AN ARCHAEOLOGICAL RECONNAISSANCE OF A 14 MILE
SECTION OF THE EAST FORK POPLAR CREEK FOR THE
ENVIRONMENTAL RESTORATION PROJECT
ANDERSON AND ROANE COUNTIES, TENNESSEE

DOE/OR/22002--73

Prepared by

Glyn D. DuVall, Archaeologist
DuVall & Associates, Inc.
Cultural Resources and Environmental Services
PO Box 150625
Nashville, Tennessee
37215-0625

and

ERM-Southeast, Inc.
PO Box 881
Brentwood, Tennessee
37027

Prepared for

United States Army Corps of Engineers
Nashville District
PO BOX 1070
Nashville, Tennessee
37202-1070

MASTER

DACW62-90-D0028

DISTRIBUTION OF THIS DOCUMENT IS UNLIMITED

ph

APPROVED FOR RELEASE OR
PUBLICATION. INTEL. PROP. GP.,
OFC. OF CHIEF COUNSEL, DOE/ORO
By EDW Date Jan 12, 98

January 1993

DISCLAIMER

This report was prepared as an account of work sponsored by an agency of the United States Government. Neither the United States Government nor any agency thereof, nor any of their employees, makes any warranty, express or implied, or assumes any legal liability or responsibility for the accuracy, completeness, or usefulness of any information, apparatus, product, or process disclosed, or represents that its use would not infringe privately owned rights. Reference herein to any specific commercial product, process, or service by trade name, trademark, manufacturer, or otherwise does not necessarily constitute or imply its endorsement, recommendation, or favoring by the United States Government or any agency thereof. The views and opinions of authors expressed herein do not necessarily state or reflect those of the United States Government or any agency thereof.

DISCLAIMER

**Portions of this document may be illegible
electronic image products. Images are
produced from the best available original
document.**

MANAGEMENT SUMMARY

At the request of the U. S. Army Corps of Engineers, Nashville District, Nashville, Tennessee, an archaeological reconnaissance of the potential impact areas of the Environmental Restoration Project (ERP) along the East Fork Poplar Creek was conducted during the period December 16, 1991, and March 3, 1992. The reconnaissance was conducted in response to environmental evaluations as a result of the accidental spillage of approximately 293,000 pounds of mercury, radionuclides, heavy metals and other compounds.

The reconnaissance to assess adverse impacts to cultural resources located within the boundaries of Federally-licensed, permitted, funded or assisted projects was conducted in compliance with the National Historic Preservation Act of 1966 (Public Law 89-665; 16 USC 470; 80 Stat. 915), National Environmental Policy Act of 1969 (Public Law 91-190; 91 Stat. 852; 42 USC 4321-4347) and Executive Order 11593 (May 13, 1971).

The reconnaissance identified eight sites within the floodplain and associated terraces/slopes. Sites 40RE195 (mill site) and 40RE197 (19th century house site) are considered eligible for inclusion in the National Register of Historic Places pursuant to 36CFR60.4(d).

Sites 40RE196, 40RE198, 40RE199, 40RE200, 40AN67 and 40AN68 do not meet the criteria for inclusion in the National Register of Historic Places pursuant to 36CFR60.4.

TABLE OF CONTENTS

Management Summary.....	i
Table of Contents.....	ii
List of Figures.....	iii
List of Plates.....	iv
Introduction.....	1
Project Description.....	1
Environmental Setting.....	3
Archaeological Background.....	5
Methodology.....	12
Coordination With State Agencies.....	12
Reconnaissance Results.....	13
Conclusions.....	25
References Cited.....	28
Appendix A: Site Locations and Probability Areas	
Appendix B: Tennessee Burial Law	

LIST OF FIGURES

Figure 1. Project Location Map.....	2
Figure 2. Generalized Physiographic Map of Tennessee Showing Anderson and Roane Counties.....	4
Figure 3. Site Location Map: Sites 40RE195, 40RE196, 40RE197, 40RE200 and 40RE134.....	14
Figure 4. Mill Site (40RE195) - General Plan.....	15
Figure 5. Site 40RE197 - General Plan.....	19
Figure 6. Site Location Map: Site 40RE198, 40RE199 and 40AN67.....	21
Figure 7. Site Location Map: Site 40AN68.....	24
Figure 8. Site Locations and Probability Area...(Appendix A)	

LIST OF PLATES

Plate 1. Mill Site (40RE195) - Mill Stones...	16
Plate 2. Mill Site (40RE195) - Dam Axis.....	16
Plate 3. Site 40RE197 - View North.....	22
Plate 4. Site 40AN67 - View South.....	22
Plate 5. Pratt Pony Truss - View East.....	26

**AN ARCHAEOLOGICAL RECONNAISSANCE OF A 14 MILE
SECTION OF THE EAST FORK POPLAR CREEK FOR THE
ENVIRONMENTAL RESTORATION PROJECT
ANDERSON AND ROANE COUNTIES, TENNESSEE**

INTRODUCTION

At the request of the U. S. Army Corps of Engineers, Nashville District, Nashville, Tennessee, an archaeological reconnaissance of the potential impact areas of the Environmental Restoration Project (ERP) along the East Fork Poplar Creek was conducted during the period December 16, 1991, and March 3, 1992. The reconnaissance was conducted in response to environmental evaluations as a result of the accidental spillage of approximately 293,000 pounds of mercury, radionuclides, heavy metals and other compounds. The impact area of the project is confined to the floodplain and lower terrace/slope sections adjacent to the East Fork Poplar Creek with approximately 500 total acres lying within the reconnaissance area. The project was conducted by Glyn D. DuVall, Principal Investigator, James R. Powers, A. Merrill Dicks and Abigayle Robbins, assistants, and Gregg Richie, historian. All field personnel involved in the field portion of the project comply with OSHA 1910.120(e)(2).

The reconnaissance to assess adverse impacts to cultural resources located within the boundaries of Federally-licensed, permitted, funded or assisted projects was conducted in compliance with the National Historic Preservation Act of 1966 (Public Law 89-665; 16 USC 470; 80 Stat. 915), National Environmental Policy Act of 1969 (Public Law 91-190; 91 Stat. 852; 42 USC 4321-4347) and Executive Order 11593 (May 13, 1971).

The following pages will present the general environmental background, archaeological data, a description and evaluation of the reconnaissance findings and a summary with recommendations for additional archaeological considerations.

PROJECT DESCRIPTION

The project area is located along an approximately 14 mile section on East Fork Poplar Creek in Anderson and Roane Counties, Tennessee (Figure 1).

The project begins at the confluence of East Fork Poplar Creek and Poplar Creek. The first 5 miles of East Fork Poplar Creek transverses hilly terrain within the K-25 Complex. Heavy vegetation cover consisting of hardwoods,

No Scale

FIGURE 1: PROJECT LOCATION MAP

successional growth and planted pine stands is present throughout this section. At approximate creek mile 4.8, the creek crosses the Oak Ridge Turnpike and passes through primarily developed or cleared land. The creek borders the Oak Ridge Golf and Country Club, passes through the Sportsman's Club shooting ranges, passes between the sewage disposal plant and a city park and follows the base of a slope through undeveloped land prior to crossing the Oak Ridge Turnpike.

After crossing the turnpike, the creek flows on the north side of the road for a short distance before turning east and crossing the turnpike. The creek flows east roughly parallel to Illinois Avenue and through a dense commercial area prior to entering the Y-12 Plant. The project ends at the New Hope Pond.

ENVIRONMENTAL SETTING

Anderson and Roane Counties (Figure 2) are located in the Great Valley of East Tennessee, a part of the Ridge and Valley Physiographic Province that extends from New York State to Central Alabama (Fenneman 1938). The Great Valley is characterized by numerous elongate, parallel ridges and intervening valleys created by severe faulting and folding. The trend of these valleys is northeast to southwest. Relief in the Ridge and Valley will vary as much as 300 feet (Hubbard, et al, 1956:5). The terrain is rugged and ranges from moderately steep to very steep.

The underlying rocks are almost wholly sedimentary (mainly limestones and dolomites) of Ordovician age. Also present are some harder shales, sandstones and siltstones. Cherty gravel deposited from eroded limestone and dolomite is present along many of the ridge tops.

The area is located within the Western Mesophytic Forest (Braun 1950). Most of the current tree cover is mixed hardwoods with oaks and hickories dominating. The arboreal flora of the region include dense stands of white, scalybark, and pignut hickories; black, blackjack, white, chestnut, and scarlet oaks, blackgum, red maple, and sourwood. Eastern red cedar is the dominant conifer in the area, the presence of which is typical for shallow soils over limestone (Lusk, et.al. 1959:8) and areas under successional recovery.

In addition to the floral resources, there is a broad array of fauna in the region. Over 300 vertebrate species have been identified as endemic in the Carolinian biotic province. Of these, most may have served as potential food sources to aboriginal occupants (Faulkner and McCollough 1973:34). Numerous species of mollusk and gastropod were present in the Cumberland River and its major tributaries

FIGURE 2: GENERALIZED PHYSIOGRAPHIC MAP OF TENNESSEE SHOWING ANDERSON AND ROANE COUNTIES

prehistorically. Elk, mountain lion, black bear, gray wolf, and bison were also present in the area prehistorically and during the early Historic Period.

The climate classification of the area is the mesothermal (Cfa) hot summer (Koepppe and Delong 1958: 247-254). Regionally, the general air movement in the summer is from the south which results in strong convection currents and locally intense thunderstorms. Although heavy thunderstorms are frequent, the maximum rainfall occurs in the winter and spring months. Precipitation records for the area indicate that about 55 inches occur annually with a mean annual temperature of 57° F. (U.S.D.A. 1981:2). Temperatures below 0° F. and above 100° F. are rare and periods of prolonged very hot or very cold are unusual.

ARCHAEOLOGICAL BACKGROUND

The location of the approximately 37,000 acre Oak Ridge Reservation (ORR) is divided between Anderson and Roane Counties with Roane County containing the largest percentage (@ 65%) of the total area. Due to the fact that the majority of the archaeological and historical studies conducted in the counties have generally focused on areas within the ORR, the major focus of the background and literature discussions will involve those related to the reservation and immediate vicinity of the East Fork Poplar Creek study area.

A minimum of ten major reconnaissance level surveys have been conducted on the reservation with many sufficiently documented in a management plan prepared by the Department of Energy (1983).

The first reported reconnaissance of the area was conducted along portions of the Clinch River by Cyrus Thomas (1894) and reported in the Bureau of American Ethnology. Thomas reported a visit to the Lee Farm Site (40RE27) and a visit to Jones Island (40RE28).

Two Woodland mound sites, the Crawford Farm Mounds (40AN21) and the Freels Farm Mounds (40AN22), located on the reservation were excavated by Webb (1938) during the construction of the Norris Dam.

Construction of the Watts Bar Reservoir resulted in a survey of portions of the Clinch River, mainly in the narrow bench areas and terraces along the main channel. Numerous sites along the course were identified facilitated by almost ideal survey conditions (Nash 1941).

Construction of the Melton Hill Dam resulted in several investigations by the University of Tennessee (McNutt and Graham 1960; McNutt and Fisher 1961). Sites 40AN2 (UT Farm

Site), 40AN8 (Freels Bend Site) and 40AN20 (Bull Bluff Site) were investigated. The most extensively occupied of these appeared to be 40AN20 which contained Woodland, Mississippian and Euro-American artifacts.

During 1972, archaeological investigations were initiated on the proposed site of the Clinch River Breeder Reactor Project (CRBRP). Schroedl (1972) relocated sites 40RE104-40RE108 originally recorded during Nash's 1941 survey. Additionally, four historic Euro-American farmsteads and a cemetery were recorded.

A follow-up study of the CRBRP site was conducted by Schroedl (1974) following the acquisition of 1940 survey maps from the Tennessee Valley Authority. The major emphasis of the survey was the relocation of the structural areas and compare current conditions to those present at the time of the acquisition of the ORR by the United Army Corps of Engineers in 1942. The findings indicated that some of the original locations were intact with all structures present while others contained no evidence of former structure locations.

Fielder's 1974 and 1977 surveys of specific areas of the ORR focused on the prehistoric and historic sites, respectively. The 1974 survey relocated and identified 45 sites dating from the Paleo-Indian (?) through the Historic Euroamerican Period with no conclusive evidence for any historic Native American occupations within the ORR. The 1977 survey focused on the numerous structures and former structure areas partially noted in previous surveys. A total of 415 structures ranging from houses to barns and sheds was identified. Of these, one structure (The Freels Cabin) was considered eligible for inclusion in the National Register of Historic Places (Fielder, et al, 1974:41).

A survey of approximately 1400 acres for the proposed Tennessee Synfuels Associates site was conducted by GAI, Inc. during the summer of 1981. The survey and testing program relocated and evaluated five previously recorded sites. The overall results included the identification of three cemeteries and associated residential areas and one house complex. Prehistoric site 40RE86 produced undisturbed cultural features and was recommended for inclusion in the National Register of Historic Places (GAI 1981:7).

Jolley (1982) conducted a second survey of the CRBRP site of those areas not evaluated in Schroedl's 1972 survey. The utilization of a thorough shoreline survey, deep testing program along the floodplain and terraces and a shovel test strategy resulted in the identification of seventeen additional sites.

An archaeological assessment of two historic house sites for the purpose of National Register eligibility evaluation

was conducted on the Jenkins House site (40RE188) and the Jones House Site (40RE189) (Faulkner 1988). The assessment utilized subsurface testing to determine if artifact concentrations were present on the sites. The Jones House Site and support structures were recommended for inclusion in the National Register of Historic Places due to the relatively intact nature of the site and its early occupation date (ca. 1820). On the other hand, the Jenkins house had been severely impacted by modern intrusions and was not considered eligible for inclusion in the National Register of Historic Places.

Several surveys associated with borrow areas and minor projects on the reservation have recently been conducted. They include the approximately 425 acre HPPR-DOSAR and Tower Shielding Borrow area (DuVall 1991), the approximately 78 acre Advanced Neutron Source (ANS) Project (DuVall 1991a), the approximately 6500 linear feet Liquid Low level Waste Collection and Transfer (LLW-CAT) System (DuVall 1991b), the one acre Melton Valley Recontour Site (DuVall 1991c), a reconnaissance of the M.K. Ferguson Lay-Down Area/West End Treatment Facility (DuVall 1992) and the Pond Waste Management Project on the K-25 Complex (DuVall 1992a). No archaeological sites were identified on any of the project areas due to large areas of prior disturbance, in most cases.

A general chronology of prehistoric habitation of the Tennessee area is presented below. Based upon excavated sites and surface finds, man has occupied the Tennessee area for at least 12,000 years. The generalized cultural sequence found throughout Tennessee will be discussed in the following paragraphs.

The earliest definable occupation of the area occurred during the Paleo-Indian Period possibly as early as 20,000 years ago. Early man most likely peopled the New World from northeastern Asia via a route across the Bering Straits region between Alaska and Siberia perhaps as early as 30,000 BC. The extensive glaciers of the late Wisconsin period probably facilitated this movement of man from the Old World. As the glaciers grew, sea levels fell from 100 to 150 meters and a landbridge, about 1000 to 1500 miles wide, emerged between the continents. Most evidence points to this landbridge as a primary entryway into North America after the late Wisconsin glacial maximum about 18,000 years ago. However, the earliest period of definitive aboriginal cultural development (Paleo-Indian) in the Tennessee River Valley dates from about 10,000 to 8,000 BC. This period would have been cooler than today's climate, the southern forest would have exhibited a stronger boreal cast, and the animal life would have included numerous forms that became extinct by the close of the Pleistocene.

The character of the Paleo-Indian culture in the area suggests that these early nomadic hunters moved about in small family bands numbering perhaps ten to fifteen persons. The

activities of these hunters are best known from sites on the High Plains and in the southwestern United States where their tools are found with such now extinct Ice Age Mammals as mastodon, mammoth, ground sloth, tapir, musk-ox, giant beaver, and ancient bison. Most characteristic of the tools of this period are the fluted projectile points, including the Clovis types that are known from numerous sites throughout the United States. Subsistence data beyond the associations with large land mammals are sparse, but several southwestern sites contain tool assemblages that suggest the exploitation of plants as well.

The relationship between the Paleo-Indian and Archaic Periods in the eastern United States is not well understood, but a continuity of some tool types indicates a continuous technological development from Paleo-Indian to Early Archaic times even as hunting patterns and social structures were probably undergoing change. The Archaic Period, dating from about 8000 to 1000 BC in the Tennessee Valley, has been divided into three divisions by archaeologist: Early (8000-5000 BC), Middle (5000-3000 BC) and Late (3000-1000 BC). These divisions are based primarily upon differences in technology and projectile point forms with accompanying inferences or speculation about subsistence orientations/strategy and social complexity. The projectile point forms change from corner-notched (Kirk, Cypress Creek), side-notched (Big Sandy), and basal notched (LeCroy, Eva I) forms to stemmed forms (Morrow Mountain, White Springs/Sykes, Benton, Late Archaic Stemmed, Little Bear Creek and Wade) forms.

The Archaic Period generally reflects aboriginal adaptations to a post-glacial, warming climate and emerging deciduous forest communities with associated modern fauna. The archaeological record clearly indicates a dependence upon the exploitation of gathered forest resources such as roots, nutfruits, berries, etc. The extensive exploitation of riverine resources such as shellfish is also recorded in the presence of shellmiddens along inland rivers and streams. Subsistence practices clearly change from a dependence upon the larger Pleistocene game mammals (now extinct) to smaller mammals. Studies of faunal remains from Archaic Period sites indicate the importance of the bear, white-tailed deer and elk among the larger postglacial mammals and the utilization of numerous other species of smaller mammals, birds, fishes and mussels as food resources.

Archaic period sites are abundant and are located in all physiographic sections and orographic locations and probably comprise the greatest number of overall components within the Tennessee River Valley. Based upon data from numerous sites in the valley, archaeologist have inferred that small bands of gatherer-hunters inhabited these sites for short periods of

time, or seasons, and that these inhabitants may have followed some sort of seasonal migratory pattern which would bring them closer to available floral and faunal resources as these ripened or became accessible for harvest. The effects of these changing adaptations and hunting strategies is reflected in patterns of increasing population density and degrees of social complexity as well as a more sedentary existence over time. The basic social unit probably increased in size from the small family bands of 10 to 15 individuals to macrobands of as many as 50 to 100 individuals during some portions of the seasonal-round. At any rate, the reported sites are both larger and often contain higher artifact densities than those recorded for the Paleo-Indian components. Additionally, many locations appear to be reoccupied over hundreds and even thousands of years. By the close of the period the rudiments of simple agriculture appear and harken changes to follow.

Other cultural innovations from this period include fish weirs, houses or shelters with compacted clay floors, stone bowls, human cremations, and perhaps the first cloth of plaited vegetable fibers, and very late in the period, the introduction of ceramic vessels tempered with plant fibers. Stone-working technology expands and the new tool types are present in site assemblages. The spearthrower, or ahtlatl, comes into use along with adzes and ground-stone implements such as axes, celts, etc. There is a marked increase in tools for working wood and a decrease in the earlier specialized bone-working tools.

Following the Archaic Period and beginning about 1000 B.C. cultural innovations and additions begin to occur, particularly in the central Ohio Valley and along the Gulf Coast. These changes are also reflected in the changing cultural adaptations in the Tennessee and Cumberland River Valleys and their tributaries. The innovations were signaled most notably in the archaeological record by the appearance of pottery, elaborate mortuary earthen mound construction, increasing widespread plant domestications and/or cultivation, and increasing sedentism with some corresponding population increases. The Woodland Period, dating from about 1000 B.C. to A.D. 900 in the Tennessee area and southeast, in general, has been divided into three parts: Early (ca. 1000 B.C. to 200 B.C.), Middle (ca. 200 B.C. to A.D. 600) and Late (ca. A.D. 600 to A.D. 900). These divisions are based primarily upon technological changes and the presence/absence of certain elaborate mortuary characteristics. These differences in mortuary treatments indicate the emergence of a non-egalitarian social order. Systems of exchange (trade) can also be inferred from the distributions of raw material and finished objects across long distances in the eastern United States. The domestication of plants which began in the Late Archaic also continues and expands in the kinds of plants being cultivated. Maize (corn) may have been introduced by

Middle Woodland times, and it was most certainly present by Late Woodland times.

Additional technological innovations include ceramics and the first inferred use of the bow-and-arrow. Ceramic types include Long Branch, Baumer, Mulberry Creek, and numerous other types. The lithic technology also reflects changes with a marked decrease in the overall size of projectile points and changes in form. Projectile point types include Cotaco Creek, Adena, Motley, Copena, Bakers Creek, Middle Woodland Stemmed, Jacks Reef Pentagonal, Knight Island and Hamilton, to name a few. The forms change from the stemmed types of the Late Archaic/Early Woodland to the triangular stemless forms. The first clear indications of structural forms and village patterning are available from excavations of Woodland villages in the Tennessee River Valley, but little data are available on the erection of elaborate earthen features and mortuary complexes since these remain to be reported in the literature or have been destroyed before scientific investigations could be undertaken.

The Mississippian Period (A.D. 900 to Protohistoric) represents the climax period in indigenous cultural development in the East. This cultural adaptation developed in the Mississippi Valley and diffused, both directly by migration of peoples in some areas and indirectly through the spread of ideas sparking in situ development in other areas across a large portion of the Southeast. The adaptation is marked by a dependence upon horticulture (hoe agriculture) for its basic, storable food supply. The gradual shift during the Woodland Period to a substantial dependence upon cultigens for a dependable food source tied societies to specific locations, emphasized territoriality and control of land, provided a steady supply of food that permitted population growth and expansion, encouraged specialization of labor, provided for the growth of long distance exchange networks, and led to the development and spread of religious ceremonies associated with particular crops (e.g., busk or green-corn ceremony of first fruits). Sociocultural complexity increased with the emergence of a chiefdom-level of sociopolitical complexity and its concomitant ranking system.

The agricultural complex included several varieties of maize, squash, pumpkin, gourd, sunflower and beans. The addition of these cultigens to the wide variety of gathered native fruits, berries and roots provided, along with hunting, an ample supply of food and support for redistributive cultural mechanisms often associated with chiefdoms and communal or public ceremonial constructions. This more efficient economy brought an increase in population in the central Mississippi Valley area, and it also served as a major force in the expansion of this cultural adaptation into other areas with favorable growing seasons and soils.

The various sites also reflect a system that was not egalitarian since there are obvious size and functional differences in the sites. The larger center that contained pyramidal (temple or platform) mounds were often fortified with stockades enclosing large areas about the mounds. These sites were the main population centers and the residences of the social, political, and ideological elites of the society.

These centers are often associated with a number of larger settlements or villages in the vicinity. Smaller settlement units could include hamlets, or a small cluster of houses, and farmsteads, or individual houses. These smaller villages and outlying farming communities would contain the bulk of the population and presumably serve as production units for consumption in the larger, predominantly ceremonial mound centers. The latter would contain the central control function of the system and contain a range of domestic and civic structures as temples, charnel structures, and/or elite residences. Each of these sites would contain cemetery precincts, and one of the hallmarks of this culture along the Cumberland River system in Tennessee is the use of stone coffins or stone-boxes in which the dead were placed.

The archaeological record for the Protohistoric Period (ca. A.D. 1450 to A.D. 1750) is sparse. The major population centers in portions of the Tennessee Valley and northward into the Cumberland River Valley of Tennessee and Kentucky during this time period had been abandoned. North of the Tennessee Valley, the Nashville Basin area was variously reported as an area reserved for hunting by the Shawnee, Chickasaw and Cherokee tribes, and the Shawnee were reportedly expelled on two occasions (1715 and 1745) by the latter two tribes (Swanton 1946:117).

Historic

Although early historic Indian (Cherokee) sites probably exist in the area, none are recorded for the project area. A number of sites of this description may occur in the area from conflicts between early white settlers and the Indians.

With the land sale by the Cherokees to the United States government in 1791, a series of military posts were eventually established to protect the whites from hostile Indian attacks. One of these was located at the mouth of the Clinch River (named Southwest Point) replacing John Sevier's territorial militia post.

The area economy was based upon agriculture throughout its early (and later) history although some of the early industries included milling, iron works, blacksmithing, gunsmithing and tanning. By the mid-nineteenth century farming dominated as scientific methods increased productivity even in the poor soils of the area. However, after the Civil

War, the large farms began to decrease in size with the sale of parcels and an increase in the timber industry.

During the late 1930s major undertakings by the government included archaeological projects conducted under the W.P.A. program, Watts Bar Reservoir and in 1942 the U.S. Army Corps of Engineers purchased 37,000 acres in 866 tracts of land for the Manhattan Project.

METHODOLOGY

The Phase I reconnaissance of the project consisted of a pedestrian survey of the East Fork Poplar Creek floodplain and adjacent terraces/slopes. The survey corridor generally was limited to a two hundred meter wide area on each side of the creek. The survey corridor varied in some cases due to wider floodplain areas or steep slopes along the creek bank. The evaluation was based on the "low" to "high" probability for the occurrence of archaeological sites, both historic and prehistoric, on specific landforms within the study area. From a predictive model approach, the floodplains would comprise a very low probability area for archaeological sites, while the low terraces/slopes would be of moderate to high probability areas. The areas considered to be of moderate to high probability without major prior disturbance were marked on the project maps. After the completion of the sampling program these areas will be coordinated with those areas identified as contaminated and requiring eventual remediation.

Notes were taken on all aspects of the project noting terrain features, vegetation cover, soil conditions and prior disturbance. Cultural material observed was not collected due to the potential for contamination. The cultural material was observed in the field and left on-site. Due to the unknown locations of contaminated areas and the potential for contamination of the archaeological personnel, no intrusive sampling of the study area was undertaken.

Photographs were taken to document specific sites and certain sections of the project. All field notes, maps and other pertinent data are on file at DuVall & Associates, Inc., 407 Church Street, Franklin, Tennessee 37064.

COORDINATION WITH STATE AGENCIES

A search of the site files and coordination with the Tennessee Division of Archaeology indicated that one site had been previously recorded for the project area. Site 40RE134 will be discussed in the following section.

A search of the National Register of Historic Places and a review of the site files at the Tennessee Historical Commission indicated that no properties included in or eligible for inclusion in the National Register of Historic Places were located within the confines of the project.

RECONNAISSANCE RESULTS

40RE195 (H1)

This is a former mill site located on the west side of East Fork Poplar Creek (Figure 3). Encompassing an area of 30 x 25 meters, the site consists of a collapsed dam (possibly log crib), timbers which may represent the penstock remains, foundations, rubble and two mill stones (Figure 4).

The foundations and mill stones lie on a relatively flat bank area with several small rises which may represent rock rubble from foundations or other structural elements. The mill stones lie approximately 7 meters from the edge of the water (Plates 1 and 2). A large, rock rubble pile originating on the flat bank currently is spread down the steep bank and into the creek. This may be a result of bank erosion and the slumping of the rubble. Just downstream of the rubble, several timbers jut from the bank. The regular pattern of the timbers and an iron spike (probable anchor) suggest that this may have been the penstock or other structural element.

The mill dam which has collapsed lies approximately 30 meters upstream of the timber framing. The dam was identified from limestone rubble on each bank with a linear pile of limestone running across the bottom of the creek. The width of the creek at this point was estimated at 9-10 meters.

The mill (both grist and sawmill) was most likely established by John Nail, Sr., sometime between 1801 (date deed records begin for Roane County) and 1838, the time of the first mention within the historical record. After, John Nail, Sr.'s, death, his wife, Jane Nail, conveyed the property to John Nail, Jr., on September 10, 1838. This conveyance was probably a result of John Nail, Jr., serving as Trustee for the estate since his brothers James, David and Alexander also conveyed their 1/5 share to him between September 10, 1838, and August 27, 1840. The property was sold to Thomas Gallaher and Jacob Carmichael.

40RE196 (H2)

This site is located on a flat area approximately 250 meters east of East Fork Poplar Creek (Figure 3). The site appears to be a twentieth century house site/farmstead. This assessment was based on observed debris (jars, metal buckets, appliances, etc.) lying about the area. The site has

FIGURE 3: SITE LOCATION MAP: SITES 40RE195, 40RE196, 40RE197, 40RE200 and 40RE134

FIGURE 4: MILL SITE (40RE195)--GENERAL PLAN

Plate 1. Mill Site (40RE195) - Mill Stones

Plate 2. Mill Site (40RE195) - Dam Axis

obviously been bulldozed due to the movement of the formed concrete foundation of the house and several clearing piles to the west and north of the house site. Currently, the house site lies in clearing surrounded by planted pines.

The remaining concrete foundation measured 11 meters long on the north side with an opening to the cellar on the east side. A filled-in cistern lies 6 meters south-southeast of the foundation with a drilled well lying 2 meters south-southeast of the cistern.

The only other evidence of support structures on the site was a small 1 x 1.25 meter foundation located approximately 50 meters from the foundation on the southeast corner of the site. The function of this small foundation is unknown.

Other disturbance to the site includes numerous circular holes on the north and south sides of the site. The origin and function of the holes are unknown; however, it appears that most were excavated after the removal of the house (1942-1943). The holes range from 1-2 meters in diameter with a depth of one meter or more. Many held water.

Although unconfirmed, this site may be Fielder's (1977) Tract 973, Structure 973A, based on longitude and latitude determinations.

40RE197 (H3)

This house site consists of the remains of a large structure with rock foundations. The main portion of the house faced south with exterior rock chimneys on each end (Figures 3 and 5). The "L" portion also had a rock chimney on the north end and a cellar entrance on the west side. Rock piers across the front of the house and on the east side of the addition revealed the location of porches. The house was measured, but very heavy successional growth around the structure made it impossible to accurately measure and evaluate. The structure measured 11 meters across the front by 14 meters along the left elevation. Based on the width of the foundation, it is probable that the structure had two stories (Plate 3).

The water source for the house was probably a large spring located approximately 30 meters northwest of the house.

No other structures were noted about the house, however, several clearing piles were observed north and east of the house site.

40RE198 (H4)

This site is the remains of a chimney base located approximately 40 meters east of the East Fork Poplar Creek

(Figure 6). The chimney base was dry-laid with mixed limestone and sandstone. The chimney base measured approximately 2 m x 1.5 meters. Based on the configuration of the chimney, the house probably had an east-west long axis.

A single undecorated whiteware sherd was observed but not collected.

Several clearing piles about the area suggested that the house may have been bulldozed after the acquisition by the US Government in 1942-1943. A cellar was not visible but clearing and demolition may have filled the cellar with rubble.

40RE199, (H5)

This was the former location of a large house (Figure 6). A massive chimney fall (limestone and sandstone) is present in the center of the structure. A partial section of rock foundation (south wall) measured approximately 9 meters with an additional section of unknown length that had been removed by clearing operations. Likewise, the west wall had been damaged by clearing, but approximately 5 meters of rock foundation remained.

Several clearing piles including a very large pile filled with rock from the structure were noted about the area. This and a large number of surviving ornamental plants suggested that the house may have been bulldozed after the acquisition by the US Government in 1942-1943. No cellar was visible but clearing may have filled or obliterated it.

A cased well, possibly a modified hand-dug well, was present near the northeast corner of the structure.

40AN67 (P6)

This site is located on an elongated point in a bend of East Fork Poplar Creek (Figure 6). The site which measures approximately 20 x 50 meters was in sparse pasture at the time of the reconnaissance (Plate 4). The long axis of the site lies north-south along the trend of the rise. Eroded slopes were present on the east, north and west sides. Erosion on the site appeared to be a result of agricultural activities as opposed to flooding. The north edge of the rise is probably the only area susceptible to flooding based on its elevation and proximity to the creek.

Cultural material was very light and identified from high traffic areas across the site. Two bifacial thinning flakes and a core reduction flake were the only artifacts noted. The material was returned to the site.

FIGURE 5: SITE (40RE197)--GENERAL PLAN

40AN68 (P7)

This site is located on a flat rise top overlooking East Fork Poplar Creek (Figure 7). Cultural material was very light and widely scattered in the areas available for a surface reconnaissance. The rise top had suffered severe disturbance due to the construction and eventual removal of a small research facility. Some brick, tile and concrete is currently exposed on the surface. Other disturbance includes a gravel access road and turnaround area.

Based on observed conditions the site has probably been destroyed.

Three bifacial thinning flakes and four core reduction flakes were the only artifacts noted. The cultural material was returned to the site.

40RE134

This site was originally recorded by Fielder (1974:64) during his survey of portions of the Oak Ridge Reservation (Figure 3). At the time of the reconnaissance, the field had been freshly cleared and plowed and planted in pines. The site is located on a small knoll on the left bank of East Fork Poplar Creek. The surface collection recovered 54 artifacts including a lanceolate side notched and a short straight stemmed projectile points/knives. It is suggested based on the artifacts that the site dated to the Woodland period.

40RE200

This is a former mill site located on the west side of the East Fork Poplar Creek (Figure 3). Encompassing an area of 10 x 15 meters, the site consists of portions of the dam foundation and two mill stones lying within the stream bed. No structural evidence beyond the mill dam foundation was observed. However, there is a mounded area lying approximately 5 meters south of the creek bank and appears to be the terminus of the dam foundation. Although unlikely, it is possible that some structural evidence may be covered by the soil and vegetation in the mound.

Immediately behind the mounded area is an overflow channel or old roadbed. Due to time and numerous flooding episodes it could not be determined if this was a former road or part of the mill race.

A search of existing files did not identify any references to this mill. However, there could possibly be some confusion between this mill site and site 40RE195 which lies approximately one mile downstream. It appears that both

FIGURE 6: SITE LOCATION MAP: SITES 40RE198, 40RE199 and 40AN67

Plate 3. Site 40RE197 - View North

Plate 4. Site 40AN67 - View South

40AN68 (P7)

This site is located on a flat rise top overlooking East Fork Poplar Creek (Figure 7). Cultural material was very light and widely scattered in the areas available for a surface reconnaissance. The rise top had suffered severe disturbance due to the construction and eventual removal of a small research facility. Some brick, tile and concrete is currently exposed on the surface. Other disturbance includes a gravel access road and turnaround area.

Based on observed conditions the site has probably been destroyed.

Three bifacial thinning flakes and four core reduction flakes were the only artifacts noted. The cultural material was returned to the site.

40RE134

This site was originally recorded by Fielder (1974:64) during his survey of portions of the Oak Ridge Reservation (Figure 3). At the time of the reconnaissance, the field had been freshly cleared and plowed and planted in pines. The site is located on a small knoll on the left bank of the East Fork Poplar Creek. The surface collection recovered 54 artifacts including a lanceolate side notched and a short straight stemmed projectile points/knives. It is suggested based on the artifacts that the site dated to the Woodland period.

40RE200

This is a former mill site located on the west side of the East Fork Poplar Creek (Plate 5). Encompassing an area of 10 x 15 meters, the site consists of portions of the dam foundation and two mill stones lying within the stream bed. No structural evidence beyond the mill dam foundation was observed. However, there is a mounded area lying approximately 5 meters south of the creek bank and appears to be the terminus of the dam foundation. Although unlikely, it is possible that some structural evidence may be covered by the soil and vegetation in the mound.

Immediately behind the mounded area is an overflow channel or old roadbed. Due to time and numerous flooding episodes it could not be determined if this was a former road or part of the mill race.

A search of existing files did not identify any references to this mill. However, there could possibly be some confusion between this mill site and site 40RE195 which lies approximately one mile downstream. It appears that both

FIGURE 7: SITE LOCATION MAP: SITE 40AN68

mill sites fell within the boundaries of the Thomas Gallaher tract. Additional research is suggested to attempt to identify dates of operation, original ownership and function.

Pratt Steel Truss Bridge: No Site Number

This abandoned bridge is a Pratt pony truss with concrete abutments (Plate 6). The bridge displayed a timber deck and angle iron rails. The bridge plaque revealed that the bridge was constructed by the Champion Bridge Company, Wilmington, Ohio. The bridge probably dates to the mid-1920s.

CONCLUSIONS

The reconnaissance of the floodplain and associated terraces of the East Fork Poplar Creek identified five historic period sites (40RE195-40RE199) and two prehistoric sites (40 AN67-40AN68). Due to the potential for contamination on the floodplain sites a non-intrusive approach was used to evaluate the identified sites and areas of moderate to high probability. The reconnaissance also determined that the potential for archaeological sites on the floodplain is extremely low.

Site 40RE195 is the remains of a probable 19th century mill site located on the floodplain of the creek. Based on the potential of the site to supply important archaeological information for 19th/early 20th century grist and sawmills, the site is potentially eligible for inclusion in the National Register of Historic Places pursuant to 36CFR60.4(d).

Site 40RE197 is a probable mid-19th century house site located on a terrace above the creek. The remains of the limestone foundation, chimney bases and probable cellar hole suggests that the site remains relatively intact. This and the possible association with the Gallaher family would make the site potentially eligible for inclusion in the National Register of Historic Places pursuant to 36CFR60.4(d).

Sites 40RE196, 40RE198 and 40RE199 are late 19th/20th century house sites which have been heavily disturbed by clearing and bulldozing probably at the time of the acquisition of the tracts by the US Government. Due to the amount of disturbance to the sites, the potential for recovering significant archaeological data is diminished; therefore, the sites do not meet the criteria for inclusion in the National Register of Historic Places pursuant to 36CFR60.4.

Sites 40AN67 and 40AN68 are two prehistoric lithic scatters located on prominent rises adjacent to the creek. Both sites have been disturbed from agricultural and other

Plate 5. Pratt Steel Truss Bridge - View East

external forces, including clearing. The low density of cultural material combined with severe erosion on the sites suggests that the potential for intact archaeological deposits is low. Therefore, the two sites do not meet the criteria for inclusion in the National Register of Historic Places pursuant to 36CFR60.4.

Site 40RE200 is the remains of a mill dam. Currently, small sections of the dam foundation and two mill stones are all that remain of the mill. Based on the limited potential to recover significant data on function and construction methods, the mill site does not meet the criteria for inclusion in the National Register of Historic Places.

The abandoned steel truss bridge is not considered eligible for inclusion in the National Register of Historic Places. The Tennessee Department of Transportation has completed the statewide survey of bridges which resulted in a thematic nomination for bridges meeting the criteria for inclusion in the National Register (Martha Carver, personal communication).

The locations of the sites and the location of moderate to high probability areas should be correlated with the areas of impact as established by the results of the analysis of soil and sediment samples from the project area. The locations of identified sites and areas of moderate to high probability are provided in Figure 8 (Appendix A).

The contractors should be made aware of the present Tennessee burial law (Appendix B)) which protects both marked and unmarked, historic and prehistoric interments. In the event that human skeletal material is unearthed during construction activities, construction in the vicinity should cease and the Tennessee Division of Archaeology notified immediately.

REFERENCES CITED

Department of Energy

- 1983 Resource Management Plan for the Oak Ridge Reservation: Appendix B: Archaeological Considerations

DuVall, Glyn D.

- 1991 An Archaeological Reconnaissance of Two Borrow Areas at the HPPR-DOSAR and Tower Shielding Sites on the Oak Ridge Reservation, Anderson and Roane Counties, Tennessee. Prepared for Martin Marietta Energy Systems, Oak Ridge.
- 1991a An Archaeological Reconnaissance of the Advanced Neutron Source Project on the Oak Ridge Reservation, Anderson and Roane Counties, Tennessee. Prepared for Martin Marietta Energy Systems, Inc., Oak Ridge.
- 1991b An Archaeological reconnaissance of the Melton Valley Liquid Low Level Waste Collection and Transfer System Upgrade on the Oak Ridge Reservation, Roane County, Tennessee. Prepared for Martin Marietta Energy Systems, Inc., Oak Ridge.
- 1991c An Archaeological Reconnaissance of the Melton Valley Recontour Site on the Oak Ridge Reservation, Roane County, Tennessee. Prepared for Martin Marietta Energy Systems, Inc, Oak Ridge.
- 1992 An Archaeological Reconnaissance of the M.K. Ferguson Lay-Down Area/West End Treatment Facility and Tank Farm on the Y-12 Complex, Oak Ridge Reservation, Tennessee. Prepared for Martin Marietta Energy Systems, Inc, Oak Ridge.
- 1992a An Archaeological Reconnaissance of Pond Waste Management Project (K-1065-1066) and the Production Waste Facilities on the K-25 Complex, Oak Ridge Reservation, Tennessee. Prepared for Martin Marietta Energy Systems, Inc., Oak Ridge.

Carver, Martha

- 1992 Personal Communication. Architectural Historian, Tennessee Department of Transportation, Environmental Planning Office, Nashville.

- Faulkner, Charles H.
 1988 Archaeological Investigations of the Jenkins House Site (40Re188) and the Jones House Site (40Re189), Copper Ridge, Oak Ridge Reservation, Roane County, Tennessee.
- Faulkner, Charles H. and Major C.R. McCollough
 1973 Introductory Report of the Normandy Reservoir Salvage Project: Environmental Setting, Typology, and Survey. Normandy Archaeological Project. University of Tennessee, Department of Anthropology,
Report of Investigations No. 11, Knoxville.
- Fenneman, Nevin M.
 1983 *Physiography of Eastern United States.* McGraw-Hill, New York.
- Fielder, George F., Jr.
 1974 Archaeological Survey With Emphasis on Prehistoric Sites of the Oak Ridge Reservation, Oak Ridge, Tennessee. Oak Ridge National Laboratory, Oak Ridge.
- Fielder, George F., Jr., Steven R. Ahler and Ben Barrington
 1977 Historic Sites Reconnaissance of the Oak Ridge Reservation, Oak Ridge, Tennessee. Oak Ridge National Laboratory, Oak Ridge.
- Hubbard, E.H., et al
 1956 *Soil Survey of Sevier County, Tennessee.* USDA, Soil Conservation Service, Washington, D.C.
- Koeppel, Clarence E. and George C. DeLong
 1958 *Weather and Climate.* McGraw-Hill Book Company, New York.
- McNutt, Charles and F.W. Fisher
 1960 Archaeological Investigations in the Upper Melton Hill Reservoir, Anderson County, Tennessee. The University of Tennessee, Department of Anthropology, Knoxville.
- McNutt, Charles and J. Bennett Graham
 1961 Archaeological Investigations in the Lower Melton Hill Reservoir, Anderson, Knox, Loudon and Roane Counties, Tennessee. The University of Tennessee, Department of Anthropology, Knoxville.
- Nash, Charles H.
 1941 Field Notes and Survey Records, Watts Bar Reservoir Survey. On file Frank H. McClung Museum, Knoxville.

Schroedl, Gerald F.

1972 Archaeological Reconnaissance and Test Excavations in the Clinch River Liquid Metal Breeder Reactor Plant Site Area. Submitted to the Tennessee Valley Authority. Prepared by the University of Tennessee, Department of Anthropology, Knoxville.

1974 Historic Sites Reconnaissance in the Clinch River Liquid Metal Breeder Reactor Plant Site. Submitted to the Tennessee Valley Authority. Prepared by the University of Tennessee, Department of Anthropology, Knoxville.

Thomas, Cyrus

1894 Report on the Mound Explorations of the Bureau of American Ethnology. In *Twelfth Annual Report of the Bureau of American Ethnology*, Washington, D.C.

Webb, William S.

1938 An Archaeological Survey of the Norris Basin in Eastern Tennessee, Bulletin 118, Bureau of American Ethnology, Washington, D.C.

APPENDIX A

EAST FORK PC

PLAR CREEK

TITLE

East Fork Poplar Creek
Cultural Resource Areas
Index

US Army Corps
of Engineers
Nashville District

EAST FORK I

LEGEND

500-year Flood Boundary
100-year Flood Boundary
Floodway

100' 0 100'

EAST FORK

POPLAR CREEK

TITLE East Fork Poplar Creek
100-year Flood, 500-year Flood, and
Floodway Boundaries
Sheet 2 of 28

US Army Corps
of Engineers
Nashville District

EAST FORK

LEGEND

500-year Flood Boundary
100-year Flood Boundary
Floodway

100' 0 100'

POPLAR CREEK

TITLE East Fork Poplar Creek
100-year Flood, 500-year Flood, and
Floodway Boundaries
Sheet 3 of 28

US Army Corps
of Engineers
Memphis District

EAST FORK

POPLAR CREEK

TITLE East Fork Poplar Creek
100-year Flood, 500-year Flood, and
Floodway Boundaries
Sheet 4 of 28

US Army Corps
of Engineers
Knoxville District

EAST FORK

LEGEND

500-year Flood Boundary
100-year Flood Boundary
Floodway

POPLAR CREEK

TITLE
 East Fork Poplar Creek
 100-year Flood, 500-year Flood, and
 Floodway Boundaries
 Sheet 5 of 28

US Army Corps
 of Engineers
 Nashville District

EAST FORK

POPLAR CREEK

TITLE East Fork Poplar Creek
100-year Flood, 500-year Flood, and
Floodway Boundaries
Sheet 6 of 28

US Army Corps
of Engineers
Nashville District

EAST FORK

<p>LEGEND</p>	<p>500-year Flood Boundary 100-year Flood Boundary Floodway</p>	<p>100' 0 100'</p>
---------------	---	--

POPLAR CREEK

TITLE East Fork Poplar Creek
100-year Flood, 500-year Flood, and
Floodway Boundaries
Sheet 7 of 28

US Army Corps
of Engineers
Memphis District

US Army Corps
of Engineers
Kearville District

EAST FORK

LEGEND

500-year Flood Boundary
100-year Flood Boundary
Floodway

100' 0 100'

POPLAR CREEK

TITLE East Fork Poplar Creek
100-year Flood, 500-year Flood, and
Floodway Boundaries
Sheet 9 of 28

US Army Corps
of Engineers
Memphis District

EAST FORK

LEGEND

Archaeological Potential

Archaeological Site

100' 0 100'

POPLAR CREEK

TITLE

East Fork Poplar Creek
Cultural Resource Areas
Sheet 10 of 28

US Army Corps
of Engineers
Nashville District

EAST FORK

POPLAR CREEK

TITLE

East Fork Poplar Creek
Cultural Resource Areas
Sheet 11 of 28

US Army Corps
of Engineers
Memphis District

EAST FORK

LEGEND	
	Archaeological Potential
	Archaeological Site

POPLAR CREEK

TITLE

East Fork Poplar Creek
Cultural Resource Areas
Sheet 12 of 28

US Army Corps
of Engineers
Memphis District

EAST FORK

East Fork Poplar Creek
Cultural Resource Areas
Sheet 13 of 28

EAST FORK

LEGEND

Archaeological Potential

Archaeological Site

100' 0 100'

POPLAR CREEK

TITLE

East Fork Poplar Creek
Cultural Resource Areas
Sheet 14 of 28

US Army Corps
of Engineers
Memphis District

EAST FORK

POPLAR CREEK

TITLE East Fork Poplar Creek
100-year Flood, 500-year Flood, and
Floodway Boundaries
Sheet 15 of 28

US Army Corps
of Engineers
Nashville District

EAST FORK II

LEGEND

Archaeological Potential

Archaeological Site

100' 0 100'

EAST FORK

EAST FORK I

EAST FORK

40RE197 (H-3)

POPLAR CREEK

TITLE

East Fork Poplar Creek
Cultural Resource Areas
Sheet 19 of 28

US Army Corps
of Engineers
Memphis District

EAST FORK

POPLAR CREEK

TITLE

East Fork Poplar Creek
Cultural Resource Areas
Sheet 20 of 28

US Army Corps
of Engineers
Nashville District

EAST FORK

LEGEND

Archaeological Potential

Archaeological Site

100' 0 100'

POPLAR CREEK

TITLE

East Fork Poplar Creek
Cultural Resource Areas
Sheet 22 of 28

US Army Corps
of Engineers
Memphis District

POPLAR CREEK

TITLE

East Fork Poplar Creek
Cultural Resource Areas
Sheet 24 of 28

US Army Corps
of Engineers
Nashville District

EAST FORK

POPLAR CREEK

TITLE

East Fork Poplar Creek
Cultural Resource Areas
Sheet 26 of 28

US Army Corps
of Engineers
Nashville District

POPLAR CREEK

TITLE

East Fork Poplar Creek
Cultural Resource Areas
Sheet 27 of 28

US Army Corps
of Engineers
Nashville District

EAST FORK

<i>LEGEND</i>		Archaeological Potential

Archaeological Site

POPLAR CREEK

TITLE

East Fork Poplar Creek
Cultural Resource Areas
Sheet 28 of 28

US Army Corps
of Engineers
Memphis District