ibid., 407.

Nickajack Hydroelectric Project	Marion County, Tennessee
Name of Property	County and State

hiking in the environs the TVA helped create, re-forest, and conserve. The parks and refuges engendered by the TVA\(\psi\) hydroelectric projects build upon the agency\(\psi\) previous efforts of conservation through re-forestation and soil improvement.

TVA anticipated heavy public visitation to the Nickajack facility, due to its proximity to Chattanooga and Interstate 24. The project was therefore designed with fishing facilities that included a parking lot, menos restrooms, a fishing berm, boat ramps, and pier, located on the south bank. A visitor building on the north bank was constructed to provide a viewing platform of the locks and dam as well as information about the TVA system. The building included menøs and womenøs restrooms and was constructed of concrete.<sup>26</sup>

The recreational potential of the Nickajack Reservoir depended on water quality, as well as controlling the spread of Hales Bar Reservoirøs milfoil infestation. Recreational watercraft numbers on Nickajack Reservoir declined between 1968 and 1969, after first opening, from 1,465 to 1,128. Pollution had previously deterred use of the Hale Bar Reservoir. Still, TVA worked with state and local officials to encourage recreational use at Nickajack. In the early planning stages, TVA identified four prime boat-launching points, constructing concrete ramps. These, however, were closed from public use until water quality was improved. The agency also built a 200-foot concrete fishing pier at the dam, connecting to the south bank with footbridges and an accessibility ramp.<sup>27</sup>

#### SIGNIFICANCE IN SOCIAL HISTORY

The Nickajack project demonstrated new attention to integrated land use planning not addressed in previous TVA hydroelectric projects. A 1965 planning report by TVA, Marion County, and the Tennessee State Planning Commission conceded that previous federal dam and reservoir project did not fulfill a complete contribution to resource development, mainly due to the absence of local and state involvement. The report pointed out the need for local planners to participate during the preliminary stages, in the areas of wildlife conservation, industry, commerce, recreation, and shoreline development.<sup>28</sup>

After three decades of building it hydroelectric facilities, TVA planners came to instruct local officials on the multi-faceted impact of the projects in the lives of area residents. The creation of reservoirs provided hundreds of miles of shoreline for private development and recreation. Dam sites were visitor destinations; TVA began designing visitor facilities that included accessibility features, long before federal legislation was enacted. During construction of the Nickajack project, new safety standards were enacted.

The Nickajack project was the second TVA project for which the planning staff of reservoir-affected cities and counties, as well as the State Planning Commission, participated in developing a comprehensive land use plan. On the heels of the Melton Hill project, the Nickajack project assessed population patterns, regional resources, and land use needs to maximize and create awareness of the projector benefits. The planning process addressed the projector potential impact on improving industry, wildlife, recreation, commerce, residential development, and open lands. The TVA engineers also heeded preservation concerns of Nickajack Cave for its potential historical and archaeological significance. Staff members at the University of Tennessee® Department of Archaeology conducted twenty-three weeks of survey and excavation at nineteen sites in the Nickajack

<sup>&</sup>lt;sup>26</sup> Ibid., 137-38.

<sup>&</sup>lt;sup>27</sup> Ibid., 306, 312.

<sup>&</sup>lt;sup>28</sup> Ibid., 3, 41, 283-84.

Nickajack Hydroelectric Project	Marion County, Tennessee
Name of Property	County and State

Reservoir. The National Park Service and the Tennessee Department of Highways provided funding of these Woodland Period sites.<sup>29</sup>

The Nickajack project employed union labor from nineteen counties in Tennessee, Alabama, and Georgia. Selection for employment was based on merit and efficiency and the requirements of the Veteransø Preference Act. A high percentage of former TVA employees were selected. African Americans accounted for 8.6% of the labor force for the project. A pre-employment physical exam was mandatory, and health services were available to employees on the first day of construction. New employees were required to received training and instruction in the principal features of the safety program, including attending weekly work crew safety meetings. Employment for the Nickajack project peaked in April of 1966 at 1,463 workers, in two, and for a time, three shifts.<sup>30</sup>

#### SIGNIFICANCE IN TRANSPORTATION

During construction at Nickajack, the river remained open for transportation via a diversion channel. It was in use for two years and was closed on March 14, 1967, at which time river traffic began using the partially completed 800-foot main lock. The 600-foot auxiliary lock was completed in December, coinciding with the filling of the reservoir. During the entire Nickajack construction project, river traffic was interrupted for just thirteen days. By March 11, 1968, a 200-foot section of the Hales Bar Dam was removed; the opening was marked with buoys directing traffic through the opening rather than the defunct facility locks. During 1968, 1,041 tow boats and 3,628 barges with an estimated 1.7 million tons of traffic passed through Nickajack locks; in 1969, there were 974 towboats and 3,906 barges with an estimated 1.9 million tons of traffic. Commodities through the lock included grain from the Midwest; wood chips and pulpwood from northern Alabama to the Bowaters newsprint plant at Calhoun, Tennessee, as well as outgoing newsprint from the plant to thirteen states; soybean oil to New Orleans for foreign markets; salt and petroleum products from the Gulf coast; steel products from Pittsburg; and nuclear reactor equipment to domestic and foreign destinations.<sup>31</sup>

Increased traffic volume on the Tennessee River during the 1950s led TVA to study new and larger navigational locks at its dams. TVA foresaw the economic growth of the region and its reliance on river transportation, allowing room for future installation of larger locks at several of its dams, including Wheeler, Fort Loudoun, Pickwick Landing, and Guntersville Dams. A second lock was added at Wheeler Dam in 1963, at Guntersville in 1965, and at Pickwick Landing in the late 1970s. The 1967 Nickajack Hydroelectric Project replaced the pre-TVA Hales Bar Dam and improved river navigation with the installation of two large locks, 600 and 800 feet in length.

Freight traffic on the Tennessee River reached a record 3.5 billion ton-miles in 1970, three years after the opening of the Nickajack facility. This volume is approximately 100 times the river traffic in 1933. Shippers using the river in 1970 saved \$51.4 million in transportation costs, a figure six times the costs of operating the waterway that year. Between 1933 and 1970, total savings to shippers was \$548 million, versus TVA\$\pi\$ \$141.2 million in operational costs during the same period. Investments in over 200 private waterfront facilities, terminals, and distribution facilities mounted to \$2 billion, most of that since 1945 when the navigational

16

<sup>&</sup>lt;sup>29</sup> Ibid., 283-84, 300.

<sup>&</sup>lt;sup>30</sup> Ibid., 193.

<sup>&</sup>lt;sup>31</sup> Ibid., 305.

Nickajack Hydroelectric Project	Marion County, Tennessee
Name of Property	County and State

channel was completed between Knoxville, Tennessee and Paducah, Kentucky. These sites employed some 38,000 in 1970, and an estimated equal number of jobs had been created in related services and trade.<sup>32</sup>

#### **SUMMARY**

The Nickajack Hydroelectric Project is one of twenty-five constructed by the Tennessee Valley Authority (TVA) for the purpose of generating electrical power from, improving navigation of, and controlling seasonal flooding of the river system of the region. The project brought construction jobs and later electricity to the region. During planning and construction, TVA provided technical assistance in local schools, municipal land use planning, road relocation and improvement, and shoreline development. While some individual families expressed a sense of loss in displacement from their homes, many relocated in neighboring communities with higher quality amenities. Business leaders in the area capitalized on the potential of the project to stimulate development and draw new industry. The Nickajack Reservoir is a popular recreational spot for camping, hiking, and especially game fishing, drawing tourism dollars to local economies.

The Nickajack Hydroelectric Project retains much of its integrity from its original design in the 1960s and later improvements in following decades. The dam, powerhouse, lock and lock control building have not been significantly altered and displays their original design in their exterior and interior detailing. The project continues to be an integral part of the TVA system. The Nickajack Hydroelectric Project meets the registration requirements set forth in the Multiple Property Documentation Form, õHistorical Resources of the Tennessee Valley Authority Hydroelectric Project,ö and this MPDF contains additional contextual information concerning TVA and its hydroelectric system.

<sup>&</sup>lt;sup>32</sup> Ibid., 5.

Nickajack Hydroelectric Project	Marion County, Tennessee
Name of Property	County and State

# 9. Major Bibliographic References

Callahan, North. TVA 6 Bridge Over Troubled Waters: A History of the Tennessee Valley Authority. Cranbury, NJ: A. S. Barnes and Co., Inc., 1980.

õEconomic Development.ö At TVA webpage <a href="http://www.tva.com/econdev/index.htm">http://www.tva.com/econdev/index.htm</a>. Accessed May 5, 2015.

Ezzell, Patricia Bernard. õTennessee Valley Authority in Alabama (TVA).ö Available at Encyclopedia of Alabama website <a href="http://www.encyclopediaofalabama.org/article/h-2380">http://www.encyclopediaofalabama.org/article/h-2380</a>. Accessed April 22, 2015.

õNickajack Reservoir,ö at webpage <a href="http://www.tva.gov/sites/nickajack.htm">http://www.tva.gov/sites/nickajack.htm</a> accessed July 21, 2015.

õHistory of the Tennessee Valley Authority.ö At TVA website <a href="http://www.policyalmanac.org/economic/archive/tva">http://www.policyalmanac.org/economic/archive/tva</a> history.shtml. Accessed April 16, 2015.

Tennessee Valley Authority Act of 1933, at TVA website <a href="http://www.policyalmanac.org/economic/archive/tva\_history.shtml">http://www.policyalmanac.org/economic/archive/tva\_history.shtml</a>. Accessed April 16, 2015.

Tennessee Valley Authority. *Design of TVA Projects Technical Report No. 24, Vol. 1, Civil and Structural Design.* Washington, D.C.: U.S. Government Printing Office, 1952.

\_\_\_\_\_. The Nickajack Project: A Comprehensive Report on the Planning, Design,
Construction, Initial Operations, and Costs, Technical Report No. 16. Washington, D.C.:
U.S. Government Printing Office, 1972.

õNickajack Navigation Lock.ö At United States Army Corps of Engineers website.

<a href="http://www.lrn.usace.army.mil/Locations/NavigationLocks/TennesseeRiver/Nickajack.aspx">http://www.lrn.usace.army.mil/Locations/NavigationLocks/TennesseeRiver/Nickajack.aspx</a>. Accessed May 18, 2015.

Wheeler, W. Bruce. õTennessee Valley Authority. Ö At webpage Tennessee Encyclopedia of History and Culture. Accessed May 29, 2015.

Nickajack Hydroelectric Project	Marion County, Tennessee
Name of Property	County and State

Previous documentation on file (NPS):		Primary location of additional data	
preliminary determination of individual listing (36 CFR 67 has been requested)	X	State Historic Preservation Office	
previously listed in the National Register		Other State agency	
previously determined eligible by the National Register	X	Federal agency	
designated a National Historic Landmark		Local government	
recorded by Historic American Buildings Survey #		University	
recorded by Historic American Engineering Record #		Other	
recorded by Historic American Landscape Survey #	Name of repository: Tennessee Valley Authority Knoxville, TN		

Nickajack Hydroelectric Project

Name of Property

Marion County, Tennessee
County and State

# 10. Geographical Data

Acreage of Property <u>6 2,015 acres</u> USGS Quadrangle <u>Sequatchie 100 SE</u>

### Latitude/Longitude Coordinates

A. Latitude: 35.023125 Longitude: -85.642084

B. Latitude: 35.022894 Longitude: -85.592960

C. Latitude: 34.992445 Longitude: -85.642720

D. Latitude: 34.992330 Longitude: -85.593271

#### **Verbal Boundary Description**

The boundary for the Nickajack Hydroelectric Project is depicted as a dashed line on the accompanying USGS Quadrangle map and TVA site plan map. The National Register boundary on the west is consistent with the overall Nickajack reservation boundary on the south side of Guntersville Lake. At this point, the National Register boundary departs from the reservation boundary and crosses the lake in a northeasterly direction. On the north bank, the National Register boundary follows the curve of the shoreline to rejoin the reservation boundary on the north. The overlapping boundaries continue to the east, and then the National Register boundary departs from the reservation boundary at a right angle, continuing to the south and then southeast in order to exclude a fire-training center on the TVA reservation. The boundary then turns south along the east shoreline of a small inlet, encompassing original recreational sites and continues in a southerly direction across Nickajack Lake. The National Register boundary then turns west along Highway 156 (Shellmound Road) and dips to the south to encompass a recreational inlet, then turns west and north along the inlet@s shoreline, then continues west again until it rejoins the starting point along the reservation@s west boundary.

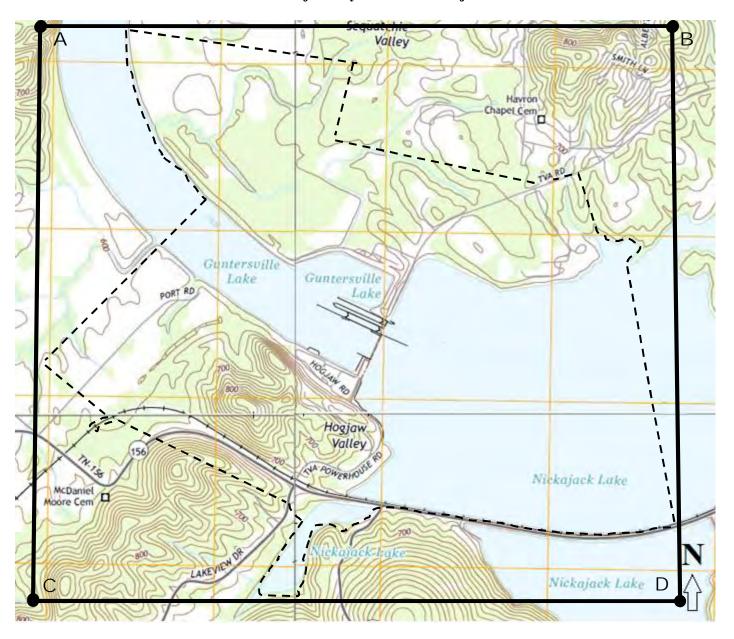
#### **Boundary Justification**

The boundary includes all facilities necessary for the operation of the hydroelectric project and/or associated with the mission of TVA of power generation, navigation, and public recreation. The boundary omits other TVA lands not directly associated with hydroelectric production.

Nickajack Hydroelectric Project	
Name of Property	

Marion County, Tennessee County and State

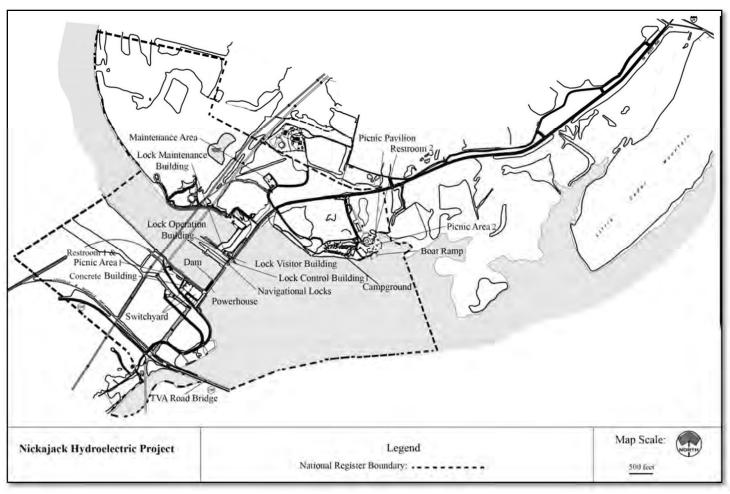
Sequatchie, TN, USGS Topographical Quadrangle depicting the National Register Boundary for Nickajack Hydroelectric Project



SCALE 1:24 000 KILOMETERS 0.5 500 0 METERS 1000 MILES 1000 2000 3000 7000 8000 10000 4000 5000 6000 9000

Nickajack Hydroelectric Project	
Name of Property	

Marion County, Tennessee
County and State



Site Plan and National Register Boundary for the Nickajack Hydroelectric Project (See 11 x 17" map for larger view)

Nickajack Hydroelectric Project		Marion County, Tenness		
Name of Property			County and State	
11. Form Prepare	d By			
Name	Andra Kowalczyk Martens; Phil Thomason			
Organization	Thomason and Associates			
Street & Number	P.O. Box 121225	Date	October 21, 2016	
City or Town	Nashville	Telephone	615-385-4960	
E-mail Thon	nason@bellsouth.net	State T	Zip Code 37212	

#### **Additional Documentation**

Submit the following items with the completed form:

- Maps: A USGS map or equivalent (7.5 or 15 minute series) indicating the property's location.
- **Sketch map** for historic districts and properties having large acreage or numerous resources. Key all photographs to map.
- **Photographs** (refer to Tennessee Historical Commission National Register *Photo Policy* for submittal of digital images and prints)
- Additional items: (additional supporting documentation including historic photographs, historic maps, etc. should be included on a Continuation Sheet following the photographic log and sketch maps)

Paperwork Reduction Act Statement: This information is being collected for applications to the National Register of Historic Places to nominate properties for listing or determine eligibility for listing, to list properties, and to amend existing listings. Response to this request is required to obtain a benefit in accordance with the National Historic Preservation Act, as amended (16 U.S.C.460 et seq.).

**Estimated Burden Statement**: Public reporting burden for this form is estimated to average 100 hours per response including time for reviewing instructions, gathering and maintaining data, and completing and reviewing the form. Direct comments regarding this burden estimate or any aspect of this form to the Office of Planning and Performance Management. U.S. Dept. of the Interior, 1849 C. Street, NW, Washington, DC.

Nickajack Hydroelectric Project

Name of Property

Marion County, Tennessee County and State

#### **PHOTOGRAPHS**

#### **Photo Log**

Name of Property: Nickajack Hydroelectric Project

City or Vicinity: Chattanooga

County: Marion State: TN

Photographer: Philip Thomason Date Photographed: May 20, 2015

Photo 1 of 34 West side of dam and powerhouse, view to southeast.

Photo 2 of 34 West side of dam and powerhouse, view to south.

Photo 3 of 34 Dam, powerhouse and locks, view to south.

Photo 4 of 34 South embankment, view to north.

Photo 5 of 34 Powerhouse, exterior wall surface detail.

Photo 6 of 34 Powerhouse, south elevation, view to north.

Photo 7 of 34 Powerhouse, west elevation.

Photo 8 of 34 Powerhouse, north elevation.

Photo 9 of 34 Powerhouse, entrance on north elevation.

Photo 10 of 34 Powerhouse, east elevation.

Photo 11 of 34 Powerhouse lobby area mezzanine.

Photo 12 of 34 Powerhouse interior from main entrance, view to northeast.

Photo 13 of 34 Powerhouse lobby restroom.

Photo 14 of 34 Overlooking powerhouse generators from metal staircase at northeast corner.

Photo 15 of 34 Powerhouse crane above generators.

Photo 16 of 34 Powerhouse generator room, Unit 4.

Nickajack Hydroelectric Project	Marion County, Tennessee
Name of Property	County and State

Photo 17 of 34 Powerhouse interior, machine shop.

Photo 18 of 34 Powerhouse interior, turbine pit.

Photo 19 of 34 Switchyard, view to north.

Photo 20 of 34 Switchyard concrete building, view to north.

Photo 21 of 34 Auxiliary lock, view to northwest.

Photo 22 of 34 Lock control building at east end of lock, view to north.

Photo 23 of 34 Lock operation building, southwest elevation, view to northeast.

Photo 24 of 34 Lock operation building, interior door.

Photo 25 of 34 Visitor building at locks, south elevation, view to north.

Photo 26 of 34 Visitor building at locks, interior.

Photo 27 of 34 Visitor plaza at locks, view to southwest.

Photo 28 of 34 Lock maintenance building, northeast elevation, view to southwest.

Photo 29 of 34 Maintenance office/garage building, northeast elevation, view to south.

Photo 30 of 34 Maintenance base, storage building and hazardous materials building, view to northwest.

Photo 31 of 34 Restrooms 1 southwest of powerhouse, view to northeast.

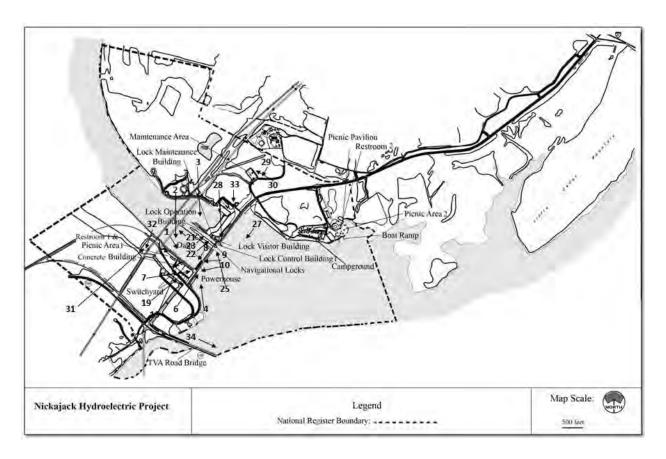
Photo 32 of 34 Picnic area west of powerhouse, view to west.

Photo 33 of 34 Picnic area to the north of locks, boat ramp, view to south.

Photo 34 of 34 TVA Road Bridge.

Nickajack Hydroelectric Project	
Name of Property	

Marion County, Tennessee
County and State

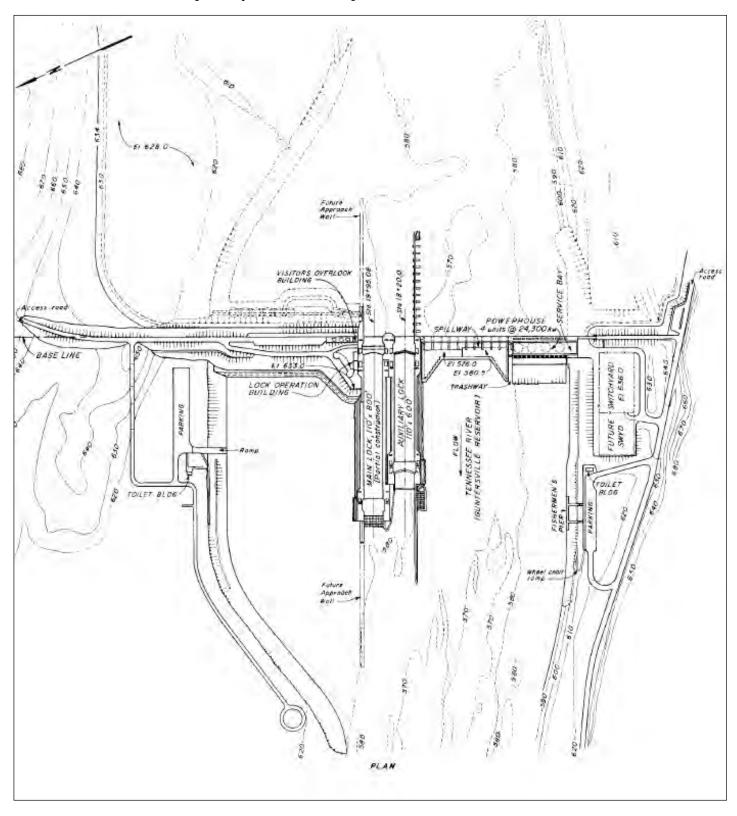


Nickajack Hydroelectric Project Photo Key Map (see 11 x 17" Photo Key Map)

Nickajack Hydroelectric Project	
Name of Property	

Marion County, Tennessee
County and State

# General Plan for the Nickajack Hydroelectric Project

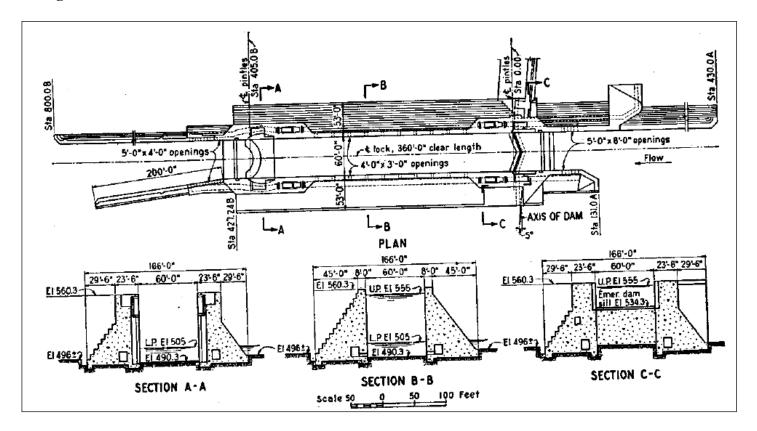


Nickajack Hydroelectric Project

Name of Property

Marion County, Tennessee
County and State

# **Navigation Lock Plan and Sections**

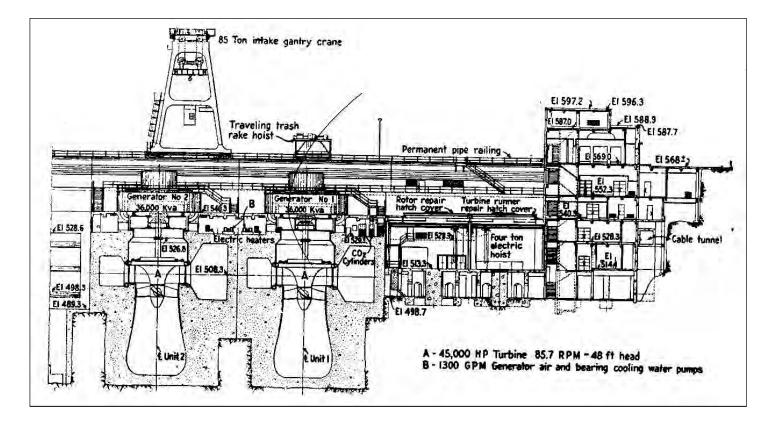


Nickajack Hydroelectric Project

Name of Property

Marion County, Tennessee
County and State

# **Powerhouse and Turbine Area Section**

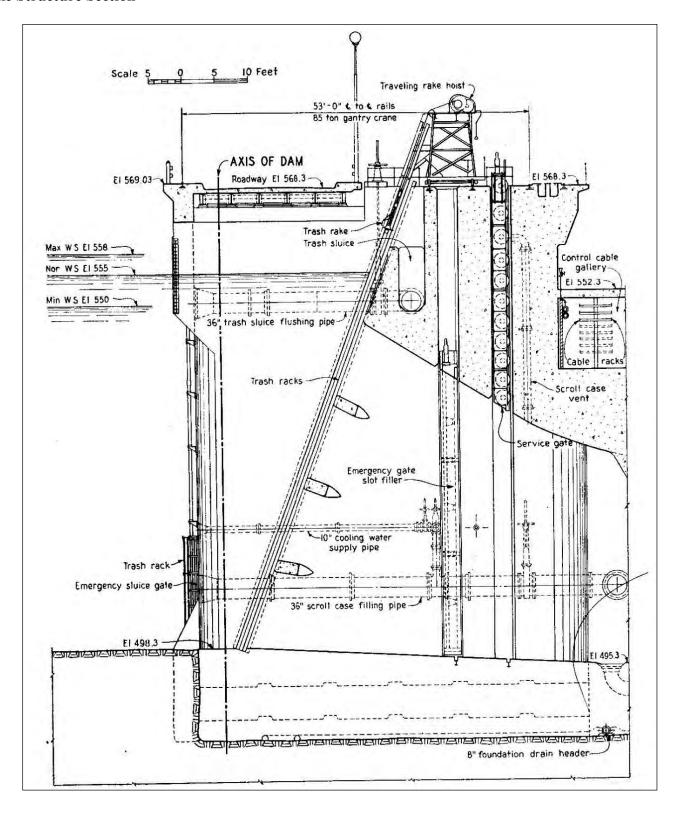


Nickajack Hydroelectric Project

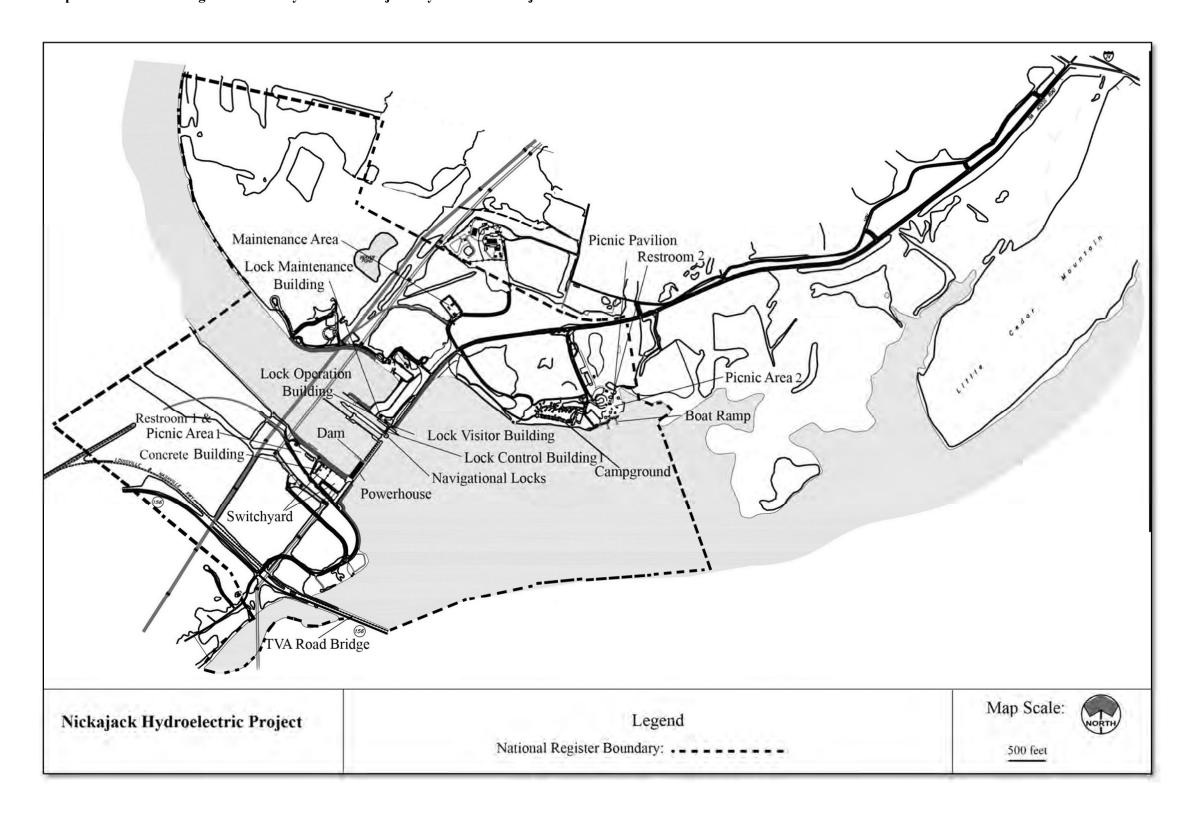
Name of Property

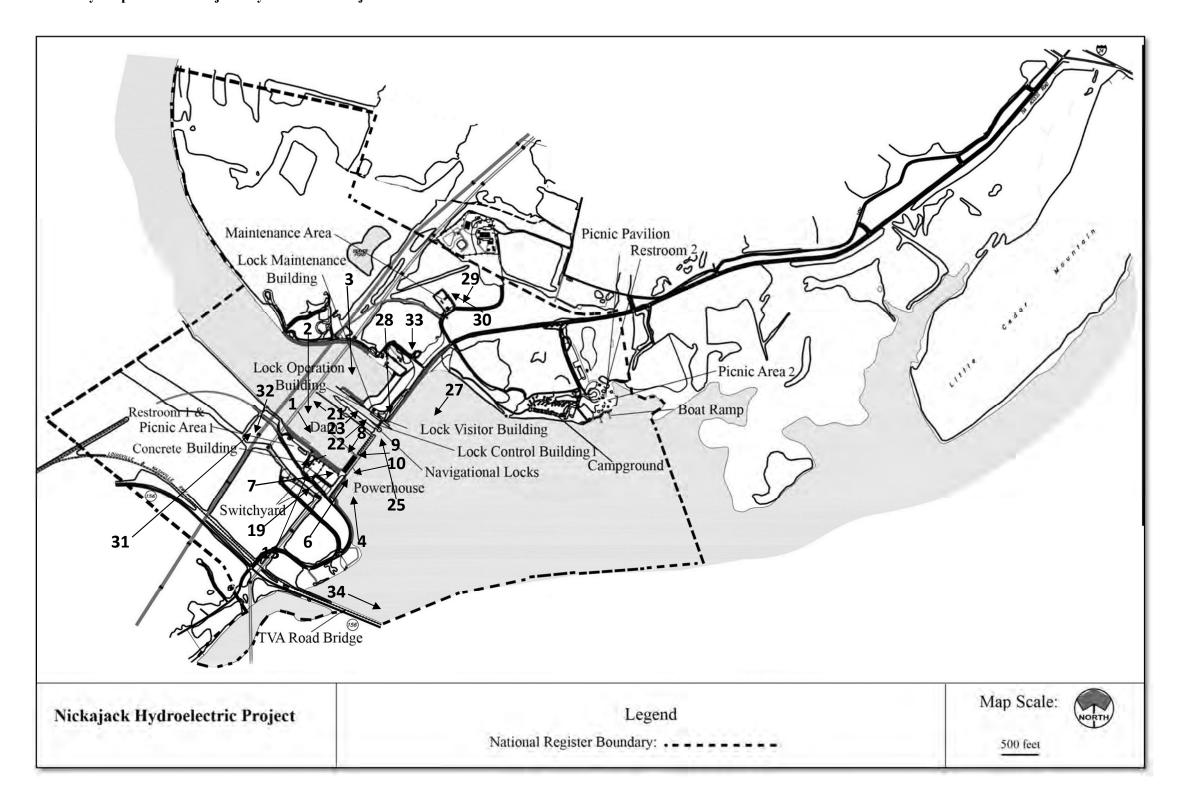
Marion County, Tennessee County and State

#### **Intake Structure Section**



<b>Property Ow</b>	ner:			
(This information	will not be submitted to the National Park Service, but will remain on	file at the Tennessee Hi	storical Commission)	
Name	Tennessee Valley Authority ó Pat Ezzell			
Street & Number	400 West Summit Hill Drive 460WT7D-K	Telephone	865-632-6461	
City or Tow	vn Knoxville	State/Zip Ti	N 37902	









































































## UNITED STATES DEPARTMENT OF THE INTERIOR NATIONAL PARK SERVICE

## NATIONAL REGISTER OF HISTORIC PLACES EVALUATION/RETURN SHEET

Requested Action:	Nomination			
Property Name:	Nickajack Hydroelectric Project			
Multiple Name:	Tennessee Valley Authority Hydroelectric System, 1933-1979 MPS			
State & County:	TENNESSEE, Marion			
Date Rece 6/30/20			Date of 45th Day: Date of Weekly List: 8/14/2017	
Reference number:	MP100001472			
Nominator:	State			
Reason For Review				
Appea	1	PDIL	Text/Data Issue	
SHPO Request		Landscape	Photo	
Waiver		National	Map/Boundary	
Resubmission		Mobile Resource	Period	
Other		_ TCP	X Less than 50 years	
		_ CLG		
X Accept	Return	Reject <b>8/</b> 1	14/2017 Date	
Abstract/Summary Comments:	Meets registration requirements of MPS. Remove Architecture, Social History, and Recreation as areas of significance			
Recommendation/ Criteria	Accept / A & C			
Reviewer Jim Gabbert		Discipline	e Historian	
Telephone (202)354-2275		Date		
DOCUMENTATION	see attached con	nments : No see attached	SLR : Yes	

If a nomination is returned to the nomination authority, the nomination is no longer under consideration by the National Park Service.





June 21, 2017

Paul Loether National Register of Historic Places, Keeper Mail Stop 7228 1849 C Street NW Washington, D. C. 20240

Dear Mr. Loether,

The Tennessee Valley Authority (TVA) contracted with Thomason and Associates, Preservation Planners to complete nominations to the National Register of Historic Places (NRHP) for twenty-five of its hydroelectric projects. Three nominations - for the Norris, Guntersville, and Wheeler Hydroelectric Projects - were previously submitted, resulting in listing in the NRHP in 2016. The TVA proposes the nomination of the remaining twenty-two hydroelectric projects. The enclosed disks contain the true and correct copies of the nominations of:

Georgia: the Nottely Hydroelectric Project; Kentucky: the Kentucky Hydroelectric Project;

North Carolina: the Apalachia, Chatuge, Fontana, and Hiwassee Hydroelectric Projects; and Tennessee: the Boone, Cherokee, Chickamauga, Douglas, Fort Loudoun, Fort Patrick Henry, Melton Hill, Nickajack, Normandy, Ocoee No. 3, Pickwick Landing, South Holston, Tellico, Tims Ford, Watts Bar, and Watauga Hydroelectric Projects.

The overall context for these nominations, the MPDF "Historic Resources of the Tennessee Valley Authority Hydroelectric System, 1933-1979" was approved by your office on March 12, 2016. The enclosed nominations have been reviewed by TVA as well as the respective State Review Boards and enclosed are the twenty-two physical signed copies of the signature pages of each nomination. All local governments have been notified of the intent to list these hydroelectric projects in the National Register.

We are pleased to submit these nominations to you which recognize the diverse history and contributions made by the Tennessee Valley Authority to our nation.

Please contact me if any additional information is needed.

Sincerely,

Philip Thomason

Principal

cc. Pat Ezell, Senior Program Manager, TVA

Enc/



Tennessee Valley Authority, 400 West Summit Hill Drive, Knoxville, TN 37902

August 9, 2017

Mr. Paul Loether National Register of Historic Places, Keeper Mail Stop 7228 1849 C Street NW Washington, D. C. 20240

Dear Mr. Loether,

The Tennessee Valley Authority (TVA) contracted with Thomason and Associates, Preservation Planners to complete nominations to the National Register of Historic Places (NRHP) for twenty-five of its hydroelectric projects. Three nominations for the Norris, Guntersville, and Wheeler Hydroelectric Projects were previously submitted resulting in listing in the NRHP in 2016. The TVA proposes the nomination of the remaining twenty-two hydroelectric projects. The enclosed disks contain the true and correct copies of the nominations of:

- Georgia: the Nottely Hydroelectric Project;
- Kentucky: the Kentucky Hydroelectric Project;
- · North Carolina: the Apalachia, Chatuge, Fontana, and Hiwassee Hydroelectric Projects; and
- Tennessee: the Boone, Cherokee, Chickamauga, Douglas, Fort Loudoun, Fort Patrick Henry, Melton Hill, Nickajack, Normandy, Ocoee No. 3, Pickwick Landing, South Holston, Tellico, Tims Ford, Watts Bar, and Watauga Hydroelectric Projects.

The overall context for these nominations, the MPDF "Historic Resources of the Tennessee Valley Authority Hydroelectric System, 1933-1979" was approved by your office on March 12, 2016. The enclosed nominations have been reviewed by TVA as well as the respective State Review Boards and enclosed are the twenty-two physical signed copies of the signature pages of each nomination. All local governments have been notified of the intent to list these hydroelectric projects in the National Register.

We are pleased to submit these nominations to you which recognize the diverse history and contributions made by the Tennessee Valley Authority to our nation.

Please contact me if any additional information is needed.

Sincerely,

Patricia Bernard Ezzell

Federal Preservation Officer

Communications

Enclosures