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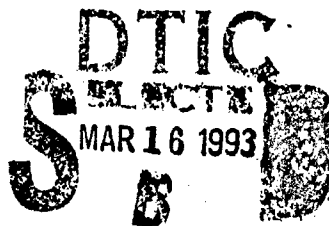
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**ANALYSIS AND INTERPRETATION OF ARTIFACT
COLLECTIONS FROM SITE 3CT271, RANDOLPH ESTATE
DEVELOPMENT, CRITTENDEN COUNTY, ARKANSAS**

February, 1991

GARROW & ASSOCIATES, INC.

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**ANALYSIS AND INTERPRETATION OF ARTIFACT
COLLECTIONS FROM SITE 3CT271, RANDOLPH ESTATE
DEVELOPMENT, CRITTENDEN COUNTY, ARKANSAS**

FINAL REPORT

Prepared for:

Department of the Army
Memphis District, Corps of Engineers
B-202 Clifford Davis Federal Building
Memphis, Tennessee 38013-1894

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Submitted by:

Garrow & Associates, Inc.
510 South Main Street
Memphis, Tennessee 38103



Guy G. Weaver, Principal Investigator and Author

February, 1991

ABSTRACT

In the Spring of 1990, six archaeological sites were recorded by the Corps of Engineers, Memphis District, during a reconnaissance survey of the proposed Randolph Estate Development area. The survey area included approximately 90 acres located within the city limits of West Memphis, Crittenden County, Arkansas. The survey was conducted as required under Mississippi River Permit No. 376. On June 22, 1990, staff from the Corps of Engineers, Memphis District, conducted a controlled surface collection at one of these sites, designated 1A. The site was subsequently assigned Arkansas state site 3CT271.

Garrow & Associates, Inc. was contracted to conduct a literature and records search on the property and to analyze the artifacts from the controlled surface collection at site 3CT271 in order to determine its potential eligibility for nomination to the National Register of Historic Places.

The results of the literature and records search indicate the property was owned by the Randolph family at least by 1887. Analysis of the artifacts suggests a single historic component is present at site 3CT271, which dates to the early twentieth century. The historic artifact assemblage is interpreted as representing a short-term occupational episode associated with tenant farming. One isolated prehistoric ceramic sherd, dating from the Mississippian period (ca. A.D. 900-1500), was also recovered. The site does not meet eligibility criteria for nomination to the National Register of Historic Places, and no further archaeological investigation is recommended.

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The archival research was aided by the assistance of Mr. Bill Eddings, Real Estate Supervisor for Crittenden County. The author also extends his thanks to Ms. Virginia McCartar at the Crittenden County Library.

Cleaning and processing of the artifacts was competently done by Amy Cooley at Garrow & Associates, Inc. laboratory in Memphis. Ms. Cooley also assisted in completion of the contour maps and in other aspects of analysis and report production. Vince Macek prepared the graphics accompanying the document. The final form of the draft report is a partial reflection of the expert editing provided by Mitchell Childress and Patricia H. Baker. Barbara Avery Garrow served as project manager and handled the related administrative details.

TABLE OF CONTENTS

ABSTRACT	i
ACKNOWLEDGEMENTS	ii
TABLE OF CONTENTS	iii
LIST OF FIGURES	v
LIST OF TABLES	v
I. INTRODUCTION	1
II. LOCAL ENVIRONMENT AND PHYSIOGRAPHY	3
Project Area Location	3
Physiography and Soils	3
Climate	4
Flora and Fauna	4
III. CULTURAL OVERVIEW	6
Introduction	6
Prehistoric Perspective	6
The Paleoindian Period	6
The Archaic Period	7
Early Archaic	8
Middle Archaic	9
Late Archaic	10
The Woodland Period	10
Early Woodland	11
Middle Woodland	11
Late Woodland	12
The Mississippian Period	12
The Protohistoric Period	14
Historic Overview	15
Early Historic Period (ca. 1700-1860)	15
The Civil War and Reconstruction (ca. 1860-1900)	16
The Twentieth Century in Eastern Arkansas	17
Previous Archaeological Investigations	18

IV.	RESEARCH DESIGN AND METHODOLOGY	20
	Research Design	20
	Settlement Studies	20
	Stylistic/Ethnic Variation, Borders, and Mixing	21
	Vernacular Architecture and Disappearing Structures	22
	Site Formation and Preservation Factors	22
	Archival and Field Methods	23
	Background and Literature Search	23
	Field Methods	23
	Laboratory Methods	23
	Curation	25
V.	RESULTS	26
	Results of the Archival and Literature Search	26
	Results of the Artifact Analysis	27
	Discussion	34
VI.	CONCLUSIONS AND RECOMMENDATIONS	36
	REFERENCES CITED	37
	APPENDICES	49
	Appendix I: Resume of Principal Investigator	50
	Appendix II: Scope of Work	65

LIST OF FIGURES

- | | | |
|----|--|----|
| 1. | Project Area Location. | 2 |
| 2. | Artifact Counts for Units Collected on Site 3CT271 and Extrapolated Artifact Density Plot. | 31 |
| 3. | Brick Weights for Units Collected on Site 3CT271 and Extrapolated Brick Density Plot. | 32 |

LIST OF TABLES

- | | | |
|----|----------------------------------|----|
| 1. | 3CT271 Artifact Frequencies | 28 |
| 2. | Comparative Artifact Frequencies | 35 |

I. INTRODUCTION

This report documents the results of a literature and records search and analysis of the artifact collections from site 3CT271. The site is located within the corporate boundaries of West Memphis, Crittenden County, Arkansas (Figure 1). Site 3CT271 is one of six archaeological sites recorded by archaeologist Jim McNeil, Corps of Engineers, Memphis District, during a reconnaissance survey of approximately 90 acres within the proposed Randolph Estate Development area. The survey was conducted as required under Mississippi River Permit No. 376.

Subsequent to the initial survey, a controlled surface collection was conducted by the Corps of Engineers, Memphis District, on June 22, 1990 at site 3CT271 (originally designated site 1A). In February, 1991, Garrow & Associates, Inc. was contracted to analyze the artifacts from the controlled surface collection at site 3CT271, conduct a literature and records search of the property, and to prepare an Arkansas state site form. Analysis of the documentary and artifactual materials was undertaken to determine site significance and to inform a decision concerning the need to conduct additional archaeological testing at the site.

A review of the real estate tax records for Crittenden County indicates the property has been under the ownership of the Randolph family since at least 1887. Analysis of the artifactual materials indicate the site was occupied during the early to mid twentieth century, and is probably associated with a tenant farm domicile. One isolated prehistoric ceramic sherd, dating from the Mississippian period (ca. A.D. 900-1500), was also recovered. The site does not meet eligibility criteria for nomination to the National Register of Historic Places, and no additional archaeological investigations are recommended.

The following report documents the procedures and results of the investigations at site 3CT271. The local environmental and physiographic conditions of the project area are reviewed in Chapter II. Information on the culture history of the region is presented in Chapter III. Chapter IV outlines the research design of the study, as well as the methods employed during the archival and literature search, field investigations, and laboratory analysis. The results of the investigations are presented in Chapter V. A summary of the investigations and recommendations is presented in Chapter VI. The sources cited in the report are listed in the References Cited section. The Scope of Work is presented in Appendix 1, and Appendix 2 includes the resume of the Principal Investigator.

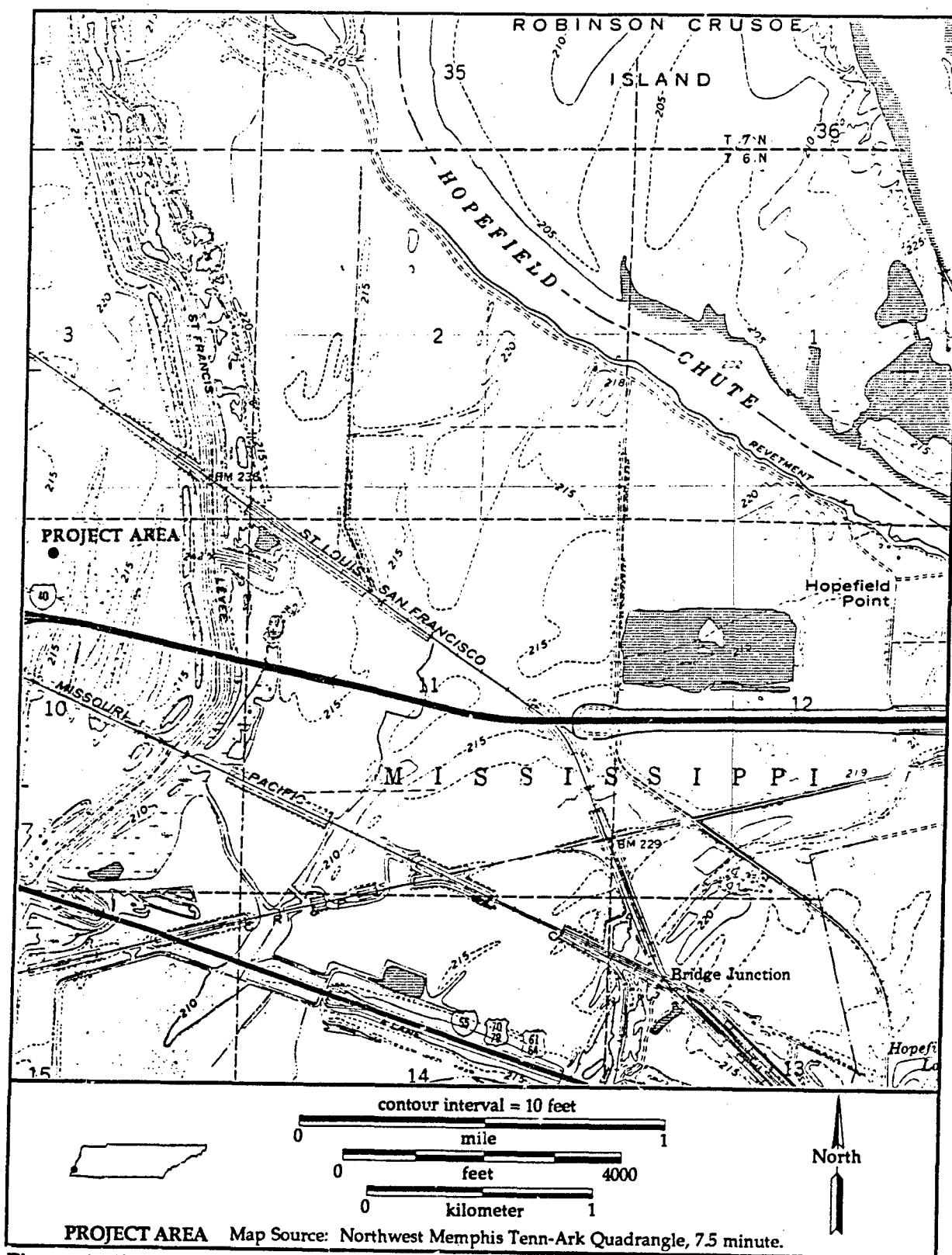


Figure 1. Project Area Location.

II. LOCAL ENVIRONMENT AND PHYSIOGRAPHY

PROJECT AREA LOCATION

Site 3CT271 is located in the NE 1/4 of the NE 1/4 of the NW 1/4 of Section 10, Township 6 North, Range 9 East in eastern Crittenden County, Arkansas. The site is situated within the corporate boundaries of West Memphis, in an area northeast of the major metropolitan development (Figure 1). This area is presently within Site 1 of the proposed Randolph Estate Development Area (see Appendix 1). The St. Francis Levee is located approximately 2,200 feet to the east, and Interstate Highway 40 is located approximately 800 feet to the south.

PHYSIOGRAPHY AND SOILS

Crittenden County is within the Eastern Lowlands subdivision of the Central Mississippi Valley (Morse and Morse 1983:2). The county is contained completely within the meander belt of the Mississippi River, which is bordered on the east by the Pleistocene loess bluffs on the Tennessee side of the Mississippi River, and on the west by Crowley's Ridge, located approximately 70 km from Memphis. The sediments within this zone are alluvial and terrace deposits of the Mississippi River bottomlands (Foti n.d.). Until ditch and levee construction was begun in the late nineteenth century, the entire county was subject to frequent flooding by the Mississippi River and its local tributaries. The surface alluvium exceeds 100 feet in depth and is derived from soil, rock, and sediment from throughout the upper Mississippi River Basin (Gray and Ferguson 1974:2). The topography of the county ranges from broad flats to areas of alternating ridges and swales. These ridges represent natural levees of abandoned river channels.

Drainage in the county is generally southward through a system of artificial ditches and natural drainageways which empty into the Mississippi River (Gray and Ferguson 1974:2). The county has many streams, bayous, and lakes. Major drainages in Crittenden County include the Tyronza River, Fifteenmile Bayou, Tenmile Bayou, and Big Creek. Differences in elevation within the county are marked by distinctive sediment types.

Site 3CT271 is situated on a low alluvial ridge, approximately 215 feet above mean sea level. A low swale which is seasonally inundated is located immediately to the east. Before the construction of the levee and the Interstate highway, drainage was

towards the southwest and the Mississippi River.

The U.S. Soil Conservation Service has mapped the natural sediments in the study area as Sharkey silty clay, gently undulating (Gray and Ferguson 1974:20, Sheet 38). These soils are characterized as poorly drained, level to gently undulating soils in slack water areas. These soils formed in thick beds of clayey sediments, and the content of organic matter is moderate to high. These soils shrink and crack when dry, and expand when wet. A representative profile of Sharkey silty clay shows an Ap layer from 0-5 inches composed of very dark grayish brown (10YR 3/2) silty clay; an A12 layer from 5-8 inches composed of very dark gray (10YR 3/1) blocky silty clay; underlain by a B21 layer from 8-17 inches composed of dark gray (10YR 4/1) clay with yellowish brown (10YR 5/6) mottles (Gray and Ferguson 1974:20).

Sharkey silty clay, gently undulating soils are generally found in areas of alternating long, narrow swales and low ridges that rise two to five feet above the swales, usually at the margins of broad flats. Slopes are usually less than three percent (Gray and Ferguson 1974:8).

CLIMATE

The climate of Crittenden County is warm and moist, with relatively mild winters. The hottest month is July, with an average high temperature of 91.1° F and average low of 71.5° F. The coolest months are December and January, with average high temperatures of about 50° F and average lows of 32.4° F. Temperature extremes range from over 100° F in the summer, to the teens in the winter. The growing season lasts approximately 230 days (Gray and Ferguson 1974:3).

Relative humidity averages about 70 percent throughout the year. Rainfall averages 49.7 inches per annum and comes mainly in the fall; winter is the driest time of year (Gray and Ferguson 1974:3-4). Thunderstorms are common in the summer. Before the construction of a permanent levee system in 1918, floods that covered the city of Marion with up to five feet of water were common (Woolfolk 1982).

FLORA AND FAUNA

When settlers first arrived in Crittenden County, the land was covered with dense hardwood forests. The rich alluvial soils supported some of the best hardwoods in the southern United States. The principal species include sweet gum (*Liquidambar styraciflua*), cottonwood (*Populus deltoides*), hackberry (*Celtis occidentalis*), pecan (*Carya illinoensis*), bald cypress (*Taxodium distichum*), ash (*Fraxinus americana*),

sycamore (*Platanus occidentalis*), oak (*Quercus* spp.), and black willow (*Salix nigra*) (Morse and Morse 1983:14). In recent years, much of the acreage has been cleared for agriculture, and the original forest cover has been reduced to about 10% or less of the land area (Gray and Ferguson 1974:2).

The dense hardwood forest supported a wide variety of wildlife. Native mammals included bison (*Bison* spp.), white-tailed deer (*Odocoileus virginianus*), black bear (*Ursus americanus*), wolf (*Canis* spp.), bobcat (*Lynx rufus*), raccoon (*Procyon lotor*), opossum (*Didelphis virginiana*), red fox (*Vulpes vulpes*), grey fox (*Urocyon cinereoargenteus*), beaver (*Castor canadensis*), and squirrels (*Sciurus* spp.). The area also supported a diverse number of reptiles and amphibians. Turkey (*Meleagris gallopavo*) were an important source of food for the early inhabitants of the area, as were migratory mallard ducks (*Anas platyrhynchos*) and canadian geese (*Branta canadensis*). Fish from the larger streams, oxbow lakes, and beaver ponds, such as the flathead catfish, alligator gar, drum, buffalo, largemouth bass, walleye, channel catfish, bowfin, gar, suckers, and many smaller fish, were also an important food source for prehistoric and historic occupants (Morse and Morse 1983:15).

III. CULTURAL OVERVIEW

INTRODUCTION

The central section of the alluvial floodplain of the lower Mississippi River contains cultural remains associated with the entire span of human occupation in North America. Certain portions of the occupational record, particularly those characterized by the production of ceramics, have been more intensively researched than others, and investigation of the earlier phases has been hindered by differential preservation associated with landscape modification caused by shifting river channels and deposition of deep alluvium. Heavy alluvial deposition following the entrenchment of the main river channel and abandonment of braided stream surfaces probably affected the earliest site record most intensively. Morse (1982:22) has suggested that some of the first sites created in eastern Arkansas may now lie under many meters of floodplain silts and clays.

PREHISTORIC PERSPECTIVE

The prehistoric period in the southeastern United States is traditionally divided into four major periods: Paleoindian, Archaic, Woodland, and Mississippian. Each of these periods is defined by characteristic artifact assemblages and patterns of subsistence and settlement. Northeastern Arkansas has long been recognized as one of the richest archaeological areas in eastern North America in terms of the wealth and complexity of prehistoric settlement. The area has seen extensive investigation since the middle of the last century. More recently, a number of large scale survey and excavation projects have been conducted in northeastern Arkansas (e.g., Anderson et al. 1989). These have greatly expanded the available data base on the prehistoric occupation of the area. In the following sections, a brief description of the culture history of the central Mississippi valley focusing on Crittenden County is presented in a period by period format.

THE PALEOINDIAN PERIOD

The Paleoindian period (ca. 11,500-9,800 B.P.) represents the earliest human occupation in the southeastern United States. The placement of these occupations in the terminal Pleistocene epoch indicates an adaptation to cooler climatic

conditions and a different physiographic regime than found in the modern Holocene. Aboriginal groups of the period were likely small, mobile bands dependent upon a hunting and gathering economy. Although they may have hunted some of the megafauna that became extinct at the end of the Pleistocene, such as mastodon (*Mammot americanum*), bison (*Bison bison antiquus*), and ground sloth (*Megalonyx sp.*), it is likely that the subsistence base was varied and included a number of plant and animal foods. Most of the known finds in northeast Arkansas are from surface contexts and tend to occur along the major river systems. The major diagnostic artifacts of the Paleoindian period are lanceolate, fluted points.

The Dalton period is considered to be transitional between the Paleoindian and Archaic traditions. The key distinguishing feature of the material culture is the unfluted, lanceolate Dalton point. In terms of chronological placement, Dalton is often considered either terminal Paleoindian or Early Archaic. Goodyear (1982) has argued that Dalton represents a distinct temporal interval between the two periods, occurring between 8,500-7,800 B.C., and has pointed out the continuity between the lithic reduction strategies employed by Paleoindian and Dalton populations (Goodyear 1982:384; see also Smith 1986:14). While technologically similar to Paleoindian, Dalton manifests an adaptive pattern that is more akin to later Archaic cultures. One of the most important game species from this time forward to the European contact era seems to have been the white-tailed deer (Morse and Morse 1983:71). The Dalton tool kit is also distinguished by the addition of a larger number of special-function tools and the presence of the woodworking adze.

In contrast to other southeastern regions, northeast Arkansas is distinctive in yielding extensive and important data on Dalton site types, material manifestations, and spacial patterning. Much of this data has been generated from surveys and excavations conducted along the L'Anguille River just west of Crowley's Ridge. Excavations from sites such as Lace, Brand, and Sloan have uncovered evidence of possible burials and revealed features identified as living floors and shelter remains. The distribution of sites and types of sites along the major drainages has also led to the formulation of competing settlement pattern models (Morse 1975, 1977; Morse and Morse 1983; Price and Krakker 1975; Schiffer 1975).

THE ARCHAIC PERIOD

The Archaic period has been dated from about 7,800-1,000 B.C. in northeast Arkansas. It is traditionally divided into three shorter intervals: Early Archaic (ca. 7,800-5,000 B.C.), Middle Archaic (ca. 5,000-3,000 B.C.), and Late Archaic (ca. 3,000-1,000 B.C.). Temporal divisions of the Archaic are primarily based on the occurrence of distinctive projectile points. These bifacial tools have been demonstrated to

change in a patterned way through time and, although a plethora of names have been applied to different morphological forms, occur as "clusters" (see J. Chapman 1975) of related types with a particular spacial distribution. In addition to diagnostic biface types, other material markers provide the means to subdivide the Archaic in the interior southeast. These include types of groundstone artifacts (e.g., Kwas 1981; Elliott 1989), fragments of carved stone bowls, and variations in mortuary items.

The Archaic is characterized by a general and gradual increase in population that has been referred to as regional packing. This demographic trend is accompanied by adaptations geared to the intensive exploitation of different broad environmental zones and to the eventual demarcation of territorial boundaries archaeologically recognizable as phases (e.g., Anderson and Hanson 1988). Intensive exploitation of food resources is reflected in substantial quantities of fire-cracked rock on many Archaic sites. This artifact class results from stone boiling techniques involving the use of skin bags or wooden bowls prior to the adoption of pottery (see Goodyear 1988).

Subdivision of the Archaic and consideration of its attributes are complicated in the central portion of the Mississippi valley by the presence of the river itself and by the contrast in ecotones represented by the broad floodplain and the immediately adjacent loess hills zone of extreme western Tennessee. The river may have acted as a cultural boundary during prehistory, but the precise nature of the boundary effect has not yet been delineated (Morse and Morse 1983:1). In addition to this factor, it seems that the varied resources of the floodplains and loess hills would have acted to differentially condition prehistoric cultural adaptations. The degree to which the archaeological record generated by Archaic activity reflects varied responses to environmental zones or boundaries between social units ("phases" or "culture areas") is a problem for future research. No attempt has been made to reconcile the contrasting schemes proposed for the Archaic of eastern Arkansas and western Tennessee (Morse and Morse 1983:99-134; Smith 1979, 1989) and no effort will be made to do so in this report. The review of both the preceramic and ceramic periods will draw more heavily on Arkansas data because of the project area location and because the data base for western Tennessee is rather sparse (see Jolley 1985:7-13). However, because the project area is within the floodplain proper but occupies a space very near the interface of these two contrasting environmental regimes, brief consideration of data generated on both sides of the river seems to be in order.

Early Archaic

The transition to the Early Archaic is marked by the beginning of the Holocene period and the evolution of a new regime of flora and fauna. In contrast to Paleoindian adaptations, the Early Archaic appears to represent a shift to a more

localized subsistence strategy based on seasonal harvest of plant and animal resources. Similar to earlier occupations, Early Archaic sites tend to be light scatters, reflecting a mobile lifestyle by small groups. Diagnostic projectile points for this period in the central valley include the San Patrice, St. Charles Notched, Hardin Barbed, Rice Contracting Stemmed, and examples in the Kirk/Palmer cluster (Morse and Morse 1983:104-108; Smith 1989:3). Terminal Early Archaic bifurcated forms, common in other areas of the southeast, appear to be absent here (C. Chapman 1975:152; Morse and Morse 1983:104).

Middle Archaic

The Middle Archaic period is poorly represented in the lowlands of the northern Mississippi Alluvial Valley (C. Chapman 1975:177; House 1975:30). It can be roughly distinguished from the Early Archaic by the increased presence of groundstone artifacts and a less diverse stone tool kit. The Middle Archaic (ca. 5,000-3,000 B.C.) represents a period of increasingly localized exploitation of the resource base, and expanded efficiency in the utilization of terrestrial and riverine resources. Morse and Morse (1983:99) have suggested the term "Hypsithermal Archaic" be used for this period in the central Mississippi valley to denote population shifts away from the lowlands in response to a warmer, dryer climatic era. The suggested temporal duration of the "Hypsithermal Archaic" (7,000-3,000 B.C.) includes what is traditionally considered the latter portion of the Early Archaic. In contrast to Morse and Morse, C. Chapman (1975) has utilized observations from southeast Missouri to argue that the lowlands were occupied in the Middle Archaic. Just east of the project area, the rather scanty and problematic Middle Archaic record of western Tennessee (Jolley 1985:10; Smith 1989:3) suggests the use of a broad seasonal round by groups moving between the lower Tennessee River and the Mississippi River loess hills zone (Smith 1972:111). Information from the Missouri bootheel, Ozark highlands, and loess hills (see also Johnson and Brookes 1989) suggest that regional data bases from areas immediately adjacent to the lowlands can perhaps be synthesized in the future to formulate specific research questions focused on the Middle Archaic.

Firm identification of Middle Archaic artifacts associated with temporal divisions of the period has been difficult to achieve. Diagnostic artifacts for the Middle Archaic are thought to include basal notched Eva and Calf Creek points and side notched Hickory Ridge and Cache River projectile points (Morse 1982:22; Morse and Morse 1983:108-110). The side notched forms are morphologically similar to Early Archaic Big Sandy points. Their association with a Middle Archaic horizon, however, suggests the possibility of a distinctive and later side notched form. Smith (1989:4) has identified the Haywood point (Smith 1979:Figure 15) of western Tennessee as one possible Middle Archaic marker for the region. Smith (1989:3) has also noted that classic Eva projectile points are almost non-existent more than 35 km west of the lower Tennessee River, and Morse and Morse (1983:108) point out a similar

scarcity within the western lowlands of Arkansas. These observations call into question the recognition of a true basal notched horizon (Morse and Morse 1983:108-109) within the western lowlands. Smith (1989:5; see also Smith and Weinstein 1987:32) has suggested that his stemmed Bartlett (Smith 1975:Figure 4) projectile point form may be diagnostic of the latter portion of the Middle Archaic along the central Mississippi drainage. It appears rather obvious that more work on the Middle Archaic is required to work out many of the current chronological and material aspects of the period. Clarification of these issues could be greatly facilitated if an intact Middle Archaic component could be located and excavated.

Late Archaic

The Late Archaic period (ca. 3,000-1,000 B.C.) continued the development of more sophisticated adaptations to localized resource zones. The large number of sites documented for this period suggests that population levels continued to increase. Human habitation of the lowlands expanded and intensified during this period (Morse and Morse 1983:115-134). The use of cultigens becomes widespread, with evidence for the use of native seed plants and tropical species (squash, gourd). Two temporal units, the Frierson and O'Bryan Ridge phases, have been tentatively identified in northeast Arkansas. Smith (1989) has posited a number of Late Archaic/Poverty Point phases for extreme western Tennessee based on the occurrence of diagnostic artifacts such as microblades and distinctive baked clay objects (see also Smith and Weinstein 1987; Smith and McNutt 1988). Late Archaic sites are identified by a range of artifact types, including Gary, Big Creek, Burkett, and Table Rock/Motley Stemmed projectile points, chipped stone adzes, and rarely, steatite vessels (C. Chapman 1975:217; Morse and Morse 1983:122). Toward the end of the Late Archaic period, clear relationships with the Poverty Point complex of the lower Mississippi Alluvial valley are evident in the widespread occurrence of baked clay objects and lapidary items, such as carved and polished beads (cf. Smith and McNutt 1988).

THE WOODLAND PERIOD

The Woodland period in the southeast is also divided into three periods: Early Woodland (1,000-500 B.C.), Middle Woodland (ca. 500 B.C.-A.D. 500), and Late Woodland (ca. A.D. 500-800). The Early Woodland period is traditionally marked by the introduction of pottery, the appearance of elaborate burial mound ceremonialism, and the first evidence of intensive horticulture. Settlement systems are characterized by small dispersed villages located in the lowlands, with upland areas at best little more than seasonally occupied hinterlands (Morse and Morse 1983:143-144).

Early Woodland

The term Tchula has been used to refer to Early Woodland components in the northern portion of the lower Mississippi Alluvial valley (Phillips 1970:876-886; Phillips et al. 1951:431-436). No Tchula period phase has been formally defined on the Arkansas side of the river in the vicinity of West Memphis. Excavations at the McCarty site (Morse and Morse 1983:145-159), as well as limited evidence from the Turnage, Bradley, Red Oak (Phillips 1970:879), and Mound City sites, however, suggest the existence of a population aggregate within eastern Arkansas during the last millennium B.C. that exhibits a general affinity to the Turkey Ridge phase (Phillips 1970:878-879) of extreme northwestern Mississippi and southwestern Tennessee (see Morse and Morse 1983:145). Ceramic marker types for the period include some fairly elaborate specimens of Cormorant Cord-Imprinted as well as Withers Fabric-Imprinted, Mulberry Creek Cord-Marked, and Baytown Plain. These grog or clay tempered ceramic types contrast sharply with the sand tempered wares of the contemporaneous Pascola phase, situated farther to the north.

Middle Woodland

The Middle Woodland (ca. 500 B.C.-A.D. 500) period witnessed the reemergence of widespread exchange networks throughout the Southeast and Midwest, involving a number of raw materials and finely crafted finished goods. In fact, one of the most widely recognized markers of the Middle Woodland are exotic artifacts associated with the extensive, pan-Eastern Hopewellian complex. Marksville is the term used to describe the Mid-Southern Hopewellian expression along the Mississippi drainage. Artifacts involved in the Hopewell Interaction Sphere (Caldwell 1964; Seaman 1979) have been found in Middle Woodland burial mounds excavated near the project area, most notably at the Helena Mounds located at the southeastern terminus of Crowley's Ridge. The Helena Mounds, type site for the local Middle Woodland phase, contained numerous burials and artifacts suggestive of both northern and southern spheres of influence (Ford 1963). Recent analysis of the mortuary patterning at Helena Mounds (Mainfort 1988b) supports an interpretation of the societies within eastern Arkansas at this time as moderately stratified. Stratification was likely linked to differential success in trade relations. Mound City, in Crittenden County, may also represent a major Marksville mound site. Unfortunately, detailed investigations at Mound City have never been conducted and the site is currently endangered by the urban expansion of West Memphis.

A number of other large mound sites occur within the major drainages of the Mississippi, and in seemingly more marginal locations (e.g., Pinson Mounds; see Mainfort 1986, 1988a), many of them containing burials associated with a wealth of

imported goods, including copper, mica, galena, and shell artifacts. This information sheds light on ceremonial aspects of Middle Woodland societies in the Mid-South, but the general nature of the Hopewell/Marksville influence in northeast Arkansas is not well understood. The archaeological record of the Middle Woodland consists mainly of ceramic assemblages, with little detailed information on the lifeways of the people (see Morse 1988). A pattern of dispersed autonomous villages and infrequent ceremonial centers is suggested (Morse and Morse 1983:162).

Late Woodland

The Late Woodland period (ca. A.D. 500-800) is poorly understood throughout the Southeast. The elaborate ceremonialism, trade networks, and earthworks associated with Middle Woodland times appear to have died out or become greatly attenuated. In northeast Arkansas, this period is divided geographically into two major study units -- Baytown (see Phillips 1970) in the southern portion of the region and along the eastern border, and Barnes (Dunklin phase), concentrated in the northern portion. In general, plain grog tempered ceramics predominate, although cord marking is most typical of Baytown period sites, while sandy paste ceramics typify Barnes.

The Late Woodland developed into a Coles Creek period culture along and south of the Arkansas River after about A.D. 700. The Toltec site near Little Rock was a major regional center during the Coles Creek period (Rolingson 1982). During the Late Woodland, the foundations of the cultural adaptation known as the Mississippian developed in the central Mississippi Valley, and northeast Arkansas may be the area where this development first emerged.

THE MISSISSIPPIAN PERIOD

Perhaps no period of southeastern prehistory has been more intensively researched than the Mississippian. Based on excavations at numerous sites and extensive surface collections, a cultural pattern for the latest prehistoric segment has been both defined and continuously refined. From about A.D. 900 until initial European contact in the sixteenth century, Mississippian societies of differential complexity controlled local and regional territories along most of the large rivers of the interior southeast, including the central section of the Mississippi.

At the risk of oversimplification, we may summarize the cultural pattern of the Mississippian in eastern Arkansas in terms of its material and organizational attributes. The settlement pattern of Mississippian groups was focused on alluvial floodplains. These areas provided expanses of tillable soil which could be easily

worked with available wood, bone, and stone agricultural equipment. Maize was the dominant food crop and was supplemented by beans, squash, and probably a variety of other foods that have low archaeological visibility. Domesticated crops were augmented with wild foods which had contributed to aboriginal diets in the southeast for centuries. These included nuts, berries, persimmons, greens, and roots. Protein sources included deer, turkey, small mammals, migratory waterfowl, and aquatic species.

The focus on maize as a primary food crop, and the generally increased commitment to agricultural, had significant impacts on the organizational complexity of aboriginal societies in eastern Arkansas. The relatively egalitarian Woodland societies of the region were apparently transformed into more hierarchically arranged constructs with new emphases placed on hereditary leadership and the emergence of managerial organizations. This more complex social organization has been generally referred to as a chiefdom.

Increased organizational complexity is marked by the appearance of substructure platform mounds during the Mississippian. These served as the foundations for religious structures and the locations for the residences of high status individuals. Individual status distinctions were reinforced through differential access to non-subsistence items such as conch shell jewelry, native copper, and non-utilitarian chipped stone items. These status distinctions are reflected in variation of Mississippian burials.

During the initial stages of the Mississippian, Woodland-style conical burial mounds were still erected, reflecting continuity in local traditions. Continuity is also reflected in ceramic traditions, with the presence of clay tempered wares (Baytown) into the Mississippian. These were augmented by shell tempered plain and cord marked ceramics through time. After about A.D. 1000, shell tempered ceramics were the dominant types in Mississippian assemblages.

The chronology for the Mississippian is based on the recognition of phases or cultures for the area which are defined on temporal, spatial, and artifactual grounds. Regional chronology building is an outgrowth of the monumental work conducted in the central drainage by Phillips et al. (1951) during the 1940s. Mississippian sites are commonplace in this portion of Arkansas. The best documented initial Mississippian assemblage comes from the Zebree site in northeast Arkansas (Morse and Morse 1980), which is the type site for the Big Lake phase. Similar components have been recently recognized along the Mississippi River drainage just east of the project area at the Shelby Forest site in Tennessee (McNutt 1988). In southern Crittenden County, Early and Middle Mississippian sites have been recorded, but more research is needed before local phases can be defined.

In the late Mississippian period, populations began to nucleate along the Mississippi

and St. Francis rivers. Settlement into more compact villages with substantial wattle-and daub houses occurred. Villages were linked to regional mound ceremonial centers which were apparently the focus of important religious and social activities. Most of these activities were associated with the agricultural cycle and mortuary ceremonialism. In the vicinity of the project area, important mound centers during the "mature" Mississippian include the Beck, Belle Meade, and Pouncey sites. Local ceramic variations lead initially to the identification of four distinct phases in the Eastern Lowlands: Kent, Parkin, Nodena, and Walls (Phillips 1970), which are often interpreted as competing chiefdoms. In southern Crittenden County, late Mississippian sites have been previously classified as Walls phase (Phillips 1970), and have been more recently included in both the Kent (House 1982) and Horseshoe Lake phases (Smith 1990).

THE PROTOHISTORIC PERIOD

Protohistoric occupations (ca. A.D. 1540-1673) in the northeast Arkansas area have been reviewed or summarized by a number of authors (e.g., Phillips et al. 1951; Morse and Morse 1983:305-315; Morse 1990; Williams 1980; Smith 1990:165-169). Initial European contact in the general project area occurred in June 1541, when the de Soto entrada crossed the Mississippi River and encountered complex Mississippian polities in the Eastern Lowlands of northeastern Arkansas. Descriptions of existing cultures by the de Soto chroniclers are the only historic record of the late prehistoric Mississippian occupations in the region (Brain 1985). The chiefly province of Pacaha has been equated with the archaeological Nodena phase. Williams (1980) has identified the Armorer phase as the seventeenth century coalescence of closely related Walls and Nodena phase populations. Horizon markers for the contact period include Chevron glass beads, Clarksdale bells, catlinite pipes, shell "buttons," sherd disks, and distinctive vessels. Several of the more distinctive vessel forms, as well as the sherd disks (gaming pieces?), of the protohistoric exhibit continuity with the latest pre-contact expressions of ceramic art in the Walls and Nodena phase areas (Childress 1989). While Lewis (1988) has argued strongly for the recognition of astragalus dice as another distinctive protohistoric marker in the central Mississippi drainage, most researchers have been reluctant to accept these artifacts as diagnostic of the period (see Eisenburg 1989). Post-contact burial practices shifted to secondary interment in large earthen urns, demonstrating associations with the late Alabama River phase along the upper section of the Tombigbee River drainage.

HISTORIC OVERVIEW

Early Historic Period (ca. 1700-1860)

Following the de Soto expedition, there were no further written descriptions of northeastern Arkansas until 1673, when the Frenchmen Father Marquette and Louis Jolliet travelled down the Mississippi from Canada in canoes. During the 132 years between the de Soto expedition and this first recorded French expedition, the complex Mississippian chiefdoms with large populations had disappeared. There is little doubt that disease epidemics, introduced by contact with Old World viruses, depopulated large areas of the interior southeast, including northeastern Arkansas (Smith 1987; Ramenofsky 1987). At the mouth of the Arkansas River, in 1673, the French encountered the Quapaw, who already possessed such European goods as beads, knives, and hoes. La Salle encountered the Quapaw nine years later, and Henri de Tonti established Arkansas Post in 1686.

After the initial European discovery, Arkansas alternately was claimed as a possession of Spain ("Florida") or France ("Louisiana"). Both used the native American groups as allies in their wars with the British. During this time, smallpox further reduced the native populations. Spain acquired Louisiana again in 1792. Disrupted native American groups such as the Delaware and Shawnee began moving west of the Mississippi. Cherokee began moving to the St. Francis drainage in 1795. Stringent religious and political requirements kept most American settlers from moving into Spanish territory, until these strictures were eased at the end of the eighteenth century.

The earliest land records available for Crittenden County show 40 eighteenth-century Spanish land grants (Goodspeed 1890:390). One of the earliest settlers was Benjamin Fooy, a native of Holland, who was sent by Don Manuel Gayoso de Lemos, Spanish Governor of Louisiana, as an agent to the Chickasaw. In 1797, he moved from Fort San Fernando de las Barrancas in present-day Memphis to a new fort on the west bank of the Mississippi, named "Camp de l'Esperanza" (Hale 1962). The Spanish name was translated to Camp Hope, and later the town became known as Hopefield. Hopefield was the second European settlement in Arkansas. The original chimney of Fooy's house was still standing in 1858, when the land on which it stood calved into the river (Goodspeed 1890:286).

The first noted resident in the vicinity of Marion was Augustine Grande (or Grandee), a Spanish sargent who settled there after the Jefferson Purchase. He built a house on one of the ridges in the middle of Lake Grandee, named after him. William Russell, "the most active real estate speculator in Arkansas," acquired much of the land in Crittenden County in the first quarter of the nineteenth century (Woolfolk 1982).

The Jefferson Purchase of 1803 acquired the Louisiana territory for the United States, finally opening the area for American settlement. Arkansas Post was taken over by government traders, where Quapaw, Delaware, Chickasaw, and Osage all traded. Arkansas Post became the capitol of Arkansas territory in 1819. It then had a population of about 60 families. Little Rock became the capitol in 1820.

Crittenden County was created by act of the Arkansas Territorial Legislature in 1825 (Goodspeed 1890:390). The original area of the county included present-day Cross, Lee, and St. Francis counties, and the first county seat was established at Greenock in 1827 (Hale 1962). In 1826, ferry service between Memphis and Hopefield was opened. Steamboats from the Mississippi often docked at Marion during times of high water (Woolfolk 1982).

It was also during this period that the Military Road from Memphis to Little Rock was being surveyed. Begun in 1824 and completed in 1828, the construction of the Military Road greatly facilitated immigration to Arkansas (Chowning 1954:7). The road began at Benjamin Fooy's house at Hopefield and ended at the house of William Strong on the St. Francis River near Little Rock. Under the direction of Major General Edmond P. Gaines, Engineer Corps of the United States Army, contracts for the road construction were let to civilians living along the right-of-way. From Hopefield, the road followed the banks of the Mississippi River (now Hopefield Chute) approximately three miles to Mound City before turning westward. The government used this route to move Choctaw and Chickasaw Indians from Mississippi to Oklahoma in 1832, and it was dubbed by some the "trail of tears" (Woolfolk 1982; Rieves 1931). Cherokee who were already living in Arkansas also ceded their lands and moved to Indian territory. The Quapaw had given up much of their territory as early as 1818, and ceded the final two million acres in 1824. The Native American population was essentially eliminated from Arkansas by 1840.

In 1836, the year Arkansas became a state, Marion was selected as the county seat of Crittenden County. Railroad surveys began in 1850-1851 (Woolfolk 1967). The railroads were important because the swamps of eastern Arkansas made the 133 miles from Hopefield to Little Rock almost non-traversable. Early railroads were frequently washed out by floods, but in 1858 the line was completed from Hopefield to Little Rock. During the period from the 1840s up to the Civil War, Crittenden County enjoyed prosperity based on the plantation system. Cotton was the main cash crop.

The Civil War and Reconstruction (ca. 1860-1900)

Early in the war, on June 5, 1862, Federal troops landed at Mound City, four miles

east of Marion, and captured Hopefield (Hale 1962). During the Battle of Memphis the next day, two Confederate rams were sunk in the shoals of the Mississippi River out from Hopefield. On February 13, 1863, Hopefield was burned by Federal troops in retaliation for a raid by Confederate guerillas in which a steamboat and seven barges of coal were sunk. The city was rebuilt, and in the decades following the Civil War, it was known for gambling, brothels, and other vice. During the Yellow Fever epidemics of the 1870s, Hopefield set up a quarantine station, but the disease spread and the community was almost wiped out (Hale 1962). Hopefield continued to exist as a small river town until it was destroyed by the great flood of 1913.

Period documentation from the Reconstruction suggests that the white inhabitants of Crittenden County harbored much resentment against African-American office holders and "carpetbaggers." The late nineteenth century was a period of violent racial strife in the county, and at times the state militia was called in (Woolfolk 1982). The Reconstruction period ended in 1874 with the adoption of a new State constitution (Goodspeed 1890:392).

Crittenden County witnessed devastating damage in the major floods of 1882, 1883, 1897, 1912, and 1913. Little was done to improve the railroads until 1868. Prosperity was enhanced, however, when in May, 1892, the Frisco Railroad bridge over the Mississippi River was opened. It was the first bridge over the Mississippi at Memphis and, at the time, the third largest bridge in the world (Woolfolk 1967).

The Twentieth Century in Eastern Arkansas

Crittenden County has been primarily rural and experienced little growth or population increases prior to the late 1970s. The majority of land annexations in Crittenden County since the early 1900s have occurred in the last thirty years as a result of subdivision developments associated with the growth of Memphis and West Memphis (Woolfolk 1982).

An agricultural depression after World War I and the nationwide depression of the 1930s severely affected the agricultural economy of Arkansas (Harrison 1954:356). Grain prices declined and property taxes could not be paid. Delinquencies resulted in the foreclosure on millions of acres in rural Arkansas, which became state property. Individuals could settle this land by making a small clearing and building a home. They could then gain title to the land by making a nominal investment. Many small households surrounded by 20 to 40 acre plots date to this time period.

Since 1933, when the first allotment was placed on cotton, the importance of that crop has declined (Gray and Ferguson 1974:2). Cotton production involved a considerable quantity of laborers, especially in the days when the crop was planted and picked by hand. Even after the introduction of mechanized cotton pickers,

weeding was done with hand hoes. The increased use of agricultural chemicals put much of the rural population out of work. Today, a more diversified cropping system that includes soybeans, milo, wheat, rice, alfalfa, sorghum, and pasture characterizes most farms in the county. Machinery began to replace livestock as the major source of farm power, and the acreage of corn needed to feed livestock in the county decreased. Farms in Crittenden County have been decreasing in number and increasing in size since 1959.

In the modern era, West Memphis has become the largest city in the county, with 77 percent of the county's population now residing in municipalities (Crittenden County Historical Society n.d.). Service industries have replaced farming in numbers of people employed.

PREVIOUS ARCHAEOLOGICAL INVESTIGATIONS

The area in and around Crittenden County, Arkansas has been the subject of numerous archaeological investigations, beginning in the late nineteenth century with C. B. Moore (1911) and Edward Palmer (1917). Standard references in northeast Arkansas include the report of archaeological investigations on the Cache River (Schiffer and House 1975), the Zebree archaeological project (Morse and Morse 1980), the Village Creek archaeological project (Klinger 1986), and the St. Francis Basin comprehensive overview program (Dekin et al. 1978). Morse and Morse (1983), Klinger et al. (1983), and Lafferty and Watkins (1987) have prepared excellent syntheses and listings of archaeological work in northeast Arkansas by both avocational and professional archaeologists. The Arkansas Archeological Survey also maintains a comprehensive list of publications and manuscripts available on a county by county basis.

A number of large-scale cultural resources surveys have been initiated in recent years. A survey of 90 miles of the L'Anguille River basin in Lee, St. Francis, Cross, and Poinsett counties, in which 222 sites were documented, was conducted by Garrow & Associates, Inc. for the Memphis District Corps of Engineers (Anderson et al. 1989). This survey documents the nature of human occupation in the L'Anguille basin for the past 11,000 years. Important environmental information was also derived from a pollen sequence obtained from Hood Lake.

Other cultural resource management studies conducted in Crittenden County include work on Big Creek (Dwyer 1978; LeeDecker 1979a; Klinger 1981, 1985; Klinger and Imhoff 1982; Klinger et al. 1983; McNeil 1984), Blackfish Bayou (LeeDecker 1979b), Little Cypress Bayou (Thomas 1986), Ten Mile Bayou and Fifteen Mile Bayou (Smith 1975), the Wapanocca National Wildlife Refuge (Jackson 1978), and in the

West Memphis-Memphis Metropolitan area (Kern 1980, 1981). In addition, various surveys by the Corps of Engineers are reported by McNeil (1981, 1985a, 1985b). Investigations in Crittenden County conducted by the Arkansas Archeological Survey are reported by McCurkan (1976), Williams (1988), Morse (1967), P. Morse (1977), Cande (1980), Martin (1978), and Waddell (1981).

Mississippian period sites associated with mound complexes have been the subject of much archaeological interest over the years (see Palmer 1917; Dellinger and Dickinson 1940; Perino 1966, 1967). Building on previous work by Phillips et al. (1951) and Phillips (1970), recent research on the Walls phase is reported by Smith (1990) and Lumb and McNutt (1988). The Parkin phase was the subject of a site cachement analysis by Morse (1981). The Parkin phase may be associated with the province of Casqui, documented by the de Soto chroniclers (Morse and Morse 1983:292). East-central Arkansas and the Kent phase in particular, has been intensively studied by John House (1982) for a number of years.

The Belle Meade and Beck sites, south of the project location, may represent the first towns of the Aquixo encountered by the de Soto entrada west of the Mississippi River (Morse and Morse 1983:296). Belle Meade has been excavated by Memphis State University field schools in recent years. David Dye and Charles McNutt, Memphis State University, Department of Anthropology, included a ceramic collection excavated by an amateur archaeologist from the Belle Meade site in a paper utilizing mathematical clustering indices for whole vessel morphology (McNutt and Dye 1988). David Dye and Sheri Moore have also presented the results of excavations of a portion of a burned house floor from the Belle Meade site (Dye and Moore 1989).

Historic archaeology in Arkansas has generally centered on the pre-twentieth century periods. The site of Arkansas Post and the trading post of Caldron have been excavated (Stewart-Abernathy 1982:302). In June, 1988, a number of local and professional archaeologists attempted to conserve and excavate a group of sunken early twentieth-century riverboats near Hopefield, exposed by record low Mississippi River levels (Stewart-Abernathy 1990).

Garrow & Associates, Inc. has conducted a number of cultural resources surveys dealing with historic site materials in Crittenden County. These include a survey of the River Trace Permit Area near Marion (Cole and Weaver 1990), a report of archaeological testing at site 3CT263 near Edmondson (Buchner and Weaver 1990), and an analysis and interpretation of artifact collections from four sites within the Country Club Gardens Permit Area in West Memphis (Childress 1990).

IV. RESEARCH DESIGN AND METHODOLOGY

Methods employed during the original field investigations and subsequent laboratory analysis are detailed below. Review of the techniques used during the field phase are based on our study of the records maintained by the crew and conversations with Jim McNeil. Discussion of laboratory methods and analytical procedures employed is based on our handling of the artifact collections and data generated from the site.

RESEARCH DESIGN

The Arkansas State Plan provides a statement of guidance for historic archaeology in Arkansas (Davis 1982). It includes a definition of historic archaeology and a discussion of a number of research problems and goals with which historic archaeologists should be concerned.

The analysis and background research portions for this project were conducted under a general research design that is in keeping with the goals of the Arkansas State Plan. This research design was developed by Garrow & Associates, Inc. for the southeastern United States and Caribbean Basin (Garrow & Associates, Inc. 1988:12-15). Four general research areas were delineated that could be applied to reconnaissance, survey, and data recovery level investigations. Those research domains applicable to the present project are discussed below.

Settlement Studies

The major use of reconnaissance and survey data is to determine the distribution of archaeological resources across the landscape. Such data can be utilized for a synchronic, spatial analysis to examine how groups of a single phase adapt to a range of natural settings. The results can also be used to address change in settlement to determine how cultures of a specific setting evolved in response to changes in the natural and cultural environment. The basic underlying premise of such research is that settlement location will be predicated by the pattern of natural resources, the organization of culture, and the subsistence focus. The distribution of smaller, non-village sites is poorly documented in the Mississippi River valley, and a significant portion of the settlement pattern is not well understood. Before archaeology can move toward explaining major cultural change (e.g., the development of hierarchical chiefdoms and concomitant ritual public works), it is necessary to

document the full settlement sphere.

Various phenomena appear to affect or cause settlement change through time. These include the beginnings of horticulture, the development of cultural complexity, the European intrusion (in terms both of European belligerence and the depopulating effect of newly introduced diseases), the rise of large plantations (which tends to cluster the population in rural centers), the rise in importance of family agricultural production, and industrialization. In addition, settlement patterns probably were altered in response to extra-insular influences. Synchronic variation in settlement should be related to the environmental potential of various ecological zones, although the organization of the various indigenous and historic cultures would also have had an impact.

Settlement patterning can also be understood at the site level, by examining the relations of individual structures and features to one another. Such analyses provide useful information for the interpretation of past cultural systems. The relation of refuse dumps to living areas; of ceremonial structures to residences; of elite occupations to the workers; and of technical to domestic spheres, all provide insights.

Stylistic/Ethnic Variation, Borders, and Mixing

The culture history of the Mississippi River valley has been interpreted as a mosaic of diverse cultural influences entering the area from different sources and with different results. As such, the prehistory and history of the area can provide an excellent context for the study of culture contacts and dynamics. While an elementary culture history has been generated which covers portions of the valley, it is important to fill in the gaps in the record and document the manifestations of the border areas. Ethnographers have recognized that the character of cultural mixing (as demonstrated in material culture and, therefore, the archaeological record) is dependent on a number of factors, including social organization, subsistence base, and population size. Additionally, major factors involved in the European-Indian contact were weaponry, mobility, and resistance to non-native diseases.

The results from reconnaissances, surveys, and large-scale excavations in different areas of the southeastern United States can provide pieces of the puzzle for recognizing cultural boundaries. Furthermore, if the analysis of materials is conducted with an emphasis on cultural markers (e.g., surface motifs and ceramic paste characteristics), surveys and reconnaissances can address culture contact in specific areas. Explicit awareness of this research avenue is necessary if these proposed projects are to fulfill their archaeological potential.

Vernacular Architecture and Disappearing Structures

A research sphere that is often downplayed in the preliminary stages of cultural resource management is the documentation of vernacular architecture. Cultural resources surveys and reconnaissances in the area have often ignored standing structures or ruins unless they are part of large, well-documented plantations. The possibility is strong that significant examples of isolated vernacular structures have been sacrificed to development because they were not carefully documented by archaeologists. The surviving buildings represent functional adaptations to unique area needs, expressed in a mixed cultural/vernacular tradition. As with the documentation of artifact style distributions, the recording of the spatial and temporal variation in house types will allow for questions of cultural interaction to be addressed. Historic structures and their archaeological expressions are cultural resources and must be carefully documented.

Site Formation and Preservation Factors

Recently, postdepositional processes have become a major theoretical and methodological focus of archaeology (e.g., Binford 1981; Schiffer 1972, 1976). Most archaeological investigation is done with much attention to the factors that have affected the character and condition of an archaeological deposit, in the hope of being able to make more meaningful inferences from the present archaeological record to past phenomena. This has led to more geologically-oriented investigation and to controlled studies of the ways in which particular kinds of material are affected by various conditions that may exist during the life of an archaeological deposit, in terms of both intra-site spatial relationships and the quality of preservation.

This focus on postdepositional and site-formational processes offers important contributions to culture resources surveys. In a study in which the goal is to determine if archaeological remains are present, knowledge of local geomorphology and sedimentary and erosional processes will help form expectations about the probabilities of locating such remains. This knowledge will also aid in understanding the results of such a study. One general kind of contribution that this focus on site formational and postdepositional processes has made is a renewed faith in the integrity of surface deposits.

ARCHIVAL AND FIELD METHODS

Background and Literature Search

A comprehensive examination of existing literature and records was conducted for the purpose of inferring the potential presence and character of cultural resources in the vicinity of the study area. The Arkansas Archeological Survey state site files provided information on previously recorded sites in the vicinity of the project area, and on previous archaeological investigations conducted in Crittenden County. Additional documentary research included a review of Crittenden County history at the Crittenden County Public Library in Marion, and a review of the Crittenden County Courthouse Tax Assessment Records. Other information was collected from the site files housed at the C. H. Nash Museum in Memphis. The extensive libraries that Garrow and Associates, Inc. maintains in Memphis and Atlanta were also consulted.

Field Methods

Investigations at site 3CT271 were first conducted in the Spring of 1990, as part of compliance procedures required under Corps of Engineers, Mississippi River Permit No. 376. Identification of the artifact concentrations within the proposed Randolph Estates Development permit area was made by Jim McNeil after the area had been plowed and moistened by rain. Six sites were identified. Survey conditions were reported as excellent and surface visibility was close to 100 percent. Initial site identification was followed by additional field work, consisting of a controlled surface collection, conducted at site 3CT271 on June 22, 1990.

The controlled surface collection strategy employed the use of 5 x 5 m squares distributed across the apparent maximum extent of the artifact concentration. Collection squares were identified by the north and west coordinates of the southeastern corner on each site, and these proveniences have been maintained in the current report. The goal of the surface collection was to obtain a provenienced 25 percent sample from the site. A total artifact recovery was executed within each collection square and all artifacts were separately bagged by square location. The selected squares were oriented along a bearing of 45° west of grid north and spaced such that no two units were defined by common margins.

Laboratory Methods

Artifacts collected during the field phase were processed at the facilities of Garrow & Associates, Inc. in Memphis, Tennessee. The work conducted in the laboratory

included washing, counting, and analyzing all specimens. Brick samples were also weighed to the nearest gram. Preliminary artifact counts had already been made by Corps of Engineer personnel when the material was received by Garrow & Associates, Inc., so a portion of the quantification served as a check on these earlier tabulations. No major discrepancies between the two tabulations were noted. All of the observations and interpretations contained in this report are based on the tabulations and identifications made in the Garrow & Associates, Inc. laboratory.

The artifacts were analysed using a system based on South's (1977) artifact patterning concept. Four attributes for historic artifacts were recorded: Group (this refers to South's Kitchen Group, Architecture Group, etc.), Class (essentially raw material, such as ceramic, glass, metal, etc.), Type (a general artifact type, like pearlware), and Subtype (a specific artifact type, such as hand painted pearlware). Observed variation in the resulting frequencies can be compared to other sites, and statements pertaining to patterns and site function(s) can be offered.

Kitchen ceramics are divided among three categories: earthenware, stoneware, and porcelain, with earthenware being the most commonly recovered historic ceramic from nineteenth-century occupations. The definition of nineteenth and twentieth century earthenware types is less readily accomplished than for earlier ceramics, however. Ceramic types that developed following pearlware are primarily characterized by a decrease in the degree of cobalt tinting and the eventual creation of "white" ceramics referred to in the archaeological literature as "whitewares." In 1813, C. J. Mason and Company of England introduced a new ceramic type known variously as "ironstone" or "stone china." This was an extremely high-fired ware which was normally vitrified, and thus technically a stoneware. However, vitrification did not always occur, and this characteristic cannot always be used with assurance to separate ironstones from other refined earthenwares. As archaeologist and ceramic historian George Miller has noted (1980:2), drawing distinctions between the various white-bodied wares of the nineteenth century is difficult to accomplish. Research by Miller (1980) indicates that surface decoration, more than ware type, determines the relative socioeconomic status of different historic ceramics and, following Miller, many archaeologists are now focusing their analyses on decorative motifs and shying away from the creamware - pearlware - whiteware - ironstone debate.

However, work by Garrow (1982) at the Washington Civic Center site suggests a more accurate resolution to the difficulties in distinguishing whiteware from ironstone. Working with exceptionally large assemblages from tightly defined nineteenth century contexts, Garrow (1982) was able to define a refined earthenware ceramic with a cream-tinted paste and an opaque white glaze which was susceptible to crazing. He noted that the paste of this ceramic was more large-grained than comparable ironstones and decorated earthenwares, and Garrow defined this type as cream colored ware, assuming it was the least expensive plain earthenware ceramic

referred to in the price-fixing guides cited by Miller (1980). Cream colored ware (referred to in shorthand as CC ware) is described as exhibiting the following characteristics: a yellow to ivory body cast; a grainy paste which was apparently not as well-fired as ironstone, and was hence lighter by volume than other ceramics; and a glaze which is susceptible to crazing. Following Miller (1980), Garrow divides white-bodied late nineteenth-century ceramics into two categories: late refined earthenwares and ironstones. CC ware and the various decorative types found on nineteenth-century earthenwares (e.g. hand painting, transfer printing, edging, sponging, etc.) are included in the Late Refined Earthenware category, while both plain and decorated ironstone are included in the ironstone group. The characteristics of ironstone recognized by Garrow (1982) include a refined, stark white, bluish, or gray paste, and a dense body and greater weight than comparable sherds.

While refined tablewares usually contribute the majority of sherds from nineteenth and twentieth century site assemblages, stoneware sherds are also usually recovered. Stonewares, generally employed for utilitarian purposes, were made throughout the United States. Four glaze types are prevalent on these wares: (1) Alkaline, a sand and ash glaze indigenous to the Deep South, and used from ca. 1820 until the 1890s; (2) Albany Slip, a clay slip glaze named for the Albany, New York region, and used from the early 1800s to the present; (3) Salt glazing, which is one of the oldest known glazes applied to stoneware, and which had a focus in the northeastern U.S., but was found throughout the country; and (4) Bristol Slip, a chemical and clay slip glaze which was made popular in the U.S. after 1884 and was used almost exclusively after 1920 (Greer 1981:211-212). The combined use of Albany and Bristol glazes on single vessels probably dates from the period between 1884 and 1920 (Greer 1981:212).

In addition to refined and coarse earthenware ceramics, large quantities of bottle glass is usually recovered from sites of this period. While most early glass was free-blown, mold-blown and machine-made bottles became common during the nineteenth and twentieth centuries. Mold-blown glass occurs after ca. 1818. Machine-made bottles were used in commercial production beginning in 1893, although fully automatic devices were not introduced until 1917 (Jones and Sullivan 1989:39).

CURATION

The artifactual materials recovered from site 3CT271 will be curated at the University Museum at the University of Arkansas in Fayetteville. The assemblage is accessioned under the number 91-5.

V. RESULTS

The results of the Archival and Literature Search and the laboratory analysis are presented below in separate sections. The information is interpreted with reference to the nature of the prehistoric and historic record of Crittenden County.

RESULTS OF THE ARCHIVAL AND LITERATURE SEARCH

A review of recorded sites indicates no previously recorded sites in the immediate vicinity of site 3CT271, and no structure is shown at this location on the USGS Memphis, Tenn.-Ark., quadrangle (1961). Approximately 12,000 feet north of 3CT271 near Mound City, a cluster of prehistoric sites, including 3CT4, 3CT5, and 3CT6, line the south shore of Marion Lake. Another prehistoric site, 3CT12, is recorded at Engineers Beach, approximately 9,500 feet to the southeast of the project area.

On June 16, 1823, William Rector, Surveyor in the Territory of Arkansas, completed the lay-out of fractional Township No. 6 North, Ranges 9 and 10 East. The original survey plats show a low swampy area immediately east of the site in the vicinity of the present swale (United States Government, Department of the Interior 1912).

The research also included a review of the Crittenden County real estate tax records, housed in the vault of the Crittenden County Courthouse in Marion. The earliest record of the property comes from the 1887 digest, which indicates W. M. Randolph owned all of Section 10, T. 6N., R. 9E. There is no listing for this parcel in 1888, but in 1893, W. M. Randolph is shown as owning the eastern half of the section, while the western half, including the quarter section in which the site is located, was under the trusteeship of J. H. Humphries. In 1903, the east 1/2 of the west 1/2 of Section 10 is listed under C. H. Organ (Orgau?). W. M. Randolph and C. H. Organ are co-listed in 1907. Humphries is again listed for the west half of the section, with Randolph in the eastern half in 1910. In 1911, the western half of the section is listed with W. M. Randolph and Organ, while the eastern half is listed with W. M. Randolph and Bryan. By 1917, W. M. Randolph is again the sole owner of Section 10. Today, the property is under the ownership of the Randolph Estate.

Very little information on W. M. Randolph has been collected. It is known that in 1862, a W. M. Randolph was part of a Confederate posse which abducted Elisha Baxter in Batesville, Arkansas. Baxter, who was later to become governor of the state, filled suit against his abductors in May, 1863 in Pulaski County, Arkansas

(Worley 1957:101).

In all probability, the parcel of land on which the site is located was once part of a larger plantation complex owned by the Randolph Estate, established in the years before the Civil War. As will be shown below, the archaeological assemblage from site 3CT271 is consistent with that expected for a tenant farmer or other subsistence farm family that worked or rented land from the estate during the early part of the twentieth century.

RESULTS OF THE ARTIFACT ANALYSIS

The controlled surface collection resulted in the recovery of 466 historic artifacts and one prehistoric artifact from site 3CT271. The results of the artifact analysis are presented in Table 1. The majority of the items recovered (n=247, or 52.9%) are kitchen related. Broken bottle glass (n=191, or 40.9%) is the major artifact class in the assemblage. Brick fragments (n=190, or 40.7%) are also well represented, although other architectural artifacts, including window glass, nails, and other hardware are generally lacking. One ceramic disc, probably an architectural tile, was recovered from N25 W60. All identifiable brick specimens are machine made.

The controlled surface collection data was used to develop a contour map of artifact density on the site with a software application called *MacContour*. This program utilizes coordinate values and associated quantities to extrapolate density patterns across a defined two-dimensional space. A plot of the total artifact count is presented in Figure 2. This plot indicates that the main artifact concentration at the site is centered in the north-central portion of the collection area. Unit N40 W35 produced the most artifacts (n=55), with decreasing artifact counts extending towards the southeast, as well as to the northeast, outside the collection area. The relatively low artifact density would suggest that cultural materials may be restricted to the plow zone (upper 20 cm), but in the absence of subsurface testing, this is merely speculation.

Given the large percentage of burned artifacts, melted glass was plotted in the hopes of isolating a specific local within the site where a dump area might be located. The result of this plot did not differ significantly from the distribution of total artifact density. Artifacts were also hand plotted by artifact group, class, and other variables. The only distribution which was distinguishable from the distribution of the total artifact density was brick weights. A plot of the brick density (recorded in grams) is presented in Figure 3. This plot indicates the greatest density of brick is located in the northeast corner of the collection area. In the absence of data from collection units to the north and east of the collected area, any statements regarding the

TABLE 1. 3CT271 ARTIFACT FREQUENCIES

	NORTH:	0	0	5	5	5	10	10	10	15	15	15	20	20	20														
	WEST:	15	35	20	40	55	5	45	60	10	30	50	15	35	55														
KITCHEN																													
CERAMICS																													
Porcelain																													
Soft Paste - Plain																													
Hard Past - Plain																													
Hard Past - Molded																													
Institutional																1	1												
Earthenware																													
White Ironstone - Plain																1	1	2	1										
White Ironstone - Molded																													
White Ironstone - Decal																													
White Ironstone - Transfer																													
Ironstone - Blue & White																													
Ironstone - Burnt																1													
Stoneware																													
Gray - Salt Glazed																													
Unident. - Burnt																													
BOTTLE GLASS																													
Machine Made																													
Clear																3	2	6	1	2	3	2	3	10					
Aqua																1	1			1		1	1						
Ameythst																2	2												
Amber																													
Blue																													
Unidentified																													
Ameythst																													
Aqua																													
Burnt																													
Clear																3	3												
Green																1	1												
Aqua																													
Amber																													
OTHER																													
Glass																													
Milk Glass Canning Seal																													
Milk Glass - Molded, Undent.																													
Unident. - Burnt																1	2												
Metal																													
Alum. Screw Cap																1													
ARCHITECTURE																													
BRICK																1	1	6	1	6	7	2	9	6	5				
CONCRETE																													
WINDOW GLASS																						1							
LOCK LATCH																													
TILE																													
ARMS																													
SHOT GUN SHELL																1													
ACTIVITIES																													
IRON MACHINE PART																			1										
BOLT																													
SPARK PLUG																1													
MISCELLANEOUS																													
COAL																													
NON-CULTURAL STONE																		1			2								
WOOD																				1									
UNIDENT. IRON/STEEL																													
UNIDENT. ALUMINUM																													
PREHISTORIC CERAMIC																													
TOTAL																1	3	2	6	2	2	17	1	11	14	7	17	14	16

TABLE 1. 3CT271 ARTIFACT FREQUENCIES (cont.)

	NORTH:	25	25	25	25	30	30	30	35	35	35	40	40	40	40
	WEST:	0	20	25	60	5	25	45	10	30	50	0	15	35	55
KITCHEN															
CERAMICS															
Porcelain															
Soft Paste - Plain														1	
Hard Paste - Plain														1	
Hard Paste - Molded												1			
Institutional			1	1				1							3
Earthenware															
White Ironstone - Plain			1				3			2			2		
White Ironstone - Molded								1							
White Ironstone - Decal						2									
White Ironstone - Transfer				1											
Ironstone - Blue & White														2	
Ironstone - Burnt													1		
Stoneware															
Gray - Salt Glazed				1											
Unident. - Burnt															1
BOTTLE GLASS															
Machine Made															
Clear			6	5	2		4	2	2	3	4		1	8	1
Aqua			3				2		1					4	
Amethyst							1								
Amber			1					1		1	1				
Blue								1							
Unidentified															
Amethyst															
Aqua								1							
Burnt															
Clear		2				2	6	4	2	3			6	10	
Green												1	1		
Aqua			3				2		2	2				5	
Amber															
OTHER															
Glass															
Milk Glass Canning Seal														2	
Milk Glass - Molded, Unident.			1												
Unident. - Burnt				2											
Metal															
Alum. Screw Cap															
ARCHITECTURE															
BRICK		4	11	3	2	6	9	1	10	8	5	3	13	18	4
CONCRETE		1					3							2	1
WINDOW GLASS										1					
LOCK LATCH		1													
TILE					1										
ARMS															
SHOT GUN SHELL															
ACTIVITIES															
IRON MACHINE PART			2												
BOLT														1	
SPARK PLUG															
MISCELLANEOUS															
COAL			1												
NON-CULTURAL STONE															
WOOD															
UNIDENT. IRON/STEEL														2	
UNIDENT. ALUMINUM						1									
PREHISTORIC CERAMIC														1	
TOTAL		8	30	13	5	11	30	12	17	20	10	5	26	55	10

TABLE 1. 3CT271 ARTIFACT FREQUENCIES (cont.)

	NORTH:	45	45	45	45	50	50	50	
	WEST:	5	20	40	60	10	25	45	TOTAL
KITCHEN									
CERAMICS									
Porcelain									
Soft Paste - Plain									1
Hard Past - Plain									1
Hard Past - Molded									1
Institutional				1					9
Earthenware									
White Ironstone - Plain				2		1	1		17
White Ironstone - Molded									1
White Ironstone - Decal									2
White Ironstone - Transfer									1
Ironstone - Blue & White		1							3
Ironstone - Burnt		1		2					5
Stoneware									
Gray - Salt Glazed									1
Unident. - Burnt				2					3
BOTTLE GLASS									
Machine Made									
Clear		1	4	1		1	2	1	80
Aqua			3	1		1		1	21
Ameythst				1					6
Amber				2					6
Blue		1		1					3
Unidentified									
Ameythst						1			1
Aqua						1			2
Burnt									
Clear		4	1	3		4			53
Green									4
Aqua									14
Amber				1					1
OTHER									
Glass									
Milk Glass Canning Seal		1							3
Milk Glass - Molded, Unident.									1
Unident. - Burnt					1				6
Metal									
Alum. Screw Cap									1
ARCHITECTURE									
BRICK		9	14	10		5	8	3	190
CONCRETE							1	1	9
WINDOW GLASS									2
LOCK LATCH									1
TILE									1
ARMS									
SHOT GUN SHELL									1
ACTIVITIES									
IRON MACHINE PART						1			4
BOLT									1
SPARK PLUG									1
MISCELLANEOUS									
COAL				1					2
NON-CULTURAL STONE									3
WOOD									1
UNIDENT. IRON/STEEL									2
UNIDENT. ALUMINUM									1
PREHISTORIC CERAMIC									1
TOTAL		18	27	23	1	15	12	6	467

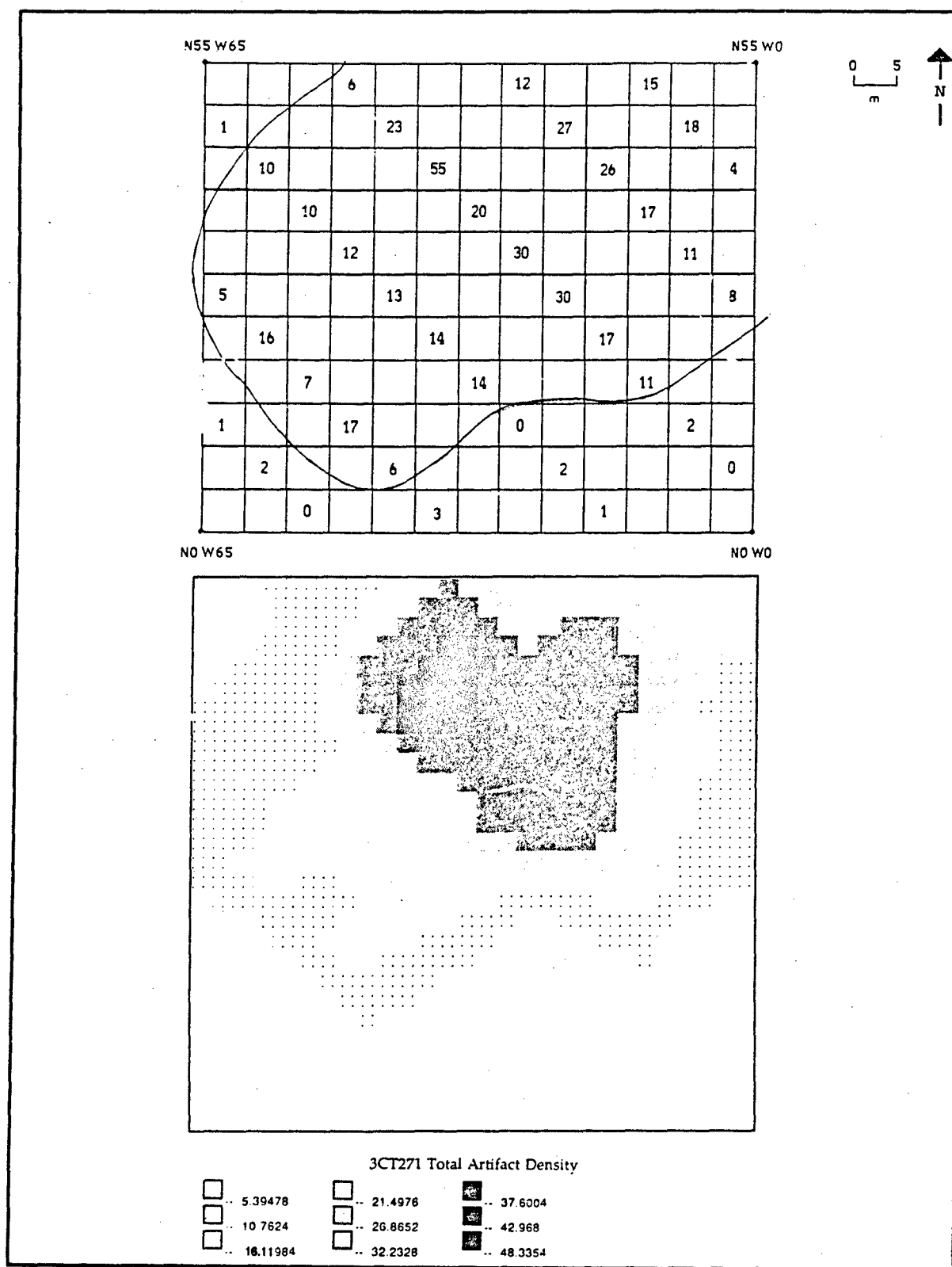


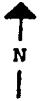
Figure 2. Artifact Counts for Units Collected on Site 3CT271 and Extrapolated Artifact Density Plot.

N55 W65

N55 W0

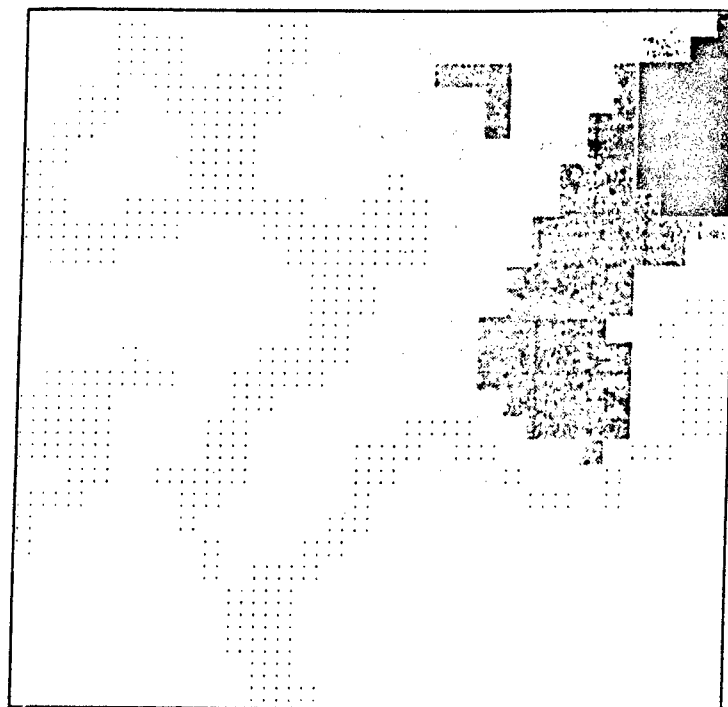
			21.5			243.5			72.5		
0				131			262			469	
	231				212				174		597.5
		63				66				369	
			15				136				212
2.5				36				256			34
	90				125				333		
		14.5				143				326	
146				107			0				0
	0				252			0			0
		0			5				0		

0 5
m



N0 W65

N0 W0



3CT271 Brick Density

□ -- 60.7332	□ -- 242.932	■ -- 425.131
□ -- 121.466	□ -- 303.665	■ -- 485.864
□ -- 182.199	□ -- 364.398	■ -- 546.599

Figure 3. Brick Weights for Units Collected on Site 3CT271 and Extrapolated Brick Density Plot.

distribution of activity areas, or of the location of the suspected chimney, would be suspect. However, the plots would tend to suggest that the site is roughly oval, extending approximately 180 feet (55 m) northwest to southeast, and at least 250 feet (75 m) southwest to northeast. Given the good surface visibility at the time the work was conducted, it is not likely that the survey crew underestimated the northeast boundary by much.

White ironstone is the major ceramic type found at the site, the majority of which is plain (see Table 1). Decorated sherds include one green transfer print on white ironstone sherd from N25 W40, and a floral polychrome decal on white ironstone sherd from N30 W05. In addition, three sherds of a thick ironstone bowl with a cobalt blue and off-white glaze were recovered. The sherds may be part of a "wedding band" decorated vessel, although positive identification is impossible, given the small size of the sherds. Nine sherds of a vitreous semi-porcelain, probably representing a single bowl, were also recovered. Surprisingly, no CC ware or other late nineteenth-century ceramics were represented. No ceramic backmarks were recovered from which manufacturing dates could be derived. However, the ceramic assemblage is consistent with other assemblages dating to the late nineteenth to mid twentieth century.

All of the identifiable bottle glass recovered from site 3CT271 is machine made. Of particular note are several pieces of solarized amethyst glass. "Sun colored amethyst," produced with manganese, was most common in the last quarter of the nineteenth century, and generally dates before World War I (Jones and Sullivan 1989:13). One large aqua bottle or jar base was recovered which exhibits suction scars around a central base mold, indicating it was manufactured using a fully automatic machine, first developed by Michael Owens in ca. 1903. Owens' machines were widely used by the second decade of the twentieth century, but were replaced by more versatile and cost-effective machines by the late 1940s or early 1950s (Jones and Sullivan 1989:38-39).

The collection also included one prehistoric ceramic rim sherd recovered from N40 W35. Although the sherd is less than 2 cm in size, surface erosion is minimal. The paste is typical of Bell Plain, *var. Bell*, and dates from the Mississippian period (Phillips 1970:59; Million 1975:202; Lumb and McNutt 1988:27). It is pale brown (10YR 6/3) in color with leached, finely ground shell and fine grog tempering. It is a straight rim, 6.2 mm thick, and the lip is rounded with a slight internal bevel. The exterior exhibits a single straight incised line at an angle to the lip. The sherd is unusual in the treatment of the interior surface, which exhibits fine fabric or cloth impressions. This last feature may not have been an intentional decorative element, being more likely a result of the potter using a cloth while handling the wet clay pot. The author knows of no current type or variety with similar interior treatment.

DISCUSSION

Glass and ceramic artifacts recovered from site 3CT271 suggest the site was occupied in the early twentieth century (ca. 1900-1950). The lack of plastic items from the site further suggests the site was abandoned by ca. 1940. In many ways, site 3CT271 is similar to other sites in Crittenden County which have been associated with tenant farmsteads, dating ca. 1870-1950 (see Buchner and Weaver 1990; Childress 1990). The proposed settlement pattern for tenant steads during this period is discussed by Stewart-Abernathy and Watkins (1982:HA87-88):

... plantation headquarters consisting of planter housing, riding boss/manager housing, general service outbuildings, plantation store; wire fencing pattern consisting of arable land divided into 20 to 40 acre fields; tenant steads consisting of house, privy, garden, mule shed or barn, chicken house, pig sty, and one or more enclosures with dug or drilled wells; dispersal pattern of tenant steads organized either in a line along a road or bayou channel separated by 100 meters or less, or according to topographic considerations with one stead per tenant farm...vernacular architecture of tenant housing includes frame construction in single pen, abutted pen (possibly multifamily), shotgun, and bungalow a.k.a double shotgun. Tenant housing may also include reuse of log or frame structures dating to earlier periods; extensive secondary and tertiary road net providing access to tenant housing (and) the various small fields.

The increased use of agricultural chemicals, mechanized farm equipment, and the growth of agribusiness at the expense of small family owned farms has changed the rural landscape of Crittenden County in the last four decades. Tenant houses which were a common element on back roads in the country, are now largely vacated or have been removed.

Recent work on tenant stead sites in Crittenden County by Garrow & Associates, Inc., provide a tentative artifact pattern of the archaeological expressions for these types of sites. Investigations at sites 3CT267, 268, 269, and 270 within the West Memphis Country Club Gardens permit area (Childress 1990) provide a comparative data base for the 3CT271 assemblage. Table 2 provides the artifact percentages from these sites organized within South's (1977) artifact patterning scheme. Following standard practice in historic archaeology, brick counts have been excluded from the Architectural Group frequencies in Table 2.

TABLE 2. COMPARATIVE ARTIFACT FREQUENCIES

	<u>3CT271</u>	<u>3CT267</u>	<u>3CT268</u>	<u>3CT269</u>	<u>3CT270</u>
KITCHEN	95.7	99.4	92.3	91.6	94.8
Ceramics	17.4	8.2	6.2	21.7	5.2
Glass	74.0	91.2	86.2	69.9	89.6
Other	4.3	0.0	0.0	0.0	0.0
ARCHITECTURE	1.6	0.0	1.5	6.0	4.1
FURNITURE	0.0	0.0	0.0	0.0	0.0
ARMS	0.4	0.2	0.0	1.2	0.0
CLOTHING	0.0	0.5	0.8	0.0	0.0
PERSONAL	0.0	0.0	0.0	0.6	0.0
TOBACCO	0.0	0.0	0.0	0.0	0.0
ACTIVITIES	2.3	0.0	5.4	0.6	1.0
Total Artifacts	258	613	130	166	193

It is clear from this table that Kitchen Group artifacts make up the bulk of materials collected at these sites, comprising 91.6% to 99.4% of the assemblage. Architectural artifacts, excluding brick, are surprisingly low (less than 10%). Although the Country Club sites may be associated with refuse areas and not house sites per se, the lack of nails, window glass and other architectural hardware is noticeably different from historical house sites occupied by middle class farm families over several decades (cf. Weaver et al. 1990).

The artifact profiles of these sites would be consistent with short-term occupations of tenant or subsistence farmers. Because a large percentage of rural farm families did not own the land on which they lived and worked, a certain amount of mobility is to be expected, given rotating field cultivation, changes in family size and family structure, and employment. The house itself may have been the single most valuable possession for many of these families. The lack of architectural items at these sites suggests the house, usually built of frame lumber, was dismantled and moved with the occupants. A similar practice of relocating "chattel" houses by landless tenants is present on the island of Barbados, West Indies.

V. CONCLUSIONS AND RECOMMENDATIONS

A literature and records search, and artifact analysis was conducted for site 3CT271, a small historical site within the proposed Randolph Estates Development area, near West Memphis, Crittenden County, Arkansas. The literature and records search included consultation of recorded sites in Arkansas, a review of the Tax Assessment Records at the Crittenden County Courthouse, and documentary research into the history of the County and property at the Crittenden County Library in Marion. In addition, cartographic materials were examined at the C.H. Nash Museum in Memphis, Tennessee.

The results of the literature and records search indicate no previously recorded prehistoric or historic sites are present in the project area. The parcel on which the site is located appears to have been under the direct ownership of the Randolph family for most of the period between 1887 to the present.

A total of 466 historic artifacts were recovered during the controlled surface collection conducted by the Corps of Engineers, Memphis District. Analysis of the materials suggested the site represents domestic and architectural refuse associated with a tenant stead, dating from ca. 1900 to 1940. In addition, one Mississippian period ceramic sherd exhibiting a cloth impressed interior surface was recovered.

Examination of the artifact pattern for site 3CT271 and four similar sites in Crittenden County reported by Childress (1990) allow for a suggested artifact pattern associated with tenant farmsteads dating from the late nineteenth through mid twentieth centuries. This pattern is characterized by extremely large percentages of Kitchen Group artifacts, and low percentages of architectural and other artifact groups. Relocation of the structure along with the mobility of landless tenants is offered as a possible reason for these archaeological manifestations.

Given the nature and date of the materials present at site 3CT271, and the level of investigation conducted to date, further work at the site does not seem warranted. The site does not meet criteria established for eligibility for nomination to the National Register of Historic Places, and no further archaeological work is recommended.

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APPENDICES

**APPENDIX I:
SCOPE OF WORK**

The following clauses are incorporated by reference. Full text available upon request.

INDEX OF

CONTRACT CLAUSES

(For use with DD 1155 (SEP 89) for the procurement of
supplies and services when the amount is under \$2,500
Issued by: Department of the Army, Corps of Engineers
Edition of 16 FEB 90

	FAR/DFARS	TITLE
1.	52.203-1	OFFICIALS NOT TO BENEFIT
2.	52.203-3	GRATUITIES
3.	52.203-5	COVENANT AGAINST CONTINGENT FEES
4.	52.203-6	RESTRICTIONS ON SUBCONTRACTOR SALES TO THE GOVERNMENT
5.	52.203-7	ANTI-KICKBACK PROCEDURES
6.	52.212-8	DEFENSE PRIORITY AND ALLOCATION REQUIREMENTS
7.	52.212-10	DELIVERY OF EXCESS QUANTITIES
8.	52.217-8	OPTION TO EXTEND SERVICES
9.	52.222-3	CONVICT LABOR
10.	52.222-40	SERVICE CONTRACT ACT OF 1965, AS AMENDED- CONTRACTS OF \$2,500 OR LESS
11.	52.223-6	DRUG FREE WORKPLACE
12.	52.225-13	RESTRICTIONS ON CONTRACTING WITH SANCTIONED PERSONS
13.	52.232-1	PAYMENTS
14.	52.232-8	DISCOUNTS FOR PROMPT PAYMENT
15.	52.232-11	EXTRAS
16.	52.232-25	PROMPT PAYMENT
17.	52.233-1	DISPUTES
18.	52.233-3	PROTEST AFTER AWARD
19.	52.237-2	PROTECTION OF GOVERNMENT BUILDINGS, EQUIPMENT AND VEGETATION
20.1	52.243-1	CHANGES--FIXED-PRICE
20.2	52.243-1	CHANGES--FIXED-PRICE--ALTERNATE I
21.	52.243-7001	PRICING OF ADJUSTMENTS

22.1	52.249-1	TERMINATION FOR CONVENIENCE OF THE GOVERNMENT (FIXED-PRICE) (SHORT FORM)
22.2	52.249-4	TERMINATION FOR CONVENIENCE OF THE GOVERNMENT (SERVICES) (SHORT FORM)
23.	52.249-8	DEFAULT (FIXED-PRICE SUPPLY AND SERVICE)

16 FEB 90

2

INDEX - SPLY & SVC
UNDER \$2,500

DESCRIPTION/SPECIFICATIONS

A CULTURAL RESOURCES SITE LITERATURE SEARCH, ARTIFACT CLEANING, ANALYSIS AND CURATION PREPARATION AND REPORT WRITING WITHIN THE PROPOSED PERMIT AREA

1.1. General Scope of Services. The types of services to be performed by the Contractor include:

a. A Cultural Resources Background and Literature Searches, Artifact Cleaning, Analysis, and Curation Preparation and Report Writing Within the Proposed Permit Area.

b. Detailed analysis of data obtained from fieldwork and other sources for the purpose of determining site significance with respect to National Register of Historic Places or to supply data prerequisite to performance of other work tasks.

c. Compilation and synthesis of all necessary data for making determinations of cultural resources site eligibility for the National Register of Historic Places, including preparation of National Register nomination forms.

d. Written cultural resources assessments and evaluations for environmental impact statements, environmental assessments, and other project documents.

e. Preparation of technical reports containing results of work accomplished under this contract.

1.2. Legal Contexts. Tasks to be performed are in partial fulfillment of the Memphis District's obligations under the National Historic Preservation Act of 1966 (P.L. 89-665), as amended; the National Environment Policy Act of 1969 (P.L. 91-190); Executive Order 11593, "Protection and Enhancement of Cultural Environment; the Archaeological Resources Protection Act of 1979 (PL 96-95); and the Advisory Council on Historic Preservation, "Procedures for the Protection of Historic and Cultural Properties" (36 CFR Part 800).

1.3. Personnel Standards.

a. The Contractor shall utilize a systematic, interdisciplinary approach to conduct the study. Specialized knowledge and skills will be used during the course of the study to include expertise in archeology, prehistory, ethnology, history, architecture, geology and other disciplines as required to fulfill requirements of this Scope of Work. Techniques and methodologies used for the study shall be representative of the state of current professional knowledge and development.

b. The following minimal experiential and academic standards shall apply to personnel involved in investigations described in this Scope of Work:

(1) Archeological Project Directors or Principal Investigator(s) (PI). Individuals in charge of an archeological project or research investigation contract, in addition to meeting the appropriate standards for archeologists, must have a publication record that demonstrates extensive experience in

successful field project formulation, execution and technical monograph reporting. Unless otherwise directed by the Contracting Officer, it will be mandatory that at least one individual actively participating as Principal Investigator or Project Director under this contract, have demonstrated competence and ongoing interest in relevant research domains in the Southeast Missouri Region. Extensive prior research experience as Principal Investigator or Project Director in immediately adjacent areas will also satisfy this requirement. The requirement may also be satisfied by utilizing consulting Co-principal Investigators averaging no less than 25% of Principal Investigator paid hours for the duration of contract activities. Changes in any Project Director or Principal Investigator during a delivery order must be approved by the Contracting Officer. The Contracting Officer may require suitable professional references to obtain estimates regarding the adequacy of prior work.

(2) Archeologist. The minimum formal qualifications for individuals practicing archeology as a profession are a B.A. or B.S. degree from an accredited college or university, followed by a minimum of two years of successful graduate study or equivalent with concentration in anthropology and specialization in archeology and at least two summer field schools or their equivalent under the supervision of archeologists of recognized competence. A Master's thesis or its equivalent in research and publication is highly recommended, as is the M.A. degree.

(3) Architectural Historian. The minimum professional qualifications in architectural history are a graduate degree in architectural history, historic preservation, or closely related fields, with course work in American architectural history; or a bachelor's degree in architectural history, historic preservation, or closely related field plus one of the following:

(a) At least two years full-time experience in research, writing, or teaching in American history or restoration architecture with an academic institution, historical organization or agency, museum, or other professional institution; or

(b) Substantial contribution through research and publication to the body of scholarly knowledge in the field of American architectural history.

(4) Other Professional Personnel. All other personnel utilized for their special knowledge and expertise must have a B.A. or B.S. degree from an accredited college or university, followed by a minimum of two years of successful graduate study with concentration in appropriate study and a publication record demonstrating competing in the field of study.

(5) Other Supervisory Personnel. Persons in any supervisory position must hold a B.A., B.S. or M.A. degree with a concentration in the appropriate field of study and a minimum of 2 years of field and laboratory experience in tasks similar to those to be performed under this contract.

(6) Crew Members and Lab Workers. All crew members and lab workers must have prior experience compatible with the tasks to be performed under this contract.

c. All operations shall be conducted under the supervision of qualified professionals in the discipline appropriate to the data that is to be

discovered, described or analyzed. All contract related activities shall be performed consistent with the Secretary of Interior's Standards and Guidelines for Archeology and Historic Preservation, and the Society of Professional Archeology's Code of Ethics and Standards. Vitae of personnel involved in project activities may be required by the Contracting Officer at anytime during the period of service of this contract.

1.4. The Contractor shall designate in writing the name or names of the Principal Investigator(s). In the event of controversy or court challenge, the Principal Investigator shall be available to testify with respect to report findings. The additional services and expenses will be at Government expense, per paragraph 1.9 below.

1.5. The Contractor shall keep standard field records which may be reviewed by the Contracting Officer. These records shall include field notes, appropriate state site survey forms and any other cultural resource forms and/or records, field maps and photographs necessary to successfully implement requirements of the Scope of Work. The Contractor shall supply the original, or copies, of all records to the Corps at the Completion of the project.

1.6. To conduct field investigations, the Contractor will obtain all necessary permits, licenses; and approvals from all local, state and Federal authorities. Should it become necessary in the performance of the work and services of the Contractor to secure the right of ingress and egress to perform any of the work required herein on properties not owned or controlled by the Government, the Contractor shall secure the consent of the owner, his representative, agent, or leasee, prior to effecting entry and conduct the required work unless otherwise notified by Contracting Officer on such property.

1.7. Innovative approaches to data location, collection, description and analysis, consistent with other provisions of this contract and the cultural resources requirements of the Memphis District, are encouraged.

1.8. No mechanical power equipment other than that referenced in paragraph 3.7. shall be utilized in any cultural resource activity without specific written permission of the Contracting Officer.

1.9. The Contractor shall furnish expert personnel to attend conferences and furnish testimony in any judicial proceedings involving the archeological and historical study, evaluation, analysis and report. When required, arrangements for these services and payment therefor will be made by representatives of either the Corps of Engineers or the Department of Justice.

1.10. The Contractor, prior to the acceptance of final reports, shall not release any sketch, photographs, report or other material of any nature obtained or prepared under this contract without specific written approval of the Contracting Officer.

1.11. The extent and character of the work to be accomplished by the Contractor shall be subject to the general supervision, direction control and approval of the Contracting Officer. The Contracting Officer may have a representative of the Government present during any or all phases of Scope of Work requirements.

1.12. The Contractor shall obtain Corps of Engineers Safety Manual (EM 385-1-1) and comply with all appropriate provisions. Particular attention is directed to

safety requirements relating to the deep excavation of soils.

1.13. There will be two categories of meetings between Contractor and Contracting Officer: (1) scheduled formal meetings to review contract performance, and (2) informal, unscheduled meetings for clarification, assistance, coordination and discussion. The initial meeting may be held prior to the beginning of field work. Category (1) meetings will be scheduled by the Contracting Officer and will be held at the most convenient location, to be chosen by the Contracting Officer. This may sometimes be on the project site, but generally will be at the office of the Contracting Officer.

2. DEFINITIONS.

2.1. "Cultural Resources" are defined to include any building, site, district, structure, object, data, or other material relating to the history, architecture, archeology, or culture of an area.

2.2. "Background and Literature Search" is defined as a comprehensive examination of existing literature and records for the purpose of inferring the potential presence and character of cultural resources in the study area. The examination area may also serve as collateral information to field data in evaluating the eligibility of cultural resources for inclusion in the National Register of Historic Places or in ameliorating losses of significant data in such resources.

2.3. "Intensive Survey" is defined as a comprehensive, systematic and detailed on-the-ground survey of an area, of sufficient intensity to determine the number, types, extent and distribution of cultural resources present and their relationship to project features.

2.4. "Mitigation" is defined as the amelioration of losses of significant prehistoric, historic, or architectural resources which will be accomplished through preplanned actions to avoid, preserve, protect, or minimize adverse effect upon such resources or to recover a representative sample of the data they contain by implementation of scientific research and other professional techniques and procedures. Mitigation of losses of cultural resources includes, but is not limited to, such measures as: (1) recovery and preservation of an adequate sample of archeological data to allow for analysis and published interpretation of the cultural and environmental conditions prevailing at the time(s) the area was utilized by man; (2) recording, through architectural quality photographs and/or measured drawings of buildings, structures, districts, sites and objects and deposition of such documentation in the Library of Congress as a part of the National Architectural and Engineering Record; (3) relocation of buildings, structures and objects; (4) modification of plans or authorized projects to provide for preservation of resources in place; (5) reduction or elimination of impacts by engineering solutions to avoid mechanical effects of wave wash, scour, sedimentation and related processes and the effects of saturation.

2.5. "Reconnaissance" is defined as an on-the-ground examination of selected portions of the study area, and related analysis adequate to assess the general nature of resources in the overall study area and the probable impact on resources of alternative plans under consideration. Normally reconnaissance will involve the intensive examination of not more than 15 percent of the total

proposed impact area.

2.6. "Significance" is attributable to those cultural resources of historical, architectural, or archeological value when such properties are included in or have been determined by the Secretary of the Interior to be eligible for inclusion in the National Register of Historic Places after evaluation against the criteria contained in 36 CFR 63.

2.7. "Testing" is defined as the systematic removal of the scientific, prehistoric, historic, and/or archeological data that provide an archeological or architectural property with its research or data value. Testing may include controlled surface survey, shovel testing, profiling, and limited subsurface test excavations of the properties to be affected for purposes of research planning, the development of specific plans for research activities, excavation, preparation of notes and records, and other forms of physical removal of data and the material analysis of such data and material, preparation of reports on such data and material and dissemination of reports and other products of the research. Subsurface testing shall not proceed to the level of mitigation.

2.8. "Analysis" is the systematic examination of material data, environmental data, ethnographic data, written records, or other data which may be prerequisite to adequately evaluating those qualities which contribute to their significance.

3. STUDY AREA

3.1. Study Area

The project area is the proposed permit area and associated fill and/or borrow areas.

4. GENERAL PERFORMANCE SPECIFICATIONS.

4.1. Background and Literature Search.

a. This task shall include an examination of the historic and prehistoric environmental setting and cultural background of the study area and shall be of sufficient magnitude to achieve a detailed understanding of the overall cultural and environmental context of the study area.

b. Information and data for the literature search shall be obtained, as appropriate, from the following sources: (1) Scholarly reports - books, journals, theses, dissertations and unpublished papers; (2) Official Records - Federal, state, county and local levels, property deeds, public works and other regulatory department records and maps; (3) Libraries and Museums - both regional and local libraries, historical societies, universities, and museums; (4) Other repositories - such as private collections, papers, photographs, etc.; (5) Archeological site files at local universities, the State Historic Preservation Office, the office of the State Archeologist; (6) Consultation with qualified professionals familiar with the cultural resources in the area, as well as consultation with professionals in associated areas such as history, sedimentology, geomorphology, agronomy, and ethnology.

c. The Contractor shall include as an appendix to the draft and final reports, written evidence of all consultation and any subsequent response(s), including the dates of such consultation and communications.

d. The background and literature search shall be performed in such a manner as to facilitate the construction of predictive statements (to be included in the study report) concerning the probable quantity, character, and distribution of cultural resources within the project area. In addition, information obtained in the background and literature search should be of such scope and detail as to serve as an adequate data base for subsequent cultural resources work undertaken for the purpose of discerning the character and significance of specific cultural resources or for the construction of research designs undertaken in conjunction with future area cultural resources tasks.

4.3. Laboratory Processing, Analysis and Preservation.

All cultural materials recovered will be cleaned and stored in deterioration resistant containers suitable for long term curation. All artifacts shall be prepared for curation in accordance with the criteria of the state in which they are found. Diagnostic artifacts will be labeled and catalogued individually. A diagnostic artifact is defined herein as any object which contributes individually to the needs of analysis required by this Scope of Work or the research design. All other artifacts recovered must minimally be placed in labeled, deterioration resistant containers, and the items catalogued. The Contractor shall describe and analyze all cultural materials recovered in accordance with current professional standards. Artifactual and non-artifactual analysis shall be of an adequate level and nature to fulfill the requirements of this Scope of Work. All recovered cultural items shall be catalogued in a manner consistent with state requirements. The Contractor shall consult with appropriate state officials as soon as possible following the conclusion of field work in order to obtain information (ex.: accession numbers) prerequisite to such cataloging procedures.

5. GENERAL REPORT REQUIREMENTS.

5.1. The primary purpose of the cultural resources report is to serve as a planning tool which aids the Government in meeting its obligations to preserve and protect our cultural heritage. The report will be in the form of a comprehensive, scholarly document that not only fulfills mandated legal requirements but also serves as a scientific reference for future cultural resources studies. As such, the report's content must be not only descriptive but also analytic in nature.

5.2. Upon completion of all field investigation and research, the Contractor shall prepare a report detailing the work accomplished, the results, and recommendations for the project area. Copies of the draft and final reports of investigation shall be submitted in a form suitable for publication and be prepared in a format reflecting contemporary organizational and illustrative standards for current professional archeological journals. The final report shall be typed on standard size 8½" x 11" bond paper with pages numbered and with page margins one inch at top, bottom and sides. Photographs, plans, maps, drawings and text shall be clean and clear.

5.3. The report shall include, when appropriate, the following items:

a. Title Page. The title page should provide the following information; the type of task undertaken, the study areas and cultural resources which were assessed; the location (county and state), the date of the report; the contract number; the name of the author(s) and/or the Principal Investigator; and the agency for which the report is being prepared. If a report has been authored by someone other than the Principal Investigator, the Principal Investigator must at least prepare a forward describing the overall research context of the report, the significance of the work, and any other related background circumstances relating to the manner in which the work was undertaken.

b. Abstract. An abstract suitable for publication in an abstract journal shall be prepared and shall consist of a brief, quotable summary useful for informing the technically-oriented professional public of what the author considers to be the contributions of the investigation of knowledge.

c. Table of Contents.

d. Introduction. This section shall include the purpose of the report, a description of the proposed project, a map of the general area, a project map, and the dates during which the investigations were conducted. The introduction shall also contain the name of the institution where recovered materials and documents will be curated.

e. Environmental Context. This section shall contain, but not be limited to, a discussion of probable past floral, faunal, and climatic characteristics of the project area. Since data in this section may be used in the evaluation of cultural resources significance, it is imperative that the quantity and quality of environmental data be sufficient to allow subsequent detailed analysis of the relationship between past cultural activities and environmental variables.

f. Previous Research. This section shall describe previous research which may be useful in deriving or interpreting relevant background data, problem domains, or research questions and in providing a context in which to examine the probability of occurrence and significance of cultural resources in the study area.

g. Literature Search and Personal Interviews. This section shall discuss the results of the literature search, including specific data sources, and personal interviews which were conducted during the course of investigations.

h. Research Design. Where possible, the research design should contain a discussion of potentially relevant research domains and questions. Field and analytical methods and other data should be explicitly related to research questions.

i. Fieldwork Methods and Collected Data. This section should contain a description of field methods and their rationale as well as, a description of data collected. All cultural items collected must be listed with their respective proveniences either in the main body of the report or as an appendix. Where appropriate, field methods should be explicitly related to the research design.

j. Analytical Methods and Results. This section shall contain an

explicit discussion of analytical methods and results, and shall demonstrate how field data, environmental data, previous research data, the literature search and personal interviews have been utilized. Specific research domains and questions as well as methodological strategies employed should be included where possible.

k. Recommendations.

(1) When appropriate and when sufficient information is available, this section should contain assessments of the eligibility of specific cultural properties in the study area for inclusion in the National Register of Historic Places. Where insufficient data are present for such evaluation, the Contractor shall list activities necessary to obtain such data.

(2) Significance should be discussed explicitly in terms of previous regional and local research and relevant problem domains. Statements concerning significance shall contain a detailed, well-reasoned argument for the property's research potential in contributing to the understanding of cultural patterns, processes or activities important to the history or prehistory of the locality, region or nation, or other criteria of significance. Conclusions concerning insignificance likewise, shall be fully documented and contain detailed and well-reasoned arguments as to why the property fails to display adequate research potential or other characteristics adequate to meet National Register criteria of significance. For example, conclusions concerning significance or insignificance relating solely to the lack of contextual integrity due to plow disturbance or the lack of subsurface deposits will be considered inadequate. Where appropriate, due consideration should be given to the data potential of such variables as site functional characteristics, horizontal intersite or intrasite spatial patterning of data and the importance of the site as a representative systemic element in the patterning of human behavior. All report conclusions and recommendations shall be logically and explicitly derived from data discussed in the report.

(3) The significance or insignificance of cultural resources can be determined adequately only within the context of the most recent available local and regional data base. Consequently, the evaluation of specific individual cultural loci examined during the course of contract activities shall relate these resources not only to previously known cultural data but also to a synthesized interrelated corpus of data including those data generated in the present study.

l. References (American Antiquity Style).

m. Appendices (Maps, Correspondence, etc.). A copy of this Scope of Work shall be included as an appendix to the final report of investigations.

5.4. All of the above items may not be appropriate to all delivery order tasks. Further, the above items do not necessarily have to be in discrete sections so long as they are readily discernable to the reader.

5.5. In order to prevent potential damage to cultural resources, no information shall appear in the body of the report which would reveal precise resource location. All maps which include or imply precise site locations shall be included in reports as a readily removable appendix (e.g.: envelope).

5.6. No logo or other such organizational designation shall appear in any part of the report (including tables or figures) other than the title page.

5.7. Unless specifically otherwise authorized by the Contracting Officer, all reports shall utilize permanent site numbers assigned by the state in which the study occurs.

5.8. All appropriate information (including typologies and other classificatory units) not generated in these contract activities shall be suitably referenced.

5.9. Reports shall contain site specific maps when appropriate. Site maps shall indicate site datum(s), location of data collection units (including shovel cuts, subsurface test units and surface collection units), site boundaries in relation to proposed project activities, site grid systems (where appropriate), and such other items as the Contractor may deem appropriate to the purposes of this contract.

5.10. Information shall be presented in textual, tabular, and graphic forms, whichever are most appropriate, effective and advantageous to communicate necessary information. All tables, figures and maps appearing in the report shall be of publishable quality. Itemized listings of all recovered artifacts by their smallest available proveniences must appear in either the body of the report or as a report appendix.

5.11. Any abbreviated phrases used in the text shall be spelled out when the phrase first occurs in the text. For example use "State Historic Preservation Officer (SHPO)" in the initial reference and thereafter "SHPO" may be used.

5.12. The first time the common name of a biological species is used it should be followed by the scientific name.

5.13. In addition to street addresses or property names, sites shall be located on the Universal Transverse Mercator (UTM) grid.

5.14. Generally, all measurements should be metric.

5.15. As appropriate, diagnostic and/or unique artifacts, cultural resources or their contexts shall be shown by drawings or photography. Black and white photographs are preferred except when color changes are important for understanding the data being presented. No instant type photographs may be used.

5.16. Negatives of all black and white photographs and/or color slides of all plates included in the final report shall be submitted to the Contracting Officer. Copies of all negatives shall be curated with other documentation.

6. SUBMITTALS.

6.1. Unless otherwise stipulated in the delivery order, the Contractor shall submit 2 copies of the draft report, one unbound original and 20 final report copies with professional quality binding. In the event more than one series of review comments is determined necessary by the Contracting Officer, additional draft copies may be required.

6.2. At any time during the period of service of this contract, upon the written request of the Contracting Officer, the Contractor shall submit, within 15 calendar days, any portion or all field records described in paragraph 1.5. without additional cost to the Government.

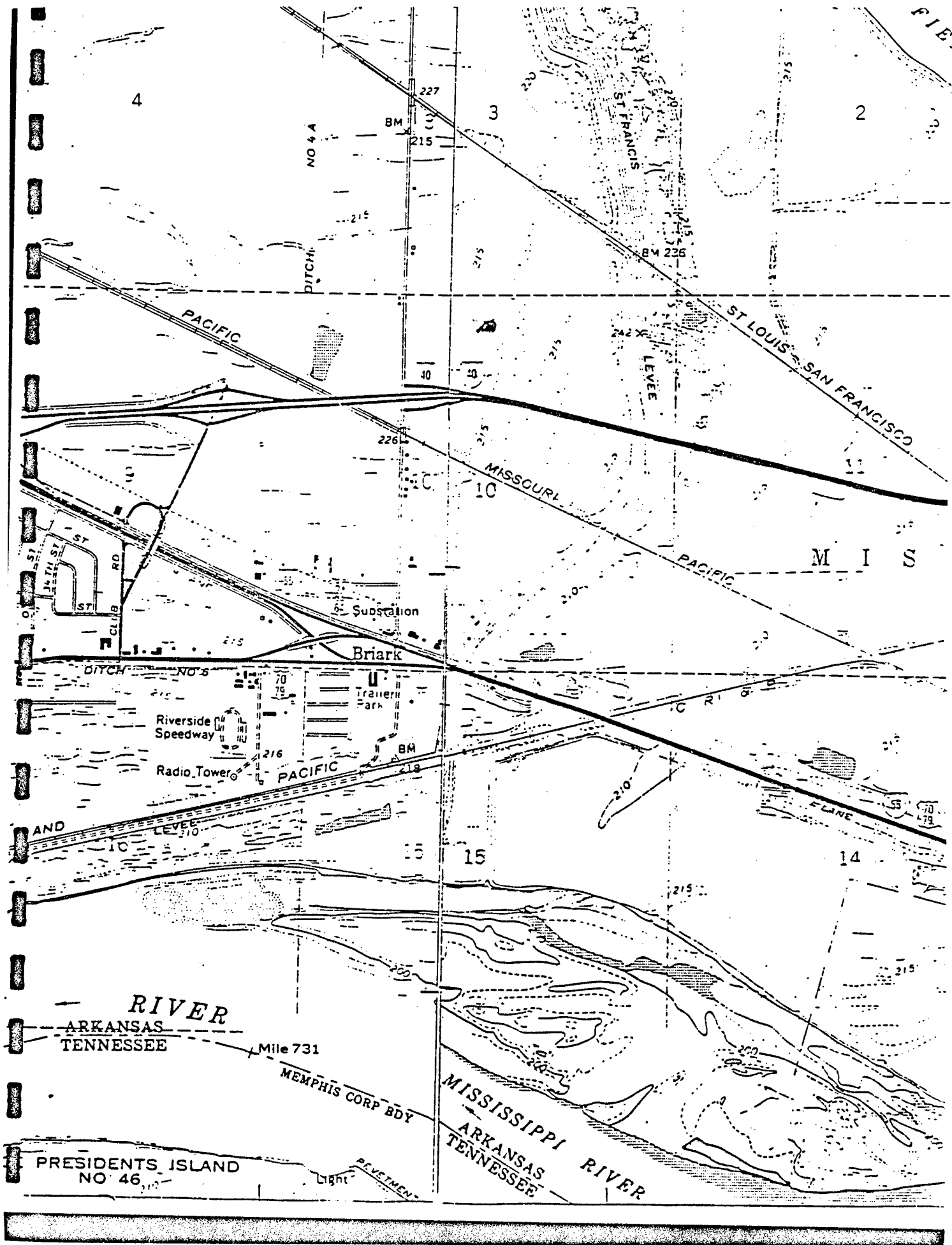
6.3. Documentation. The Contractor shall submit detailed monthly progress reports to the Contracting Officer by the 7th day of every month for the duration of the contract. These reports will contain an accurate account of all field work, laboratory procedures and results in sufficient detail to allow monitoring of project progress.

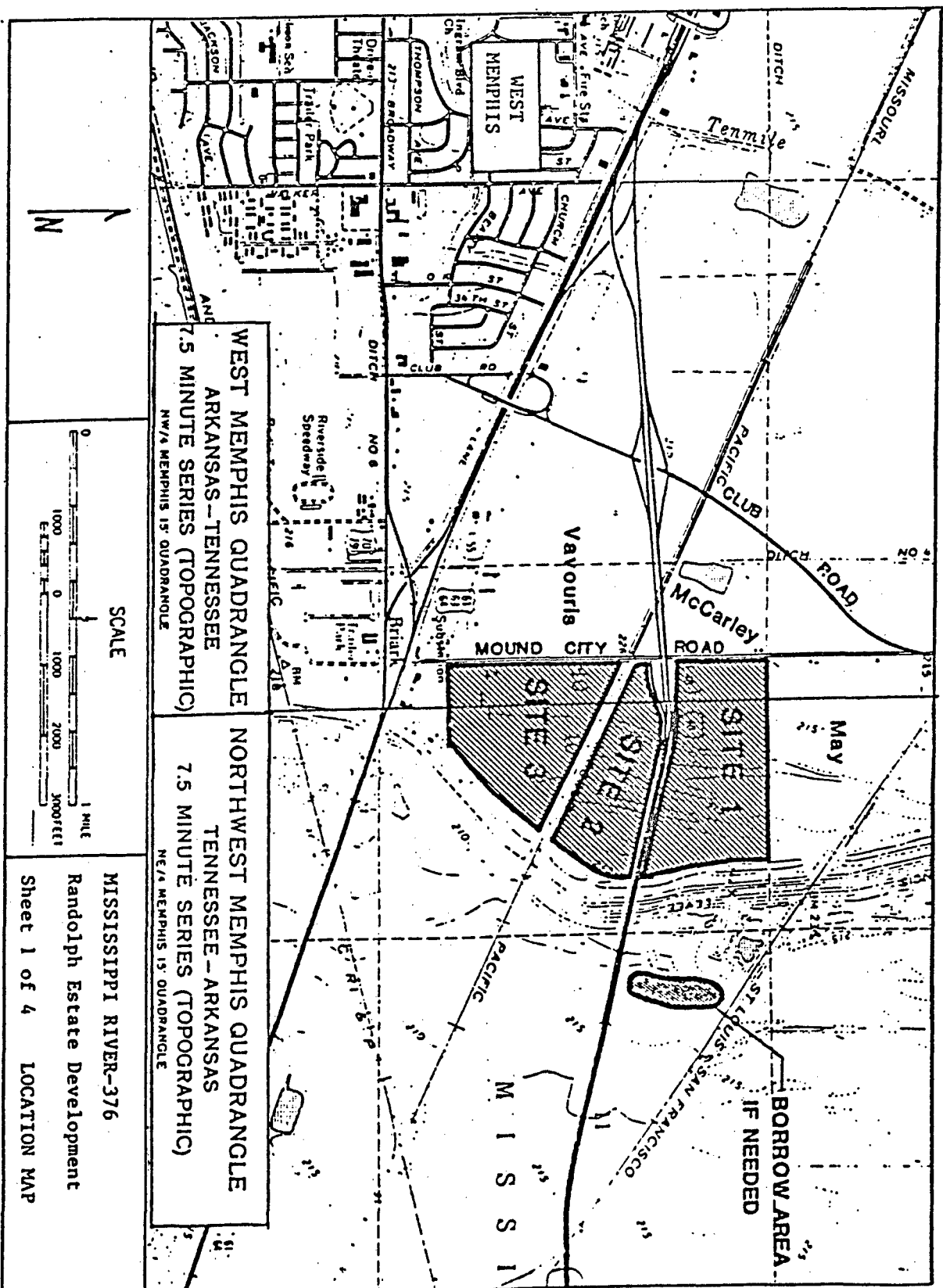
6.4. Additional submittals may be required.

6.5. The Contractor shall make any required corrections to reports after review by the Contracting Officer. The Contracting Officer may defer Government review comments pending receipts of review comments from the State Historic Preservation Officer or reviewing agencies. More than one series of draft report corrections may be required. In the event that the government review period (40 days) is exceeded and upon request of the Contractor, the contract period will be extended automatically on a calendar day for day basis. Such extension shall be granted at no additional cost to the Government.

7. Schedule.

The work must be received by the required date shown on the purchase order.





MISSISSIPPI RIVER-376
Randolph Estate Development
Sheet 1 of 4 LOCATION MAP

**APPENDIX II:
RESUME OF PRINCIPAL INVESTIGATOR**

**GUY GORDON WEAVER
GARROW & ASSOCIATES, INC.**

Education

Ph. D. program in Anthropology, Southern Illinois University at Carbondale,
Illinois, August 1985 to present.
M.A. in Anthropology, Memphis State University, December 1978.
B. A. in Anthropology, Memphis State University, May 1975.

Areas of Specialization

Cultural Resource Management, Historical and Prehistoric Archaeology of the
Southeastern United States and West Indies, Social Organization, Ethnicity,
Folklore, Urban Archaeology, Historical Ethnology, Cartography, Museology.

Professional Membership

American Anthropologist Association
National Association for the Practice of Anthropology
Southeastern Archaeological Conference
Society for Historical Archaeology
Archaeological Institute of America
Tennessee Anthropological Society
West Tennessee Historical Society
Mid-South Association for Professional Anthropologists

Professional Experience

Academic Positions

Southern Illinois University, Carbondale, Department of Anthropology,
Teaching and Research Assistant, 8/85-5/88.
Memphis State University, Memphis, Department of Anthropology,
Adjunct Assistant Professor, 12/80-present; Instructor, 9/83-12/83.
Shelby State Community College, Memphis, Department of Sociology and
Anthropology, Instructor, 1/80-5/80.
Rhodes College (Southwestern at Memphis), Department of Sociology and
Anthropology, Co-instructor, 3/79-4/79, 4/80-5/80.

Non-Academic Positions

Garrow & Associates, Inc., Atlanta, Georgia. Branch Manager & Senior Archaeologist, 10/88-present; Archaeologist II, 9/87-10/88.
Center for Archaeological Investigations, Southern Illinois University at Carbondale. Researcher II, 9/84-12/84.
Memphis State University Anthropological Research Center, Memphis. Co-principal Investigator, Field Director, Crewmember 1974-1985.
Tennessee Valley Authority, Cultural Resources Program. Principal Investigator under Personal Services Contract, 5/80-5/86.
Center for Southern Folklore, Memphis, Tennessee. Research Associate, 11/82-2/83.
Tennessee Division of Archaeology, Nashville. Archaeological Aid, 6/78-9/78, 5/80-8/80, Crewmember 5/76-8/76.

Field Experience

Participation in over sixty anthropological and archaeological field projects in Tennessee, Illinois, Arkansas, Alabama, Mississippi, Georgia, Kentucky, Virginia, New Hampshire, Vermont, Puerto Rico, and the U.S. Virgin Islands, as well as Derbyshire, U.K., Rota, Mariana Islands, Micronesia and Barbados, West Indies.

Publications and Major Manuscripts

Weaver, Guy G., and John L. Hopkins

1991 *Data Recovery at the Rum Boogie Site (40SY494), Feabody Place Mall and Office Complex, Memphis, Tennessee.* Submitted to the City of Memphis, Division of Housing and Community Development. Garrow & Associates, Inc., Memphis.

Chapman, Shawn and Guy G. Weaver

1990 *A Cultural Resources Intensive Survey Along the Wolf River, Permit No. 63, City of Germantown, Shelby County, Tennessee.* Submitted to the Memphis District, Corps of Engineers. Garrow & Associates, Inc., Memphis.

Cole, Steve C. and Guy G. Weaver

1990 *A Cultural Resources Survey of the River Trace Permit Area, Marion, Crittenden County, Arkansas.* Submitted to the Memphis District, Corps of Engineers. Garrow & Associates, Inc., Memphis.

Foster, Lee A., and Guy G. Weaver

1990 *A Cultural Resources Intensive Survey of the Proposed Clear View Environmental Control Facility, Scott County, Mississippi.* Submitted to

Chambers Development Corporation. Garrow & Associates, Memphis.

Buchner, Drew, and Guy G. Weaver

1990a *A Cultural Resources Intensive Survey of the Ensley Berm Construction Site, Shelby County, Tennessee.* Submitted to the Memphis District, Corps of Engineers. Garrow & Associates, Inc., Memphis.

1990b *A Report of Archaeological Testing at Site 3CT263 Within the Proposed Edmondson Wastewater Pond, Crittenden County, Arkansas.* Submitted to the Memphis District, Corps of Engineers. Garrow & Associates, Inc., Memphis.

Weaver, Guy G., John L. Hopkins and Mary Kwas

1990 *Archaeological Testing and Data Recovery at the Morning Sun Farmstead Site (40SY508), Shelby County, Tennessee.* Report prepared for the Tennessee Department of Transportation. Garrow & Associates, Inc., Memphis.

Weaver, Guy G., and Stephen R. James, Jr.

1989 *A Terrestrial and Underwater Cultural Resources Survey of Inner Brass Island, St. Thomas, U.S. Virgin Islands.* Report prepared for Virgin Islands Cay, Ltd. Garrow & Associates, Inc., Atlanta, and Underwater Archaeological Consortium, Memphis, Tennessee.

1989b *A Terrestrial and Underwater Cultural Resources Survey at Hull Bay, St. Thomas, U.S. Virgin Islands.* Report prepared for Virgin Islands Cay, Ltd. Garrow & Associates, Inc., Atlanta, and Underwater Archaeological Consortium, Memphis, Tennessee.

Weaver, Guy G. and Charles H. McNutt, Jr.

1989 *A Survey Report of Archaeological Resources in Portions of the Chickamauga Reservoir, Tennessee: 1989 Season.* Submitted to the Tennessee Valley Authority. Garrow & Associates, Inc., Atlanta.

Garrow, Patrick H., Guy G. Weaver and Charles R. Cobb, (Editors)

1989 *Nineteenth- To Twentieth-Century Agriculture in Southern Illinois: Pope County Farmstead Thematic Study, Shawnee National Forest: Phase II Results.* Report submitted to the National Forest Service, Shawnee National Forest, Harrisburg, Illinois. Garrow & Associates, Inc., Atlanta.

Weaver, Guy G.

1989 *Archaeological Data Recovery at La Iglesia de Maraquez (Site PO-39), Ponce, Puerto Rico: Phase I Report.* Garrow & Associates, Inc. Report submitted to the Jacksonville District, Corps of Engineers. Garrow & Associates, Inc., Atlanta.

Cobb, Charles R., and Guy G. Weaver

- 1989 *Archaeological Survey for the Proposed Lexington-Knoxville FTA Lightguide Cable, Pulaski, Laurel, and Whitley Counties, Kentucky.* Report submitted to A.T.&T. Communications, Inc. Garrow & Associates, Inc., Atlanta.

Weaver, Guy G., Herminio Rodríguez Morales and Arleen Pabón

- 1989 *A Cultural Resources Reconnaissance within the Proposed Río Grande De Aricibo Flood Control Project, Arecibo, Puerto Rico.* Draft report submitted to the Jacksonville District, Corps of Engineers. Garrow & Associates, Inc., Atlanta.

Weaver, Guy G. and Herminio Rodríguez Morales

- 1989 *A Cultural Resources Reconnaissance and Survey within the Proposed Río Cibuco Flood Control Project, Vega Baja, Puerto Rico.* Draft report submitted to the Jacksonville District, Corps of Engineers. Garrow & Associates, Inc., Atlanta.

Weaver, Guy G.

- 1988a *Archaeological Testing at the Site of the Peabody Place Mall and Office Complex, Memphis, Tennessee: Phase II Construction.* Garrow & Associates, Inc. Report Submitted to Division of Housing and Community Development, Memphis, Tennessee. Garrow & Associates, Inc., Atlanta.

- 1988b "Stone and Coral Tools." In *Archaeological Investigations on Rota, Mariana Islands, Micronesia*, edited by Brian Butler, pp. 255-278. Micronesian Archaeological Survey Report No. 23, Southern Illinois University at Carbondale, Center for Archaeological Investigations Occasional Paper No. 8. Southern Illinois University, Carbondale.

Weaver, Guy G. and Herminio R. Rodríguez Morales

- 1988 *A Cultural Resources Reconnaissance and Survey of the Río Puerto Nuevo Flood Control Project, San Juan, Puerto Rico.* Report submitted to the Jacksonville District, Corps of Engineers. Garrow & Associates, Inc., Atlanta.

Coggeshall, John M. and Jo Anne Nast

- 1988 *Vernacular Architecture in Southern Illinois: The Ethnic Heritage.* Shawnee Series, Southern Illinois University Press. (Co-researcher, co-author and photographer.)

Weaver, Guy G.

- 1987 *The Presidents Island and Rivergate Proposed Development Tracts, Memphis, Tennessee.* Garrow & Associates, Inc. Report submitted to ERM-Southeast, Inc., Marietta, Georgia. Garrow & Associates, Inc., Atlanta.

Weaver, Guy G. and Jonathan Bloom

- 1987 Addendum to: *Archaeological Survey of the Proposed Northrop Substation and Transmission Line, Peach and Houston Counties, Georgia*. Report submitted to Oglethorpe Power Company, Tucker, Georgia. Garrow & Associates, Inc., Atlanta.

Weaver, Guy G.

- 1986a *An Archaeological Survey of the City of Salem Wastewater Treatment Facilities, Marion County, Illinois*. Center for Archaeological Investigations, SIU-C Manuscript on File No. 1986-7. Report submitted to Roland Associates, Des Plaines, Illinois.

- 1986b *An Archaeological Survey of the Proposed Albers Substation Site, Clinton County, Illinois*. Center for Archaeological Investigations, SIU-C Manuscript on File No. 1986-6. Report submitted to Clinton County Electric Cooperative, Inc., Breese, Illinois.

Weaver, Guy G. and John R. Stein

- 1986 *A Report of Archaeological Investigations in the Boxley Valley, Buffalo National River, Newton County Arkansas*. Tennessee Valley Authority. Report submitted to the National Park Service, Santa Fe, New Mexico.

Mark B. Sant and Guy G. Weaver

- 1986 *An Archaeological Survey and Assessment of the Proposed Wastewater Treatment Facilities, Steeleville, Randolph County, Illinois*. Center for Archaeological Investigations, SIU-C Manuscript on File No. 1986-5. Report submitted to E.M. Webb and Associates, Carbondale, Illinois.

McNutt, Charles H. and Guy G. Weaver

- 1985 *An Above-Pool Survey of Cultural Resources Within the Little Bear Creek Reservoir Area, Franklin County, Alabama*. The Tennessee Valley Authority Publications in Anthropology No. 45, and Memphis State University Anthropological Research Center Occasional Papers No. 13.

Smith, Gerald P. and Guy G. Weaver

- 1985 *A Cultural Resources Survey of the Proposed One Riverside Drive Condominiums, Memphis, Tennessee*. Report submitted to the Pickering Firm, Memphis, Tennessee.

Weaver, Guy G.

- 1984a *An Archaeological Survey of the Proposed Devondale Apartment Complex, Metropolis, Massac County, Illinois*. Center for Archaeological Investigations, Southern Illinois University. Report submitted to Landmark, Louisville, Kentucky.

- 1984b *An Archaeological Survey for the KRPD Baldwin Industrial Port Site, Randolph County, Illinois*. Center for Archaeological Investigations,

Southern Illinois University. Report submitted to Kaskaskia Regional Port District, Red Bud, Illinois.

Weaver, Guy G. and Patricia Ruppe

1984 *An Archaeological Survey of the Route 127 Development Corridor Utility System Improvements, Nashville, Washington County, Illinois.* Center for Archaeological Investigations, SIU-C Manuscript on File 1984-13. Submitted to the City of Nashville, Illinois.

Weaver, Guy G. and Gerald P. Smith

1984 *A Report of Archaeological Investigations at Reelfoot-Indian Creek Watershed Dam No. 1 and 18, and Adjacent Areas in Obion County, Tennessee.* Memphis State University Anthropological Research Center. Report submitted to Soil Conservation Service, Nashville, Tennessee.

Weaver, Guy G. and Mitch Childress

1984a *Archaeological Investigations at the Swan Bay Site (40HY66), Henry County, Tennessee.* Memphis State University Anthropological Research Center. Report submitted to the Tennessee Valley Authority, Norris, Tennessee.

1984b *An Archaeological Reconnaissance for the Proposed Bartlett Corporate Park, Bartlett, Shelby County, Tennessee.* Memphis State University Anthropological Research Center. Report submitted to the City of Bartlett.

Weaver, Guy G. and David Bowman

1984 *An Archaeological Survey of the Proposed Area for Land Application of Waste Water, 201 Facility Plan, EPA Project No. C470469-01-0, Oakland, Fayette County, Tennessee.* Report submitted to Gregory-Grace and Associates, Engineers, Bartlett, Tennessee.

Charles H. McNutt and Guy G. Weaver

1983 *The Duncan Tract Site (40TR27), Trousdale County, Tennessee.* The Tennessee Valley Authority Publications in Anthropology No. 33, Norris, Tennessee.

Charles H. McNutt, Guy G. Weaver, and Glenda Maness

1983a *An Archeological Overview and Management Plan for the Volunteer Army Ammunition Plant, Hamilton County, Tennessee.* Memphis State University Anthropological Center for Woodward-Clyde Consultants. Report submitted to National Park Service, Atlanta Georgia.

1983b *An Archeological Overview and Management Plan for the Holston Army Ammunition Plant, Hawkins and Sullivan Counties, Tennessee.* Memphis State University Anthropological Center for Woodward-Clyde Consultants. Report submitted to National Park Service, Atlanta Georgia.

Gerald P. Smith and Guy G. Weaver

1983 *An Archeological Overview and Management Plan for Radford Army Ammunition Plant.* Memphis State University Anthropological Center for Woodward-Clyde Consultants. Report submitted to National Park Service, Atlanta Georgia.

Raichelson, Richard M.

1983 *On the Road: An Ecological Interpretation of the Blues Pianist.* *Journal of Regional Cultures* 3:1, pp. 41-64. (Cartographer).

Weaver, Guy G., David Bowman and Louella Weaver

1981 *A Cultural Resources Reconnaissance of the Proposed Humboldt and Bradford Drainage Programs, Gibson County, Tennessee.* Report submitted to U.S. Engineer District, Memphis Corps of Engineers.

Weaver, Guy G. and Charles H. McNutt

1981 *A Report of Intensive Testing for Cultural, Archeological and Architectural Resources at the Allen Duncan Tract, Off-Site Borrow Area No. 4, Hartsville Nuclear Plant, Hartsville, Tennessee, 1981.* Memphis State University Anthropological Research Center. Report submitted to the Tennessee Valley Authority, Norris, Tennessee.

Weaver, Guy G.

1979a *Report of Archaeological Excavations at the Denny Site, 40SM69.* Report submitted to the Tennessee Valley Authority, Norris, Tennessee.

1979b *Preliminary Survey of Archaeological and Architectural Resources at Point Pleasant Landing, Saltillo, Decatur County, Tennessee.* Report submitted to the Tennessee Valley Authority, Norris Tennessee.

Weaver, Guy G. and Charles H. McNutt

1979 *Archaeological Survey of the Proposed Franklin-Hartsville Transmission Line.* Report submitted to the Tennessee Valley Authority, Norris, Tennessee.

McNutt, Charles H., and Guy G. Weaver

1977 *An Archaeological Survey of the Proposed Piney Campground Expansion, Land Between the Lakes, Steward County, Tennessee.* Report submitted to the Tennessee Valley Authority, Norris, Tennessee.

Broster, John, and Guy G. Weaver

1975 *Middle Woodland Settlement Systems Along the South Fork of the Forked Deer River.* In *The Pinson Mounds Archaeological Project: Excavations of 1974 and 1975*, edited by John B. Broster and Lee Schneider, pp. 90-98. Tennessee Division of Archaeology Research Series No. 1.

Professional Papers

1990 Contract Archaeology: Present Problems and Future Directions. Introduction to session. Co-Organizer and Chair. American Anthropological Association, 89th Annual Meeting, New Orleans.

Archaeological Investigations at the Morning Sun Farmstead, Shelby County, Tennessee. Paper presented at the April meeting, West Tennessee Historical Society, Memphis, Tennessee. With John L. Hopkins.

Urban Archaeology on Beale Street, Memphis, Tennessee. Paper presented at the Illinois Historical Archaeology Conference, Makanda, Illinois.

1985 The Tale of Two Wells: Historical Archaeology in Memphis. Paper presented at the April meeting, Archaeological Institute of America, Mid-South Chapter, Memphis Tennessee. With Louella Whitson Weaver.

1982 Intra and Interskeletal Differences in Nitrogen Content of Prehistoric Human Bone. Paper presented at the Southern Anthropological Society, 17th Annual Meeting, Boone, North Carolina. With David R. Stevenson.

1982 Chert Utilization Patterns in the Outer Nashville Basin. Paper presented at the Southeastern Archaeological Conference, 39th Annual Meeting, Memphis, Tennessee.

1981 Excavations at the Duncan Tract Site, 40TR27, Hartsville, Tennessee. Paper presented at the Southeastern Archaeological Conference, 38th Annual Meeting, Asheville, North Carolina.

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