Report for the Finding of No Effect to
Archeological and Historic Resources
Associated with the Proposed Fractionation
and Deisobutanizer Units
Chambers County, Texas

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REPORT FOR THE FINDING OF NO EFFECT TO ARCHEOLOGICAL AND HISTORIC RESOURCES ASSOCIATED WITH THE PROPOSED FRACTIONATION AND DEISOBUTANIZER UNITS CHAMBERS COUNTY, TEXAS

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July 2012

Abstract

Atkins has been contracted to perform cultural resources consultations with the Texas Historical Commission and the Environmental Protection Agency (EPA) for the proposed installation of two new fractionation process units and a deisobutanizer unit at the Mont Belvieu complex in Chambers County, Texas, for Enterprise Products Operating LLC (Enterprise). The project is subject to a Prevention of Significant Deterioration Permit from the EPA.

In May 2012, Atkins conducted a cultural resources background review of the proposed approximately 30-acre facility. The background review examined an area extending 3 kilometers (km) from the proposed project boundary. Four documented cultural resources (The First United Methodist Church and Cemetery of Mont Belvieu [Marker No. 9122], The Williams Cemetery [Cemetery No. CH-C018], and The Fisher #2 Cemetery [Cemetery No. CH-CO17]) were identified within the 3-km project review area. No cultural resources were identified within the proposed project area, and there is a low probability that intact cultural resources are present that would be eligible for listing in the National Register of Historic Places (NRHP). It is Atkins' opinion that the proposed project area does not require an intensive cultural resources survey, and no known archeological or historic properties eligible or potentially eligible for the NRHP would be adversely affected.

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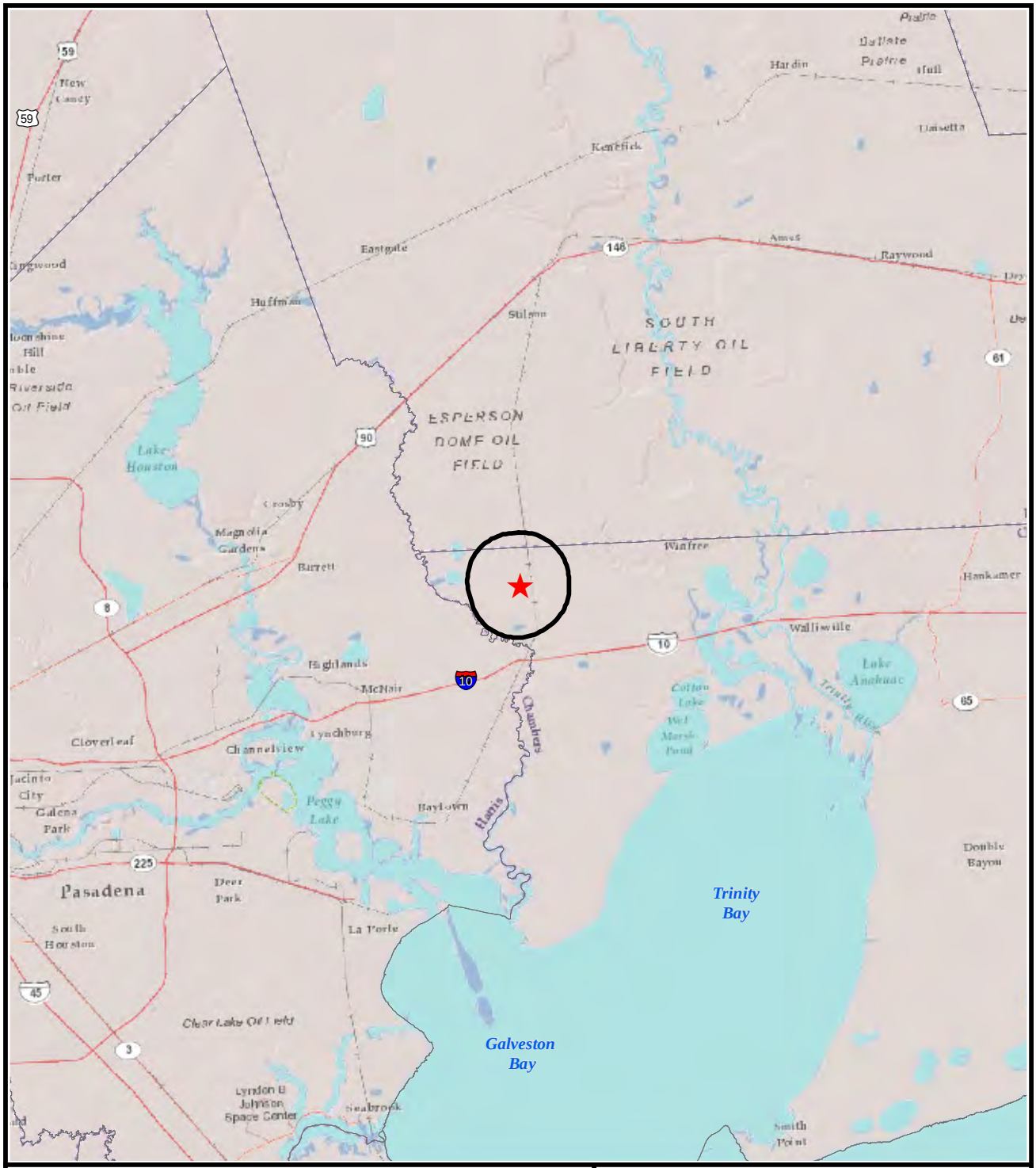
I. INTRODUCTION

Atkins has been contracted to perform cultural resources consultations with the Texas Historical Commission (THC) and the Environmental Protection Agency (EPA) for the proposed installation of two new fractionation process units and a deisobutanizer unit at the Mont Belvieu complex for Enterprise Products Operating LLC (Enterprise). The proposed project location is located in northwest Chambers County (Figure 1). The project is subject to a Prevention of Significant Deterioration Permit from the EPA. The proposed project will not require a Section 404/10 permit from the U.S. Army Corps of Engineers (USACE).

The new fractionation facilities will include two fractionation unit deethanizer distillation columns, two fractionation unit debutanizer distillation columns, two natural gas–fired hot oil heaters, two natural gas–fired regenerant gas heaters, cooling towers, new frac unit's contribution to an existing flare (EPN SK25.001), ancillary tanks, a deisobutanizer distillation column, and a new DIB unit's contribution to the flare (EPN SK25.001).

In May 2012, Atkins conducted a cultural resources background review of the proposed approximately 30-acre facility. The background review examined an area extending 3 kilometers (km) from the proposed project boundary (see Figures 2 and 3). Four documented cultural resources (The First United Methodist Church and Cemetery of Mont Belvieu [Marker No. 9122], The Williams Cemetery [Cemetery No. CH-C018], and The Fisher #2 Cemetery [Cemetery No. CH-CO17]) were identified within the 3-km project review area. No cultural resources were identified within the proposed project location, and there is a low probability that intact cultural resources are present that would be eligible for the National Register of Historic Places (NRHP). It is Atkins' opinion that the proposed project area does not require an intensive cultural resources survey and no archeological or historic properties eligible or potentially eligible for the NRHP would be adversely affected.



★ Project Location

3km Project Review Area

0 6 12 Miles

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Figure 1
Project Vicinity Map
Enterprise Products Operating LLC
Proposed Installation of
the Eagle Ford Fractionator
Chambers County, Texas

Prepared By: ATKINS/14923	Scale: 1 in = 6 miles
Job : Eagle Ford Frac	Date: July 6, 2012

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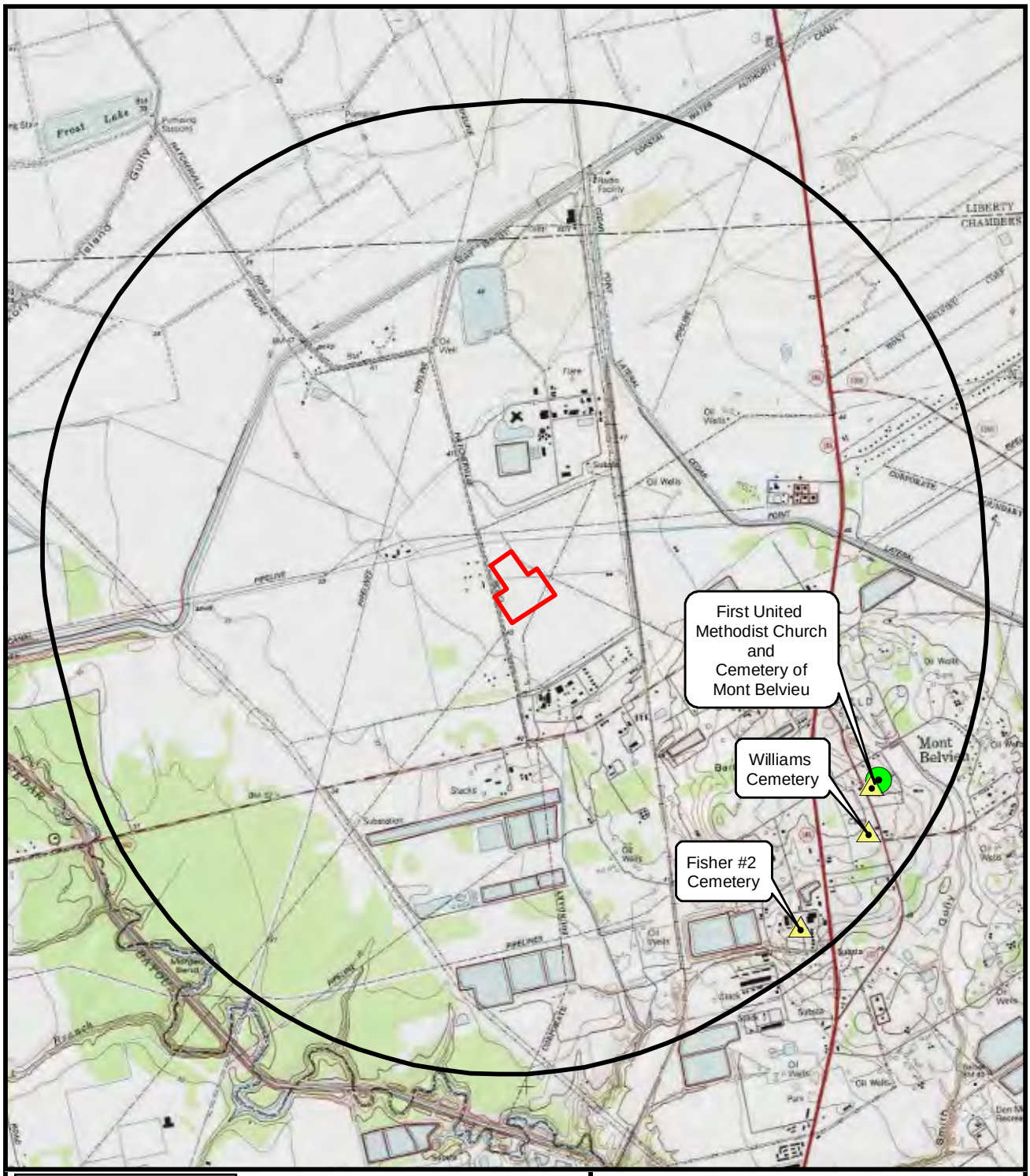

3km Project Review Area
Project Footprint
Cemetery
Historic Marker

TARL: 12/21/11 KM
Topo: USGS 7.5 minute Quad
Sheeks & Mont Belvieu

0 1,700 3,400 Feet

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Figure 2 Topo
Project Vicinity Map
Enterprise Products Operating LLC
Proposed Installation of
the Eagle Ford Fractionator
Chambers County, Texas

Prepared By: ATKINS/14923	Scale: 1 " = 3,400 '
Job : Eagle Ford Frac	Date: July 6, 2012

File: M:\EPCO\EF_Frac\projects\mxd\A_report_map.mxd

3km Project Review Area
Project Footprint
Cemetery
Historic Marker

TARL: 12/21/11 KM
Aerial: Bing Maps
Sheeks & Mont Belvieu

0 1,700 3,400 Feet

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Figure 3 Aerial
Project Vicinity Map
Enterprise Products Operating LLC
Proposed Installation of
the Eagle Ford Fractionator
Chambers County, Texas

Prepared By: ATKINS/14923	Scale: 1 " = 3,400 '
Job : Eagle Ford Frac	Date: July 6, 2012

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II. NATURAL ENVIRONMENT AND CULTURAL SETTING

This chapter presents information concerning the natural environment and cultural setting of the proposed project area and region, followed by a review of previous archeological investigations and recorded sites within 3 km (1.86 miles) of the project location.

ECOLOGICAL SETTING

The archeological and ethnohistoric records (summarized by Aten 1979, 1983a) indicate that the indigenous people in the Galveston Bay area were nonagricultural foragers. Based on ethnohistoric documentation, Aten (1979, 1983a) hypothesized that the local indigenous groups occupied the coast temporarily on a seasonal basis. Foraging groups worldwide have been shown to acquire key resources through some degree of transhumance within more or less defined territories (Binford 1980; Lee and DeVore 1968) such as the seasonal round hypothesized by Aten for foragers along the upper Texas coast. Seasonal data from shell-bearing sites in the region support Aten's hypothesis that occupation or use of coastal resources was temporary and recurred on a seasonal basis. The following discussion of the environment, therefore, includes the variety of resources that would have been available in the Galveston Bay area.

NATURAL ENVIRONMENT

Geology

The entire upper Texas coast lies in Fenneman's (1938) West Gulf Coastal Plain physiographic province. The West Gulf Coastal Plain is a relatively young area characterized by geologic formations that dip toward the Gulf of Mexico. The Pleistocene-aged Beaumont Formation governs the topography of Galveston Bay. The Beaumont Formation consists of spatial arrangements of clay, silt, and fine sand reflecting the distribution of fluvial and mudflat/coastal facies (Abbott 2001: 15–16). According to Van Siclen (1985), raised, sandy meander-belt ridges on the Beaumont surface are relict Brazos and San Jacinto River channels and natural levees separated by low, relatively featureless, clayey backswamp deposits.

During the Wisconsin glacial maximum, sea level was approximately 100 meters (m) below its modern position, and coastal rivers cut down into the older Pleistocene deposits, creating a series of valleys along the coast. As sea level rose, after ca. 18,000 B.P., these coastal river valleys were inundated, creating long embayments (Ricklis 1994:5). Galveston Bay and its secondary embayments are the result of the inundation of the Pleistocene channels of the Trinity and San Jacinto Rivers.

Ricklis (1993:64–71) argues that Holocene sea level rise was episodic, and he demonstrates that gaps in radiocarbon dates from coastal archeological sites in the Corpus Christi area correspond to periods of apparent sea level rise. Ricklis (1993:64–67) suggests that the rich marine ecosystems of

the bays and lagoons broke down during these periods of rapid sea level rise (6000–7000 B.P. and 3000–4000 B.P.), leading to decreased utilization by coastal groups. Early shell midden components near Galveston Bay, such as those reported by Gadus and Howard (1990) and Howard et al. (1991) suggest a similar pattern may eventually be defined as our knowledge of Archaic coastal exploitation grows.

Ricklis and Weinstein (2005) and Widmer (2005) both agree that an essentially modern sea level was reached circa 3000 B.P., which allowed the development of stable barrier islands as well as productive bays, estuaries, and inundated shallows along the coast. The development of these resource-rich areas and their increased exploitation by aboriginal groups are mirrored, in part, by the advance of modern climactic conditions, as discussed below.

Soils

The soils within the proposed project area consist of leveled Morey silt loam, Lake Charles clay, 0 to 1 percent slopes, and Beaumont clay (Crout 1976). The Morey and Beaumont series, formed in silty sediments of the Beaumont Formation of Pleistocene age, are poorly drained, slowly permeable, and located on uplands. Similarly, the Lake Charles series is derived from the Beaumont Formation of the Pleistocene age and are slowly permeable. However, the Lake Charles series are moderately well drained and located on fairly level areas along sideslopes of drainages. All three series are listed by Abbott (2001) as having a low geoarcheological potential.

Climate

The modern climate of Chambers County is classified as Subtropical Humid (Larkin and Bomar 1983), characterized by abundant rainfall, high humidity, a moderate daily temperature range, and prevailing southeasterly winds (Fischer et al. 1972). Due to its proximity to the coast, the climate is less extreme than more-inland areas, with infrequent northerly winds from December through February. Rainfall, averaging 130.9 centimeters (51.55 inches) annually in Chambers County (Orton 1976), most frequently results in flooding during late winter and early spring. Winter temperatures rarely fall below freezing, and summer temperatures peak in August, with an average high of 91.2 degrees Fahrenheit (Orton 1976).

Terrestrial Resources

The climate and vegetation of the upper Texas coast reflect the latitude, low elevation, and influence of proximity to the Gulf of Mexico. The region is bound on the west by the Brazos River, on the east by the Sabine River, and on the north by an arbitrary line that closely approximates the southern extent of Caddo settlement (Ensor 1991). In general, four broad communities of vegetation can be identified near the Houston area: Coastal Marsh/Barrier Island, Coastal Prairie, Coastal Gallery Forest, and Pine-Hardwood Forest (McMahan et al. 1984).

Coastal Marsh/Barrier Island communities include well-drained sandy coastal environments and saline and freshwater wetlands near the coast. Salinity, frequency and duration of inundation, and depth of the seasonal water table control the character of vegetation assemblages in these areas (Abbott 2001:24). Well-drained freshwater environments are dominated by bluestem (*Schizachyrium* spp. and *Andropogon* spp.), switchgrass (*Panicum virgatum*), and *Paspalum* spp. Marshhay cordgrass (*Spartina patens*), seashore saltgrass (*Distichlis spicata*), bulrushes (*Scirpus* spp.), saltmarsh aster (*Aster subulatus*), and other sedges and grasses dominate wetter areas. Higher areas are dominated by some of the above-mentioned vegetation and gulfdune paspalum (*Paspalum monostyachyum*), bushy sea-oxeye (*Borrichia frutescens*), and glasswort (*Salicornia* spp.) (Abbott 2001; White and Paine 1992).

The most common mammal on the barrier islands is the hispid cotton rat (*Sigmodon hispidus*), a significant source of meat for aboriginal inhabitants of Galveston Island (Ricklis 1994:13). White-tailed deer (*Odocoileus virginianus*), raccoons (*Procyon lotor*), and opossum (*Didelphis virginiana*) are also common to the coastal marsh/barrier island communities, although white-tailed deer are no longer present on Galveston Island. Reptilian species include the ornate box turtle (*Terrapene ornata*), kingsnakes (*Lampropeltis* spp.), eastern hognose (*Heterodon platirhinos*), western diamondback rattlesnake (*Crotalus atrox*), and cottonmouth (*Agkistrodon piscivorus*).

The Coastal Prairies are nearly topographically flat, characterized by clayey soils, and generally only a few meters above sea level. The Coastal Prairie consists primarily of grasses with minor amounts of forbs and wooded plants, and is characteristic of upland areas that are not saturated on a seasonal basis (Abbott 2001:24). Principal taxa include little bluestem (*Schizachyrium scoparium*), indiangrasses (*Sorghastrum* spp.), eastern gamagrass (*Tripsacum dactyloides*), switchgrass (*Panicum virgatum*), brownseed paspalum (*Paspalum plicatulum*), silver bluestem (*Bothriochloa saccharoides*) buffalograss (*Buchloe dactyloides*), threeawn (*Aristida* spp.), and Texas wintergrass (*Stipa leucotricha*). Sunflower (*Helianthus* spp.), Engleman daisy (*Englemannia pinnatifida*), bluebonnets (*Lupinus texensis*), ragweed (*Ambrosia* spp.), croton (*Croton* spp.), verbena (*Verbena* spp.), and winecup (*Callirhoe* spp.) are common forbs. Woody plants include mesquite (*Prosopis* spp.), huisache (*Acacia farnesiana*), eastern baccharis (*Baccharis halimifolia*), rattlebush (*Sesbania drummondii*), live oak (*Quercus virginiana*), elm (*Ulmus* spp.), hackberry (*Celtis pallida*), bumelia (*Sideroxylon lanuginosum*), and coralberry (*Symphoricarpos orbiculatus)* (Abbott 2001:25–26). As the Coastal Prairie grades into the Pine-Hardwood forest, the frequency of trees increases.

The upland coastal prairies provide habitats for a number of mammals, including white-tailed deer, eastern cottontail (*Sylvilagus floridanus*), jackrabbit (*Lepus californicus*), gray fox (*Urocyon cinereoargenteus*), coyote (*Canis latrans*), raccoon, eastern spotted skunk (*Spilogale putorius*), striped skunk (*Mephitis mephitis*), opossum (*Didelphus virginiana*), and bobcat (*Lynx rufus*) (Abbott 2001; Shew et al. 1981). During historic times, bison (*Bos bison*), black bear (*Ursus americanus*), and gray wolf (*Canis lupis*) were present on the coastal prairies and woods in the Galveston Bay region, some of which were known ethnographically to be hunted by native peoples (Folmer 1940).

The Coastal Gallery Forest consists of diverse trees and understory occupying the floodplains of streams along the outer coastal plain (Abbott 2001:26) A variety of oaks (*Quercus* spp.), elms (*Ulmus* spp.), and pines (*Pinus* spp.), as well mulberry (*Morus rubra*), ash (*Fraxinus* spp.), sweetgum (*Liquidambar styraciflua*), hawthorn (*Crataegus* spp.), dogwood (*Cornus* spp.), hickory (*Carya* spp.), bois d'arc (*Maclura pomifera*), willow (*Salix* spp.), cottonwood (*Populus deltoides*), and sumacs (*Rhus* spp.) are included in these areas. The understory commonly includes mustang grape (*Vitis mustangensis*), greenbriar (*Smilax* spp.), yaupon (*Ilex vomitoria*), coralberry (*Symphoricarpos orbiculatus*), possumhaw (*Ilex decidua*), elderberry (*Sambucus canadensis*), and dewberry (*Rubus trivialis*), as well as little bluestem (*Schizachyrium scoparium*), big bluestem (*Andropogon gerardii*) and indiangrass (*Sorghastrum* spp.) grasses. Frequently flooded areas support stands of dwarf palmetto (*Sabal minor*), and bald cypress (*Taxodium distichum*) trees are common in relict stream channels and swamps (Vines 1977).

White-tailed deer are abundant in the floodplain environment, as well as gray and fox squirrels (*Sciurus* spp.), raccoons, opossum, swamp rabbits (*Sylvilagus aquaticus*), and muskrats (*Ondatra zibethicus*). Beaver (*Castor canadensis*) and river otters (*Lutra canadensis*) were once common to these areas. In addition to a number of snakes and turtles, alligators (*Alligator mississippiensis*) are common in riverine and floodplain environments. Upstream of brackish waters, bowfin (*Amis calva*), shiners (*Lythrurus umbratilis, Cyprinella venusta, Notemigonus crysoleucas*), yellow bullhead (*Ameiurus natalis*), largemouth bass (*Micropterus salmoides*), and sunfish (*Lepomis* spp.) are found in rivers and larger streams (Ricklis 1994:13).

CULTURAL SETTING

Prehistoric Setting in Southeast Texas

Based on technological changes evident in the archeological record of the region, the sequence of recognized archeological manifestations in Southeast Texas has been divided into three periods: Paleoindian, Archaic, and Late Prehistoric or Ceramic periods. These cultural periods are roughly equivalent to broad patterns of environmental change, described by Aten (1983a:141–142). These patterns are the Late Glacial (12,000–9000 years B.P.), post-Pleistocene adaptations that resulted in a shift in economic orientation and an increasing population (9000–3000 B.P.), and, lastly, essentially modern environmental conditions that developed approximately 3000 B.P. Ensor et al. (1990:7–8) proposed a prehistoric cultural sequence of periods in Southeast Texas as follows: Paleoindian (10,000–8000 B.C.), Early Archaic (8000–5000 B.C.), Middle Archaic (5000–1000 B.C.), Late Archaic (1000 B.C.–A.D. 400), Early Ceramic (A.D. 400–800) and Late Ceramic (A.D. 800–1750).

Other attempts at broad regional culture history syntheses relevant to the study area include Aten (1979, 1983a), who concentrates on the littoral, deltaic, and estuarine portion of the coastal plain, and Shafer et al. (1975) and Patterson (1983, 1996), all of whom place greater emphasis on inland sites. These chronologies rely on better-established stone-tool-based chronologies from

surrounding regions of Texas for most of the pre-Ceramic periods. Aten (1979, 1983a) offered a ceramic seriation and chronology for the Ceramic period that is still the subject of testing and refinement (for example, see Ensor and Ricklis 1998; Gadus and Howard 1990; Ricklis 1994). The following review of the prehistoric setting in Southeast Texas follows the chronology of Ensor et al. (1990), but includes information from a number of sources.

Paleoindian Period (10,000–8000 B.C.)

The earliest well-established human occupations of North America are referred to as the Paleoindian. Isolated Paleoindian chipped stone projectile points, typed as Clovis, have been found on the upper Texas coast in surficial or mixed contexts (Hester 1980:4; Patterson 1980:6; Wheat 1953:213). These projectile points date to approximately 12,000 to 10,500 B.P. (Ensor and Ricklis 1998). Story et al. (1990:178–210) found that, except for well inland of the modern coastline, Paleoindian artifacts on the upper Texas coast are from disturbed or secondary contexts.

Aten (1983a:116–117) estimates that during the Paleoindian period, the coastline of the Gulf of Mexico was between 30 and 40 km seaward of its present location (see also Gagliano 1977; Paine and Morton 1986). Woodlands apparently covered much of the upper Texas coast and probably extended onto the now-submerged continental shelf. Most of the sites dating to this period may lie offshore, be deeply buried in the terraces of major streams, or have been obliterated by Holocene erosion (Abbott 2001:98; Hester 1980:7–8). Paleoindian remains have been recovered along McFaddin Beach, redeposited from an actively eroding site offshore (Long 1977; Turner and Tanner 1994). Stright (1986, 1990) has found evidence for early Holocene shell middens along now-inundated paleochannels of the Sabine River. Environmental changes that brought about the extinction or dislocation of Rancholabrean megafauna precipitated a shift away from Paleoindian adaptations toward a broad-based subsistence orientation termed Archaic (Aten 1983a:146, 148; Willey and Phillips 1958:107).

Archaic Period (8000 B.C.–A.D. 400)

Probably the most prominent characteristic of the Archaic period is that it epitomizes the foraging lifestyle. The Archaic period on the upper Texas coast is marked by sea-level rise and climatic fluctuation in the middle to late Holocene, from 7000 B.C. to A.D. 100 (Aten 1983a:152–157). Few Archaic sites are recorded on the upper Texas coast (Aten 1983a:153; Story 1985:28–29), and Story (1985:31–34) suggests site density was low on the coastal plains. Archaic sites that have been tested or excavated near the modern shoreline generally consist of shell-bearing sites, including some along Cedar Bayou, with varying degrees of lithic tools and debitage, shell or bone tools, and the bones of fish, mammals, and reptiles (e.g., Ambler 1967, 1970, 1973; Aten 1983a; Ensor 1998; Howard et al. 1991). Inland sites tend to contain more lithic artifacts and debitage, and terrestrial mammal bones make up the bulk of the inland faunal assemblages.

Early Archaic (8000–5000 B.C.)

The Paleoindian types are followed in this period by unfluted lanceolate projectile points such as Plainview, Golondrina, and Angostura (Story et al. 1990), generally thought to date to from around 10,100 to 9200 B.P. (Johnson 1989:47). Ensor (1987) suggests that San Patrice points, a probable variant of Dalton points (see Turner and Hester 1993:181), bridged the gap between Paleoindian manifestations and later Early Archaic expanding-stem projectile points. This is consistent with adaptations in the southeastern United States to modern floral and faunal regimes after the Pleistocene (Goodyear 1982). Based on morphological and technological similarities between Dalton and San Patrice projectile points, as well as cultural and broad environmental similarities across the Gulf Coastal Plain from Alabama into Texas, Ensor (1987) suggests that the San Patrice phenomenon is an extension of the Dalton tradition. Thus, cultural affinities with the southeastern United States are deeply rooted in Southeast Texas.

Several sites on the inner margin of the coastal plain with components dating to the Early Archaic have been recorded (Fields 1988; Patterson 1980; Patterson and Hudgins 1985; Wheat 1953). Very few intact Early Archaic components are known on the upper Texas coast (Aten 1983a:153), and Story (1985:31) suggests the inland margin of the coastal plain may have been occupied more intensively than the upper Texas coast as sea levels rose during the Early Archaic.

Middle Archaic (5000–1000 B.C.)

The coastline reached its current location during the Middle Archaic, between 5000 and 3000 years B.P. (Aten 1983a:137). Expanding-stem projectile points continued to predominate the lithic assemblage until approximately 4000 B.P., when the later Middle Archaic type Palmillas is thought to predominate, followed by Kent points, dating to the late Middle Archaic period in the lowest levels of the Harris County Boys' School site (Ensor and Ricklis 1998). Howard et al. (1991) reported the earliest dates, between 4700 and 4400 B.P., for a shell midden in the region. Excavation of 41AU36 on the lower Brazos River revealed a cemetery in use from the Middle Archaic through the Early Ceramic period (Hall 1981). Story (1985:44–47) suggests the establishment of cemeteries along major streams on the coastal plain (see Hall 1981; Story et al. 1990:237–242) indicates increased territoriality during the Middle and Late Archaic.

Late Archaic (1000 B.C.–A.D. 400)

Late Archaic occupation of the coastal area is much better represented by numerous specimens of dart points such as Yarbrough, Kent, and Gary types found in shoreline shell-bearing sites as well as inland riverine locations (Gadus and Howard 1990; Mercado-Allinger et al. 1984). During the Late Archaic, sea level stabilized and the modern climatic regime became established (Aten 1983a: 157–159). Beginning around 1000 B.C., subsistence adaptations increasingly focused on coastal zone resources (Aten 1983a:157–159; Story et al. 1990:240).

Aten (1979:470–474) suggests that prior to A.D. 100, no major technological changes took place in the development of the foraging groups along the upper Texas Gulf Coast, although it is likely that populations began increasing in the Late Archaic as modern environmental conditions developed (Aten 1983a). Numerous Late Archaic shell middens have been excavated in the Galveston Bay area (e.g., Ambler 1970, 1973; Aten 1967, 1983b; Dillehay 1975; Gadus and Howard 1990). These middens typically contain *Rangia* and oyster shells, varying amounts of lithic debitage and tools, bone and shell tools, as well as the bones of mammals, fish, and reptiles.

Aten (1979, 1983a) hypothesized the establishment of seasonal rounds, including regular movements from littoral to inland areas during the Late Archaic. The historic Akokisa have been demonstrated to move in a yearly round from small, dispersed band-sized or smaller groups during the warm seasons to aggregated villages during the colder months (Aten 1979:466; Newcomb 1961). Walnut shells, deer, turtles, beaver, and possibly bison remains have been recovered from inland Late Archaic sites, as well as burned rocks and clay balls (Shafer et al. 1975). During this period, grave goods from 41AU36 indicate the inhabitants of the site were involved in an import-export sphere extending far beyond Southeast Texas, as far as Arkansas (Hall 1981:289–309).

Story (1985:40) views the establishment of large cemeteries along drainages as evidence of strong territorial ties by certain groups resulting from increased population growth in the region. Hall (1981) argued that the highly productive environments such as river valley bottoms, estuaries, and bays that formed during the late Holocene were home to an aggregate of resources. Many of these resources were predictable, concentrated, and fixed on the landscape, and allowed Late Archaic groups to operate within smaller, more-exclusive territories.

Ceramic/Woodland Period (A.D. 400–1750)

The Ceramic period is divided into early and late parts after Ensor et al. (1990) and Story (Story et al. 1990). Ceramics became a regular part of the archeological material culture in the Galveston Bay area beginning around 2000 B.P., and Shafer (1975) views the introduction of pottery in the Early Ceramic as having little effect on the lifeways of prehistoric groups in Southeast Texas. The contents of shell-bearing sites along the upper Texas coast during the Ceramic period vary little from the Late Archaic shell middens, except for the addition of pottery to the native technological repertoire (Takac et al. 2000:17).

Story et al. (1990) differed from other researchers in the region such as Aten (1983a) and Shafer (1975), who referred to the post-Archaic inhabitants of the region as Woodland, by referring to the developmental sequence of ceramic styles on the upper coast and inland areas as the “Mossy Grove Tradition.” Following the introduction of Tchefuncte varieties, as early as 400 B.C. (Ensor 1998), the incised design motifs of the Mossy Grove Tradition were strongly influenced by the Coles Creek Tradition of the Lower Mississippi Valley (Ricklis and Weinstein 2005).

Early Ceramic (A.D. 400–800)

The Early Ceramic is identified by the co-occurrence of sandy or clay paste ceramics and dart points (primarily Gary and Kent types) (Aten 1983a:303). Aten (1983a:320–321) believes population densities increased during the Ceramic period and intraregional differences became more pronounced. Group territories were established along major streams (Aten 1983a:31–37), marked by at least one cemetery (Aten 1983a:322). The sandy paste ceramic types are Goose Creek Plain, Incised, and Red-Filmed and other ceramic types such as O'Neal Plain and Tchefuncte Plain during this period. Aten's (1983a) detailed sequence of ceramic periods in the Galveston Bay area mirrors major inland cultural changes (Howard et al. 1991:12).

Late Ceramic (A.D. 800–1750)

Arrow points and grog-tempered ceramics were introduced during the Late Ceramic. Arrow points were introduced around A.D. 600, and grog-tempered ceramics around A.D. 1000 (Aten 1983a:288, 303), although sandy paste ceramics and dart points from the Early Ceramic continue to be used during this period. Arrow points include the types Catahoula, Perdiz, Cliffton, and Scallorn (Ensor et al. 1990:8). The grog-tempered ceramics include Baytown Plain and Incised types. Shafer (1975) believes some evidence exists for more-permanent residence inland near modern Lake Conroe.

Based on findings at the Mitchell Ridge site (41GV66), including radiocarbon data from discrete features and associated artifacts of strongly inferrable chronological positions, Ricklis (1994:21) provided an alternative chronological framework for the Galveston Bay area Ceramic period, suggesting the precision of Aten's detailed ceramic seriation for the region was not supported by empirical evidence. Ricklis (1994:21–23) divided his chronology into the Preceramic period, ending at ca. A.D. 100; the Early Ceramic period (ca. A.D. 100–700), which spans from the introduction of pottery to the appearance of arrow points in the artifact assemblage; the Initial Late Prehistoric period (ca. A.D. 700–1250), during which the arrow point may have completely replaced the dart point and grog-tempered pottery appeared; and the Final Late Prehistoric period (A.D. 1250–1500), during which 41GV66 attracted more-intensive occupation, and is marked by Perdiz arrow points and prismatic blades similar to inland assemblages, as well as the presence of bison bone.

Protohistoric and Early Historic Periods

Ricklis (1994:23) also included the Protohistoric period (A.D. 1500–1700) and the Early Historic period in his alternate chronology for the Galveston Bay area. Although there is no evidence for drastic changes in lifeways at 41GV66 during the Protohistoric period, the aboriginal inhabitants of the Galveston Bay area had limited access to European-manufactured goods such as glass and beads found in two burials of the period. During the Early Historic period, increasingly intensive contact with Euro-American traders, missionaries, and military personnel resulted in rapid changes in native culture and demography. The evidence from Mitchell Ridge suggests that native groups were suffering major population loss as a result of epidemics of introduced Old World diseases, that

there was significant social mixing of local groups with nonlocal peoples, the natives of Galveston Bay were participating in the French-Indian fur trade, and there may have been a partial shift to a horticultural subsistence base in the mid-1700s.

The historic Akokisa, an Atakapan-speaking group, moved in a yearly round as small mobile bands in the summer and congregated in large, aggregated villages in the winter (Aten 1979; Newcomb 1961). Newcomb (1961) notes that the Frenchman Simars de Bellisle, captured by the Akokisa in 1720, described the Akokisa as hunters, gatherers, and fishermen and stated that they grew no crops.

None of the native groups around Galveston Bay adapted well to the arrival of Europeans. Conflict and disease forced the integration of the local tribes by the end of the eighteenth century. Aten (1983a) tells that the Akokisa had passed into oblivion by 1830; however, Moore (1992; Moore and Donachie 2001) has found evidence that a few of the Akokisa and closely related Bidai were alive well into the twentieth century. Neither the Akokisa nor their neighbors the Karankawa exist today as a federally or state-recognized tribe.

European Settlement

The European presence in the Galveston Bay area began with the Spanish explorations of Alonso Álvarez de Piñeda and Alvar Nuñez Cabeza de Vaca in the early sixteenth century. Piñeda was commissioned by Francisco de Garay, the governor of Jamaica, to explore between Mexico and Florida for a supposed water route to Asia. This expedition, which left Jamaica in 1519, was the first to chart the coast of Texas (Campbell 2003:27). Cabeza de Vaca was second in command of an expedition led in 1527 by Pánfilo de Narváez to create a settlement in Mexico. After a series of misfortunes, Cabeza de Vaca's vessels were separated from the expedition during a storm and swept ashore, likely at San Luis Island or Follet's Island, just west of Galveston (Campbell 2003:28; Favata and Fernández 1993; Weddle 1992:99). Cabeza de Vaca lived in the Galveston area for several years among the Karankawas as, variably, a doctor, slave, and merchant. He and his companions would eventually reach Mexico City in 1536 before finally returning to Spain. His account of the journey, published in 1542, is the first book relating to Texas (Campbell 2003:28–30).

Cabeza de Vaca's account was used, in turn, as the basis for subsequent explorations of the Gulf region by the likes of Hernando de Soto in 1539 and Luis de Moscoso Alvarado in 1542. However, by 1561 Spain was facing increasing difficulties in maintaining its few colonies in Florida. The relatively poor economic prospects for these colonies and increasing competition from other colonial powers quelled the Spanish crown's interest in further colonization efforts. By the late seventeenth century, the threat of French exploration in the territory was exemplified by the establishment of Fort St. Louis by René Robert Cavelier, Sieur de La Salle at Matagorda Bay in 1685. This event provided the Spanish government with an impetus to establish permanent settlements

in the area (Weddle 1992:105). In spite of French explorations and renewed Spanish interest in the colonization of Texas, the Galveston Bay area would not again see European interest until the cartographic survey of Jean Baptiste Bénard de la Harpe in the early eighteenth century.

French attempts to establish permanent trading posts on Galveston Bay were ultimately unsuccessful, but individual traders continued to make excursions into the San Jacinto and Trinity Rivers through the 1750s. Anchoring their sailing vessels in the upper bay, the traders would transport their goods upstream by canoe to trade with the local Orcoquisa, Bedai, and Attakapa tribes (Henson 1986:2–3). This practice came to an end in 1754 when an Orcoquisac chief betrayed a French trader to Spanish agents, which ultimately led to establishment of a Spanish *presidio* in the area to prevent further French encroachment. Spain abandoned this presidio in 1771, in part because France had lost the Seven Years War in 1763 and, with it, any territorial claims. Spain then had sovereign control of the area all the way to the Mississippi River.

Texas Republic and Statehood

By the early 1800s, increasing dissent against Spain's imperial control over New Spain gave rise to a series of revolutionary movements seeking to establish new independent nations in Mexico and Texas. Animosities between Spain and the United States over the affairs in Texas only intensified following the U.S. acquisition of Louisiana as part of the Louisiana Purchase in 1803. Unofficially, American agents supported revolutionary activities in the Texas territory, including separate filibustering operations by Henry Perry, Louis Michel Aury, Francisco Xavier Mina, and James Long.

These numerous filibustering expeditions to liberate New Spain were ultimately unsuccessful, but Mexico was still able to declare its independence in 1821. After Mexico had declared its independence, James Long was accidentally shot and killed in Mexico City after having been arrested at La Bahia. Once news of his death reached his widow, Jane Long, on Bolivar Peninsula, she joined an immigrant family from Louisiana that eventually settled on Cedar Bayou (Henson 1986:5).

Eager to capitalize on Mexico's newfound independence, and spurred by Stephen F. Austin's advertisements of cheap land for sale, many immigrants began arriving in Galveston in 1822. Austin's father, Moses, had negotiated a contract with the Spanish government in 1820 to bring settlers to Texas in exchange for land. Moses Austin died the following year, and Stephen took on the responsibility of fulfilling the contract. The Austin grant included the Colorado and Brazos River watersheds, but many of the frontiersmen who initially arrived in Galveston chose to remain in the area. Nathaniel Lynch, James Strange, Christian Smith, and John Iiams were some that settled their families in the area that came to be Baytown. Smith, a member of the family that took in Jane Long, selected a site that straddled Cedar Bayou several miles upstream from its mouth (Henson 1986: 7–8).

PREVIOUS ARCHEOLOGICAL INVESTIGATIONS AND SITES WITHIN 1.86 MILES (3 KM) OF THE PROPOSED PROJECT AREA

The following is a discussion of previous archeological investigations and sites within 3 km (1.86 miles) of the proposed project area. The files and maps at the Texas Archeological Research Laboratory (TARL), the THC's on-line Restricted Archeological Sites Atlas, and the National Park Service's NRHP GIS Spatial Data and National Historic Landmarks Program were consulted during the background review. Four documented cultural resources were identified within the 3-km project review area. These consist of three cemeteries and one Official Texas Historical Marker (OTHM). No previously recorded archeological sites were located within the 3-km proposed project area.

Multiple archeological investigations have occurred within 3 km of the proposed project location. The following is a list of these surveys. None of the surveys resulted in the location of cultural resources.

Consultant	Agency*	Date
Not Available	TxDOT	1976
Not Available	EPA	1978
Not Available	FCC	1998
Blanton and Associates	USACE	2004
Ecomm	TxDOT	2006
Horizon	USACE	2006
HRA Gray and Pape	USACE	2007
HRA Gray and Pape	USACE	2007
SWCA	USACE	2007
Archeology and Environmental Consultants	FERC	2008
Archeology and Environmental Consultants	FERC	2008
HRA Gray and Pape	USACE	2010
Coastal Environments, Inc.	USACE	2011

*TxDOT = Texas Department of Transportation; FCC = Federal Communications Commission; FERC = Federal Energy Regulatory Commission

The First United Methodist Church and Cemetery of Mont Belvieu accounts for a cemetery and an OTHM (Marker No. 9122). The church and cemetery are located approximately 2.5 km southeast of the proposed project boundary. Erected in 1979, the marker documents the arrival of Amos and Ann Barber in the vicinity in 1849. The area they settled became known as Barbers Hill. The Barbers donated 4 acres for a church house and school building, which was built in 1878. The current location was acquired in 1895, and the current structure was built in 1897. Initially, the chapel was named Fisher's Chapel as a result of the Fisher family's donation to construct the

current structure. There are 245 interments located in the associated cemetery (Cemetery No. CH-C019). Other portions of the current structure were added on in 1932 (sanctuary), 1945 (fellowship hall), and 1957 (education wing). The church and cemetery's association with Amos and Ann Barber, founders of the Mont Belvieu community (Ladd, 2012) suggests that these resources may be potentially eligible for listing in the NRHP under Criterion B for its associations with the lives of significant persons at the local level. The church and cemetery appear to meet Criteria Consideration B for a surviving structure most importantly associated with a historic person or event.

The Williams Cemetery (Cemetery No. CH-C018) is also located approximately 2.5 km southeast of the proposed project location. It is located behind the Mont Belvieu Church of Christ. Very little is documented about this cemetery. While no dates for the cemetery are noted, the cemetery does appear on the 1943 U.S. Geological Survey (USGS) Cedar Bayou Quadrangle (see Appendix A). Additionally, the THC site atlas explains that some "stones" were destroyed in 1975. The Williams Cemetery may contain the final resting place of Amos Barber, founder of the Mont Belvieu community, and was possibly associated with his homestead, which is no longer standing. Given this association and its proximity to the First United Methodist Church and Cemetery of Mont Belvieu, this cemetery could be part of a historic landscape associated with the Barber family, and may be potentially eligible for listing in the NRHP under Criterion B for its associations with the lives of significant persons at the local level. In addition, within a landscape context, this cemetery as well as the First United Methodist Church Cemetery, appears to meet Criteria Consideration D for cemeteries that derive their primary importance from graves of persons of transcendent importance, from age, from distinctive design features, or from association with historic events.

The Fisher #2 Cemetery (Cemetery No. CH-CO17) is located approximately 2.75 km southeast of the proposed project location. The cemetery is located approximately 200 m west of Highway 146 within a highly industrialized area. However, the cemetery appears to be well protected from development as it is situated within a locked pasture with a smaller fenced-in area in the middle of the pasture. The cemetery is small, consisting of approximately 12 burials. The earliest of the burial markers dates to the 1890s. This cemetery has recently been associated with legal action in which family members have testified that it contains the remains of some of the earliest founders of the Mont Belvieu community (see attached appellate opinion [Appendix C]). As a result, this cemetery may be eligible under Criteria A for its association with events that have made a significant contribution to the broad patterns of our history or B for its associations with the lives of significant persons at the local level for its association with early local development and founding families of the Mont Belvieu community. This cemetery appears to meet Criteria Consideration D for a cemetery that derives its primary importance from graves of persons of transcendent importance, from age, from distinctive design features, or from association with historic events.

Additionally, Atkins historians conducted a review of historic maps within the Atkins Texas Historic Sites Overlay collection and The University of Texas at Austin digital map collection. The 1943

Cedar Bayou USGS topographic map (see Appendix A) depicts the small community of Mont Belvieu within the southwestern portion of the 3-km review area. According to the *Handbook of Texas Online*, the town site was platted in 1922 subsequent to the first commercial production of oil at the Barbers Hill Oilfield in 1918 (Wooster 2012). The town appears to have been platted along what is now called Spur 207, west of Highway 146. The structures depicted include residential and commercial buildings as well as several schools and churches. Other structures present on the map within the 3-km review area include more than 20 oil wells just west of the town. Also, the map depicts the Barbers Hill Canal (now Cedar Bayou Canal), which runs north of Mont Belvieu.

The 1961 and 1969 USGS topographic maps (see Appendix A) show additional residential and commercial buildings within Mont Belvieu and a large increase in oil wells and associated oil field structures near the town. Very few structures are depicted on the maps within the remainder of the 3-km review area and appear to be limited to oil wells and windmills. No structures are shown within the footprint of the proposed facilities.

III. CONCLUSIONS AND RECOMMENDATIONS

The proposed project area has been subject to many disturbances associated with previous construction activities related to oil and gas facilities. Additionally, historic aerials indicate that the proposed project area has been disturbed by agricultural activities, such as the construction of berms and irrigation ditches. The First United Methodist Church and Cemetery of Mont Belvieu, Williams Cemetery, and Fisher #2 Cemetery are located approximately 2.5 to 2.7 km from the proposed project location. Although these resources may be potentially eligible for listing in the NRHP, it is anticipated that no adverse effects would occur to these cultural resources as a result of the proposed construction activities associated with the Fractionation and Deisobutanizer Units. Furthermore, no physical destruction to the cultural resources will occur resulting from the proposed construction activities such as the movement of soils and travel of construction vehicles. Further, due to the distance, Atkins expects that any potential airborne pollutant or sediments resulting from the construction and operation of the proposed project will not adversely affect the above-mentioned resources. Finally, given the distance of the cultural resources to the proposed project, no adverse visual impacts are anticipated as a result of the proposed project.

In conclusion, it is Atkins' opinion that the proposed undertaking will have no adverse affect on historic properties listed in the NRHP or that meet the criteria for the NRHP as it pertains to the Section 106 process. This opinion is supported by the project area's low geoarcheological potential, the presence of ancient alluvium having already undergone significant impacts as a result of previous oil and gas construction activities (see Appendix B), and long-term farming activities. In addition, the proposed project area is a little over 3 km from any source of naturally occurring perennial water.

Atkins recommends that cultural resource consultations be considered complete for the proposed project area presented in this report. However, if during the course of the proposed project any cultural resources are encountered, the project should cease at that location until the THC and the EPA are notified and a qualified professional archeologist can assess the significance of the findings.

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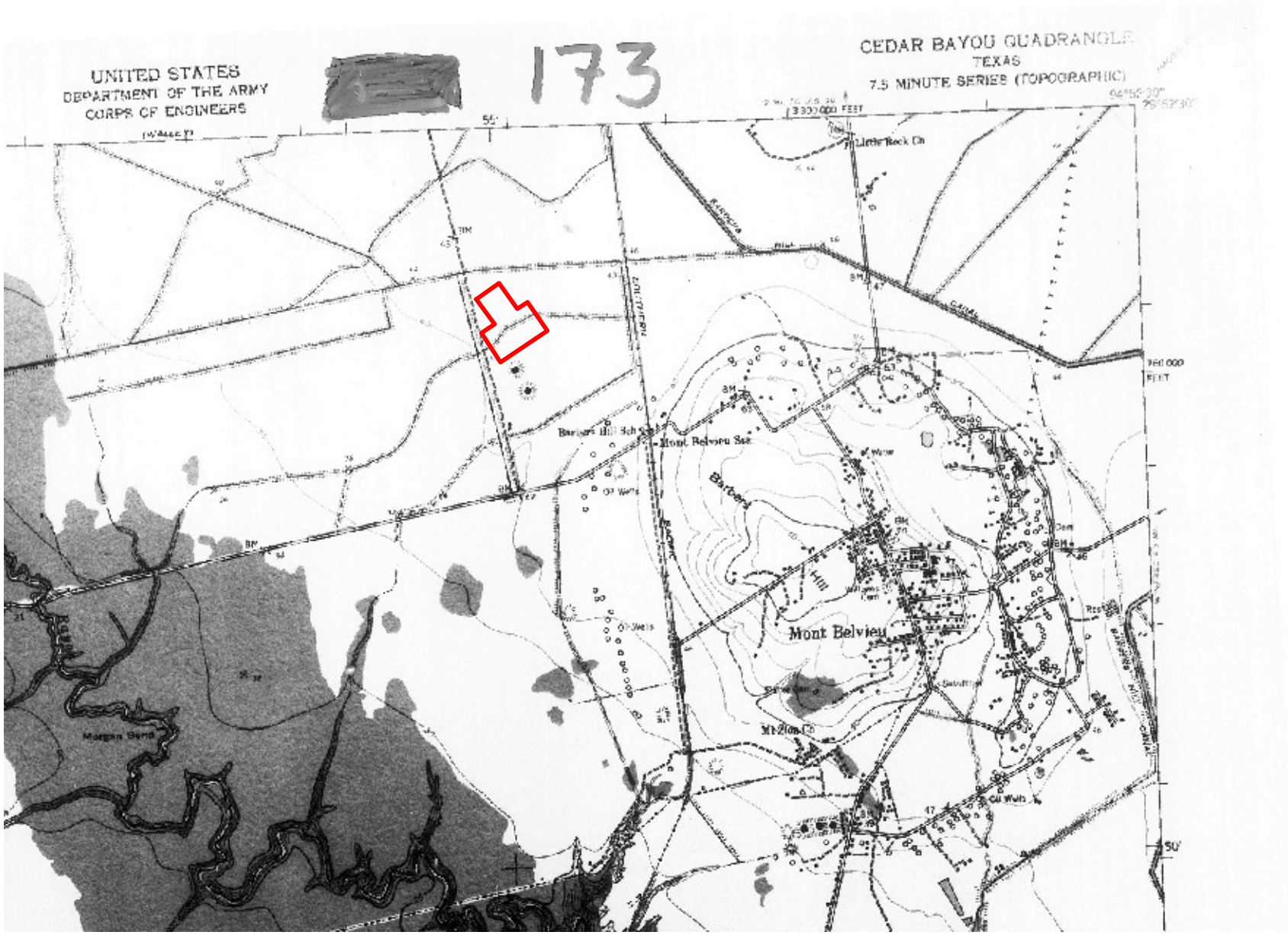
Appendix A

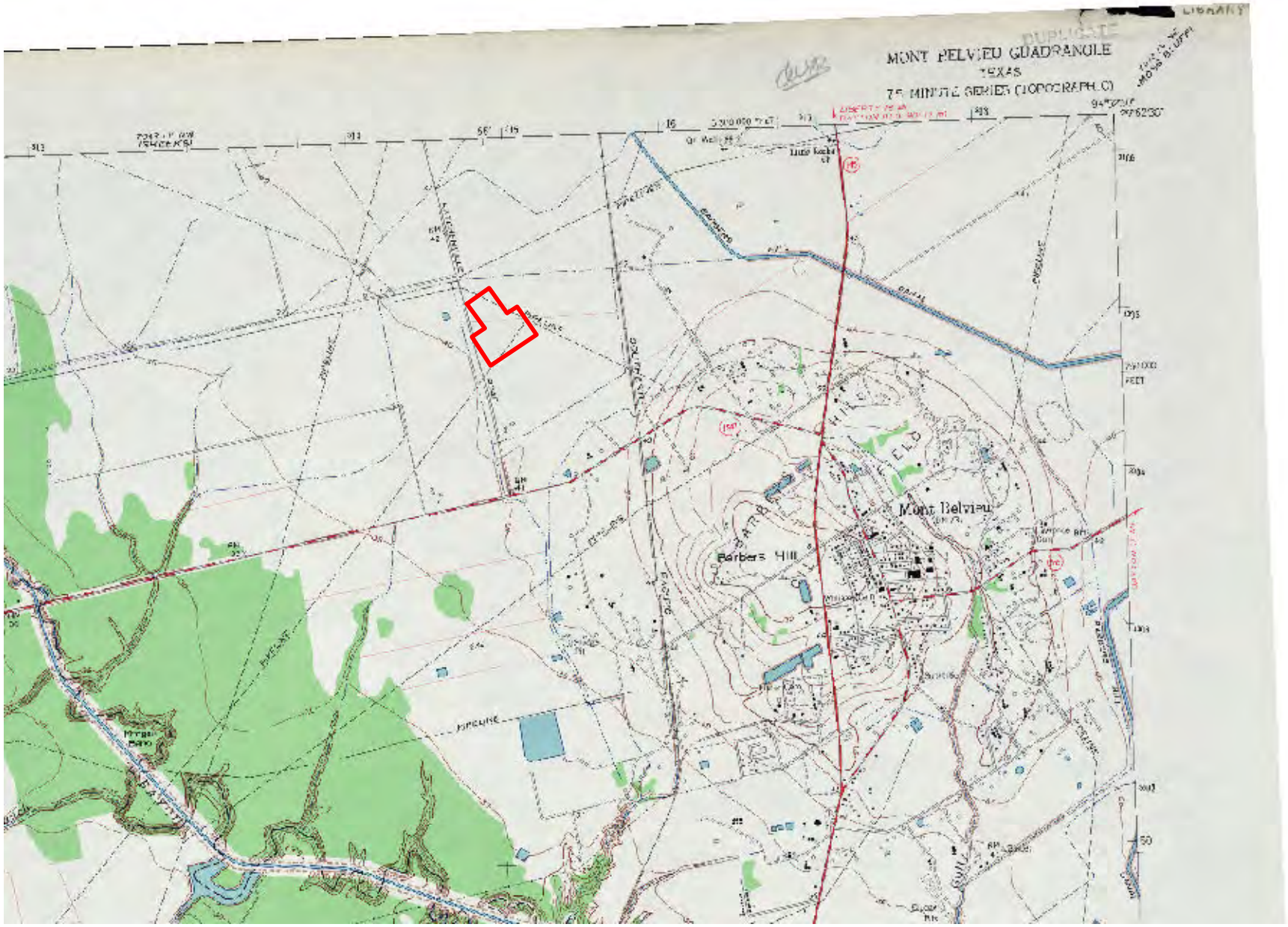
Historic Topographic Maps

Appendix A

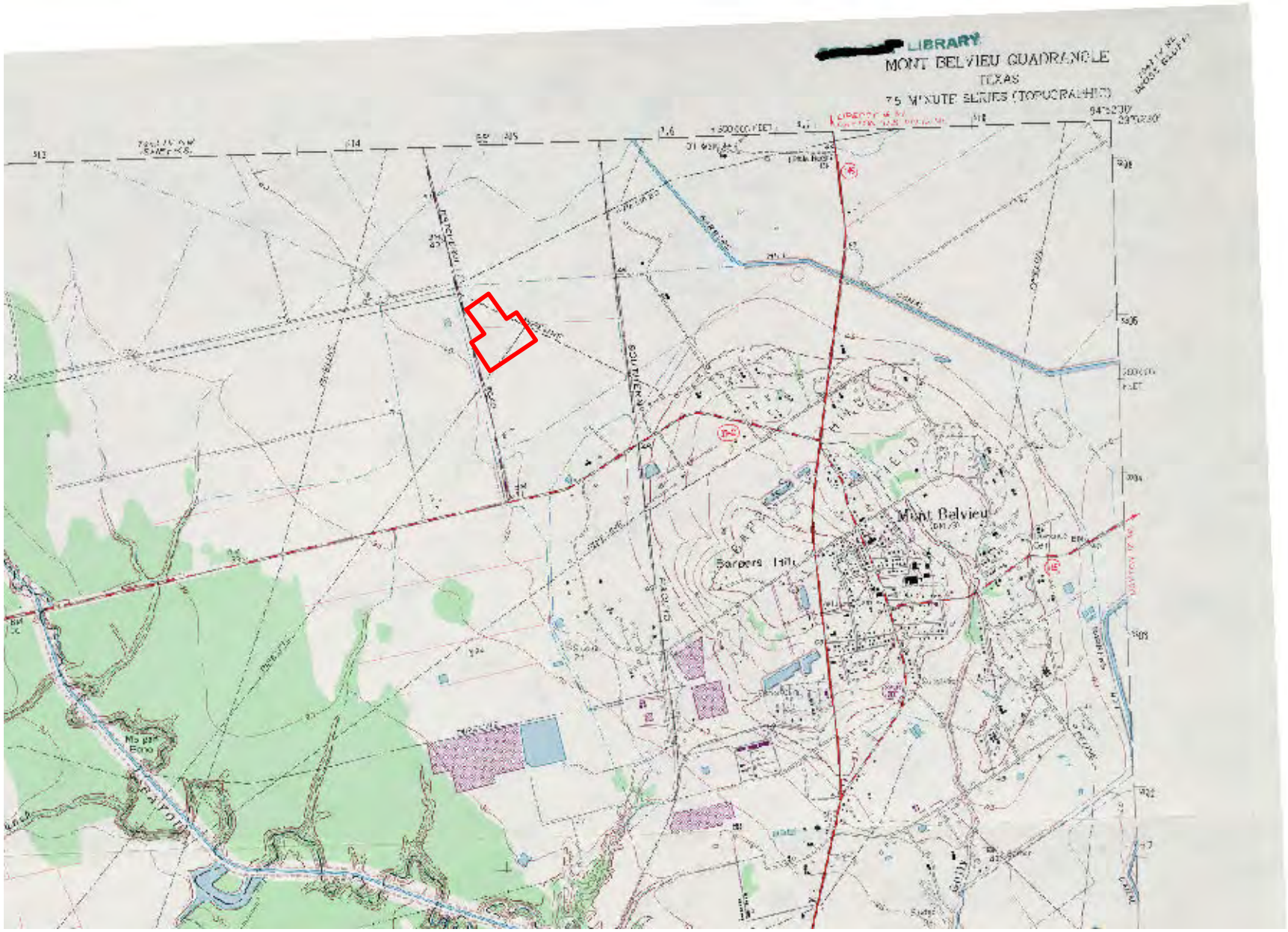
Historic Topographic Maps



1943 Cedar Bayou Quadrangle USGS



1961 Mont Belvieu Quadrangle USGS



1969 Mont Belvieu Quadrangle USGS

Appendix B

Project Location Overview Photographs

Overview of future facilities location facing south.

Overview of future facilities location facing east.

Overview of future facilities location facing northeast.

Overview of future facilities location facing southwest.

Appendix C

Opinion No. 14-11-01000-CV
Mary Catherine Levandovsky, Appellant
V. Targa Resources Inc. and
Targa Downstream LLC, Appellee
Fourteenth Court of Appeals

Reversed and Remanded and Opinion filed July 12, 2012.

In The

Fourteenth Court of Appeals

NO. 14-11-01000-CV

MARY CATHERINE LEVANDOVSKY, Appellant

V.

TARGA RESOURCES INC. AND TARGA DOWNSTREAM LLC, Appellee

On Appeal from the 344th District Court
Chambers County, Texas
Trial Court Cause No. CV26087

O P I N I O N

In this summary-judgment appeal, appellant Mary Catherine Levandovsky contends that the trial court erred in declaring a family cemetery located on property owned by Targa Resources Inc. and Targa Downstream LLC (collectively, "Targa") "abandoned" and granting summary judgment in favor of Targa. We reverse and remand.

BACKGROUND

This appeal involves a small family cemetery located on slightly more than one acre tract of land within the perimeter of Targa's 200-plus acre Mont Belvieu gas-processing facility in Chambers County, Texas. Targa's predecessor in interest, Warren Petroleum, acquired the acreage containing the cemetery tract from Edgar C. Fisher on August 16, 1955. The deed from Fisher to Warren included a reservation of the surface estate of the approximately one acre cemetery, referred to as the Ben Fisher Cemetery.[1] This reservation explicitly stated that Warren, the grantee, would own fee simple title to the property, but it was not permitted to use the surface estate of the Ben Fisher Cemetery as long as the land was used as a cemetery. The graves of Edgar Fisher, his mother, his brother, and his daughter are located in the cemetery. The oldest grave in the cemetery dates from 1898, and the most recent burial occurred in 1976. The cemetery is surrounded by a fence, headstones are clearly visible, and the area within is maintained by Targa. *See* Appendix.[2]

In December 2010, Targa brought a declaratory judgment action seeking removal of the dedication for cemetery purposes and permitting exhumation and transfer of the human remains to a perpetual-care cemetery. Prior to filing suit, Targa discovered that appellant was the granddaughter of Edgar Fisher. When she was notified of the proceeding, she opposed relocation of the graves. Targa also notified the Texas Historical Commission, which declined to intervene in the matter in the trial court.[3]

In August 2011, Targa filed a motion for summary judgment, requesting the relief described above. In support of its request, Targa asserted that, in relevant part, the

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[1] The deed contains a metes and bounds description of the cemetery tract and states: "This deed includes said cemetery tract, with the exception that Grantee shall not have the right to use the surface of said cemetery tract for any purpose so long as it is used as a cemetery."

[2] These photographs were attached to Targa's summary-judgment motion.

[3] However, on appeal, the Texas Historical Commission, through the Office of the Attorney General, has filed an amicus brief supporting appellant's position.

cemetery is abandoned, and it is in the public interest to remove the dedication for cemetery purposes and relocate any buried remains to a perpetual care cemetery. Targa further alleged that, prior to filing the suit, none of the grave sites had been visited by family members for at least thirty-five years. It alleged that it and its predecessor, Warren, had provided "minimal maintenance" to the grave sites for more than fifty-five years, including mowing the grass in the tract to prevent the accumulation of long grasses. Targa asserted that it was dangerous for people to visit the cemetery due to the risks associated with a large gas processing facility, citing a prior fire at an adjacent facility. It argued that public interests would be better served by exhumation of the bodies from the graves and removal to a perpetual care cemetery where the public would have safer access to the graves.

Appellant responded, denying that the cemetery had been abandoned and asserting that Targa had failed to establish that relocation of the graves was in the best interest of the public. She attached her own affidavit to the response, stating that she is the granddaughter of Edgar Fisher and became aware of the cemetery only after she was contacted by a Targa representative. She stated that she had visited the cemetery on September 16, 2011 and had researched her family history. She explained that the cemetery is an important location for both "personal and general historical reasons." She further stated that she intended to visit the cemetery in the future, that the safety requirements associated with a visit to the cemetery, including wearing appropriate safety gear and watching a safety video, did not "bother" her, and that she was not concerned about her safety when visiting the cemetery. She expressed willingness to execute a waiver of liability. Finally, she stated that she intended to replace or repair the damaged headstones and markers and would "gladly see to the maintenance of the cemetery" if permitted by Targa.

Also attached to the response was the affidavit of Catherine Levandovsky, appellant's daughter and the great-granddaughter of Edgar Fisher. Catherine averred that she became aware of the cemetery during the pendency of the suit and has visited it three

times. She explained that she discovered many details regarding her family history, including that her family was one of the founding families in Chambers County. Like her mother, Catherine stated that she planned to visit the cemetery in the future and was willing to execute a waiver of liability. She further explained as follows:

> While I understand there are inherent risks to visiting the cemetery I am not concerned about my safety. As stated above I will follow all instructions and safety precautions as instructed by Targa employees and included in the safety video. I am a Department of the Army employee and work on an Army installation. The need to follow rules and procedures when it comes to safety and security are very important and familiar to me.

The trial court heard Targa's summary-judgment motion on October 4, 2011. It subsequently granted the following declaratory relief:

> Any dedication, implied easement or designation for cemetery purposes that affects the real property described below and recorded at Vol. 168, Page 369 of the Real Property Records of Chambers County, Texas (the "Real Property), has been abandoned, and therefore is of no further effect or a burden on the Real Property. . . .
>
> IT IS FURTHER ORDERED, ADJUDGED AND DECREED by the Court that Targa may forthwith remove any human remains from said Real Property to a perpetual care cemetery, at Targa's sole cost and expense. Also at Targa's sole cost and expense, Targa shall do the following in connection with the relocation of the graves and any bodily remains located in the Real Property to a perpetual care cemetery: (a) it shall engage the perpetual care cemetery funeral director to relocate the graves and any human remains located in the Real Property to the perpetual care cemetery, to maintain and perform all required record keeping, and to secure any required permits in the performance of such tasks, and henceforth to care for the graves in accordance with the rules and standards of the perpetual care cemetery; (b) it shall also direct that the perpetual care cemetery follow all laws and regulations with respect to the proper reinternment [sic] and care of the graves; (c) it shall advise Mary Catherine Levandosky [sic] of the new location of the graves; (d) it shall engage a religious official to oversee the dis-internment [sic] and the reinternment [sic] of the graves and remains from the Real Property to the perpetual care cemetery; and (e) it shall engage a person qualified in the repair of gravestones to make repairs to the gravestones in a manner that is in accordance with normal maintenance of gravestones at the perpetual care cemetery.

This appeal timely followed the trial court's declaratory judgment.

ANALYSIS

We review a trial court's summary judgment *de novo*. *Valence Operating Co. v. Dorsett*, 164 S.W.3d 656, 661 (Tex. 2005). In reviewing a summary judgment, we take as true all evidence favorable to the nonmovant, indulging every reasonable inference, and we resolve any doubts in the nonmovant's favor. *Nixon v. Mr. Prop. Management Co.*, 690 S.W.2d 546, 549 (Tex. 1985). In a traditional motion for summary judgment, if the movant's motion and summary judgment evidence facially establish its right to judgment as a matter of law, the burden shifts to the nonmovant to raise a genuine, material fact issue sufficient to defeat summary judgment. *M.D. Anderson Hosp. & Tumor Inst. v. Willrich*, 28 S.W.3d 22, 23 (Tex. 2000). This burden shifts, however, only when the movant establishes its right to judgment as a matter of law. *See id.*

In her first issue, appellant asserts that the trial court erred in determining that the Ben Fisher Cemetery had been abandoned. The Texas Health & Safety Code provides that the owner of a property on which an "abandoned" cemetery is located may petition a district court in the county in which the cemetery is located for removal of any dedication for cemetery purposes that affects the property if the court finds that the removal of the dedication is in the public interest. Tex. Health & Safety Code § 711.010(b). "If a court orders the removal of a dedication of a cemetery and all human remains on the property have not previously been removed, the court shall order the removal of the human remains from the cemetery to a perpetual care cemetery." *Id.* The Texas Historical Commission (the "Commission") may adopt rules to enforce and administer section 711.010 of the Texas Health & Safety Code. *Id.* at 711.012(c)(1).

Administrative rules have the same force and effect as statutes. *Rodriguez v. Service Lloyds Ins. Co.*, 997 S.W.2d 248, 254 (Tex. 1999). They should be construed in the same manner as statutes. *TGS-NOPEC Geophysical Co. v. Combs*, 340 S.W.3d 432, 438 (Tex. 2011). Unless the rule is ambiguous, the court should follow the rule's clear

language. *Rodriguez*, 997 S.W.2d at 254. In construing an administrative rule, the primary objective is to give effect to the agency's intent. *Id.* To discern that intent, we begin with the plain language of the rule. *See TGS-NOPEC Geophysical Co.*, 340 S.W.3d at 439.

Apparently unbeknownst to the parties in this case, the Commission adopted a definition of an "abandoned cemetery" in May 2010, prior to the filing of this suit. 13 Tex. Admin. Code § 22.1. The Commission defines an "abandoned cemetery" as follows: "a non-perpetual care cemetery containing one or more graves and possessing cemetery elements for which no cemetery organization exists *and* which is not otherwise maintained by any caretakers. It may or may not be recorded in deed records of the county in which it lies." *Id.* § 22.1(1) (emphasis added).

The trial court erred by failing to consider the Commission's definition of an abandoned cemetery. As defined by the Commission, a non-perpetual care cemetery is abandoned if it: (1) contains one or more graves; (2) has cemetery elements for which no cemetery organization exists; *and* (3) is not otherwise maintained by *any* caretakers. *Id.* The Ben Fisher Cemetery meets the first and second but not the third prong of the Commission's definition of an abandoned cemetery. Under the facts of this case, including photographs[4] of the cemetery, it appears that the Ben Fisher Cemetery has been maintained, even though it has been maintained by Targa, the party seeking a declaration that it has been abandoned.

In sum, the Ben Fisher Cemetery does not meet the definition of an "abandoned cemetery" as established by the Commission because it is "otherwise maintained by [a] caretaker."[5] *Id.* Accordingly, the trial court erred in declaring the Ben Fisher Cemetery abandoned. We sustain appellant's first issue.

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[4] See Appendix

[5] *Cf. Andrus v. Remmert*, 136 Tex. 179, 146 S.W.2d 728, 730 (Tex. 1941) ("As long as land once dedicated to use as a cemetery is kept and preserved as a resting place for the dead, with anything to

CONCLUSION

Having sustained appellant's first issue, we reverse and remand to the trial court for proceedings consistent with this opinion.[6]

/s/ Adele Hedges
Chief Justice

Panel consists of Chief Justice Hedges and Justices Seymore and Brown.

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indicate the existence of graves, or as long as it is known and recognized by the public as a graveyard, it is not abandoned." (internal quotations omitted)), *modified*, 136 Tex. 185, 149 S.W.2d 584 (1941). The parties rely on case law in their briefs because, as noted above, none of them appears to have been aware of the Commission's definition of an abandoned cemetery. Although none of the cases cited by the parties explicitly defines an "abandoned cemetery," the Commission's definition is consistent with the common law. *See id.*

[6] Because of our disposition this issue, we need not reach appellant's second issue.

APPENDIX

Appendix D

Résumé for Dale Norton

Dale C. Norton

Group Manager
Atkins

Education

B.A., Anthropology, Southwest Texas State University, 1998
M.A., Anthropology, University of Southern Mississippi, 2004

Professional Memberships

Society for American Archaeology

Mr. Norton works as a group manager for Atkins. In this capacity, he is responsible for managing the Houston Cultural Resources Program. In addition, he manages projects overseeing their field investigations, report preparation, and agency review coordination in Texas, Louisiana, Mississippi, Missouri and Oklahoma.

In addition to his archeological experience, extensive training and practical experience in both bioarcheology and forensic anthropology have provided him with the skills and knowledge necessary to conduct investigations of skeletonized human remains. Mr. Norton wrote his thesis while at the University of Southern Mississippi entitled *Intersite Relationship of the Widows Creek (1JA305) and Williams Landing (1JA306) Sites: A Holistic Evaluation Utilizing Diet, Health, Genetic, Cultural and Demographic Data*.

Cultural Resources Survey Experience

2012 Front Range Pipeline Project in Colorado, Oklahoma and Texas. Currently Mr. Norton is serving as the manager for cultural resources for the approximately 400 mile Front Range Pipeline Project. He is overseeing all cultural resource permitting at the federal and state level. This also entails managing all field crews and ensuring that all state and federal laws are adhered to during field investigations.

2011 Cuero Lateral Pipeline Project in Dewitt and Jackson Counties, Texas. Mr. Norton served as the Principal Investigator for this 52-mile pipeline located in south central Texas. In this role, he developed and implemented field methodologies, worked effectively with the pipeline engineers and project managers. In particular, he provided guidance to the pipeline engineers with respect to avoiding a potentially NRHP eligible sites encountered within the proposed project. This entailed consultations with the Texas Historical Commission and the Galveston USACE District. The sites were avoided, concurrence was provided by both agencies.

2011 EOG Marshall and Milton Eagle Ford Gas Pipeline Project in Dewitt, Karnes, Gonzales and Lavaca Counties, Texas The Project consisted of approximately 73 miles of new 16-inch-diameter and 36-inch-diameter natural gas pipeline. As Principal Investigator, Mr. Norton ensured that all fieldwork was conducted in a timely and safe manner and that all reports for particular required permits were produced such that Enterprise was able to commence construction on time.

2011 Eagle Ford Shale Crude Pipeline Project 24-inch crude oil pipeline in Gonzales, DeWitt, Lavaca, Colorado, and Austin Counties, Texas. The project consisted of approximately 91 miles of new pipeline. Mr. Norton served as Principal Investigator on this project, which entailed being in constant contact with crews regarding survey methodologies in varying conditions and environments, coordination of field efforts, creating and maintaining a budget and report preparation. This particular project consisted of multiple preconstruction notifications with the USACE Galveston District, which has

involved consultations with both the USACE archeologists and Texas Historical Commission reviewers.

2010 White Kitchens Line 5-10, Section 4 Pipeline Project in Frio and LaSalle Counties, Texas. This project consisted of 21 miles of 16-inch natural gas pipeline. Mr. Norton served as Principal Investigator for the project. As such, he provided guidance on field methodologies, scheduled field crews, provided weekly status reports for the client and project manager, worked effectively with pipeline engineers in the field and ensured that budgetary and scheduling aspects were dealt with appropriately. A total of 14 archeological sites were documented. Several sites were found to be potentially eligible for the NRHP and PBS&J archeologist worked closely with project engineers to avoid impacts to these areas allowing the project to proceed on schedule.

2010 Eagle Ford Mainline West Pipeline Project in Webb and LaSalle Counties, Texas. Mr. Norton served as PBS&J's Principal Investigator on this project that spanned approximately 54.4 kilometers (33.8 miles). Mr. Norton oversaw field crews and advised crew chiefs on varying shovel testing methodologies as varying terrain was encountered. A total 9 cultural resources sites were recorded. In addition, Mr. Norton assisted in preparing a report documenting the survey in time for the client to begin construction on schedule.

2009 College Station College Station Switchyard Brazos County, Texas This project consisted of a intensive archeological survey for a proposed 400 by 400 foot switchback facility for Entergy Services, Inc. Mr. Norton served as the Principal Investigator.

2009 Branson to Aurora Pipeline Project, Sendero, Barry, Stone, Taney and Lawrence Counties, Missouri. This project consists of approximately 30 miles (48 kilometers) of 8-inch natural gas pipeline. Mr. Norton is serving as Principal Investigator for the project. He provides direction on field methodologies, schedules field crews and provides status reports for the client and project manager. A total of five cultural resources sites have been assessed during the project. Three sites have been found potentially eligible for the NRHP. Mr. Norton is working with the Missouri Department of Natural Resources regarding the project and the sites ensuring that the requirements of both the state and the client are met in a timely and satisfactory manner.

2009 Upper Leggett Gathering System Pipeline Project, Knudson, Polk County, Texas. This project consisted of approximately 19.31 kilometers (12 miles) of proposed 8-inch pipeline. Mr. Norton served as Principal Investigator for the project. In this role, he developed and provided guidance on field methodologies, scheduled field crews, worked effectively with pipeline engineers and ensured that budgetary and scheduling aspects were dealt with properly.

2009 Davis A-39 #1 Pipeline Project, Knudson, Polk County, Texas. This project consisted of approximately 2.4 kilometers (1.5 miles) of proposed 8-inch pipeline. Mr. Norton served as Principal Investigator and survey crew for the project. In this role, he developed and implemented field methodologies, worked effectively with the pipeline engineer. In particular, he provided guidance to the pipeline engineer with respect to avoiding a potentially NRHP eligible site encountered within the proposed project. The site was avoided and construction began on time.

2009 Grizzly Bear Lateral Pipeline Project, Knudson, Polk County, Texas. This project consisted of approximately 2.4 kilometers (1.5 miles) of proposed 8-inch pipeline. Mr. Norton served as Principal Investigator for the project. In this role, he developed and provided guidance on field methodologies, scheduled field crews and worked effectively with pipeline engineers.

2008 Sims Bayou Extension Project, USACE Galveston District, Harris County, Texas. This project consisted of intensive terrestrial survey for an approximately 20 acre site for the extension of Sims Bayou. Mr. Norton served as the PI for the project. His roles included coordination with the USACE Galveston cultural resources division and provided guidance on field methodologies and scheduled field crews. The area was culturally sensitive due to the proximity of the historic Blue Ridge State Prison Farm. Additional intensive historic background reviews were conducted to ensure that no associated cultural resources would be impacted by the proposed project.

2008 Texas Independent Pipeline, Energy Transfer Fuels, LP, Ellis, Navarro, Henderson, Anderson, Cherokee and Rusk Counties, Texas. Mr. Norton served as PBS&J's Principal Investigator on this project that spanned approximately 230.54 kilometers (143.28 miles). Mr. Norton oversaw field crews and advised crew chiefs on varying shovel testing methodologies as varying terrain was encountered. A total of 27 cultural resources sites were recorded. Mr. Norton effectively worked with the client to avoid five sites recommended as potentially eligible for the National Register of Historic Places by shifting the proposed pipeline route. In addition, Mr. Norton assisted in preparing a report documenting the survey in time for the client to begin construction on schedule.

2008 Vastar Well #7 Hardin County, Texas This project consisted of intensive archaeological survey for archaeological investigations were conducted within a project area consisting of a 2.06 acres (300 feet x 300 feet) well pad and an access road measuring approximately 1,000 feet in length. A total of 2.74 acres were surveyed during this project. Mr. Norton served as the Principal Investigator for the project.

2008 Marshfield to Lebanon Pipeline Project, Sendero, Laclede and Webster Counties Missouri. This project consisted of 32.08 miles (51.62 kilometers) of 8-inch natural gas pipeline. Mr. Norton served as Principal Investigator for the project. He provided direction on field methodologies, scheduled field crews, provided status reports for the client and project manager, worked effectively with pipeline engineers in the field and ensured that budgetary and scheduling aspects were dealt with correctly. A total of 24 cultural resources sites were assessed during the project. Mr. Norton coordinated extensively with the Missouri Department of Natural Resources regarding the project and the sites ensuring that the requirements of both the state and the client were met in a timely and satisfactory manner.

2008 Siesta Key Development in Matagorda County, Texas. Mr. Norton worked as PBS&J's Principal Investigator for this proposed project by a private developer. The survey was for a proposed 55-acre housing development near Matagorda, Texas. This project involved intensive survey with transect navigation using GPS equipment. During survey site 41MG123 was revisited and determined to be potentially eligible. Additional testing was requested by

the THC. Mr. Norton developed and implemented a SOW involving several mechanical trenches and test units being excavated to determine the site's eligibility.

2008 Cedar Bayou Navigation Channel Improvement Project, USACE Galveston District, Chambers and Harris Counties, Texas. This project consisted of a remote sensing survey, terrestrial survey for two mitigation areas and the relocation of five recorded sites for the Cedar Bayou Navigation Channel Improvement Project. Mr. Norton served as the PI for the terrestrial portion of the project. His roles included coordination with the USACE Galveston cultural resources division and provided guidance on field methodologies and scheduled field crews. He also oversaw the documentation of the site revisits and survey for the mitigation areas.

2008 Wesley AME Church, Harris County, Texas. Mr. Norton worked as PBS&J's Principal Investigator for this proposed project by a private developer. The survey was for an approximately 32 acre plot of land in Houston, Texas.

2008 Indian Springs, Enterprise Operating Products, L.P. in Polk County, Texas. This project consisted of 6.9 miles (11.1 kilometers) of 10-inch natural gas pipeline. Mr. Norton served as Principal Investigator for the project. As such, he provided guidance on field methodologies, scheduled field crews, and ensured that project logistics and dilemmas were addressed. The intensive cultural resources survey was completed and an USACE permit was granted allowing the client to begin construction on time.

2008 Grimes to Katy, Energy Transfer Company Katy Pipeline, Ltd. in Grimes County, Texas. This project consisted of 54 miles (87 kilometers) of 36-inch natural gas pipeline. Mr. Norton served as Principal Investigator for the project. As such, he provided guidance on field methodologies, scheduled field crews, provided weekly status reports for the client and project manager and ensured that budgetary and scheduling aspects were dealt with appropriately. In addition, several locations along the proposed route were in deep soils that required exploratory trenching, which involved coordination between the client and the US Corps of Engineers, Galveston District. The intensive cultural resources survey was completed and a permit was granted allowing the client to begin construction on time.

2007 Virginia Point Pipeline Maintenance Project, Houston Pipeline, L.P., Galveston County, Texas. This project involved monitoring construction activities associated with the repair of 100 feet (30.48 meters) of natural gas pipeline near Galveston, Texas. Mr. Norton served as the project manager and coordinated with the THC to address the sensitivity of the area; especially as it relates to the Civil War era Fort Hebert. Houston Pipeline, L.P. successfully made repairs and the associated activities had no adverse affect to Fort Hebert or any related cultural resources.

2007 Oak Grove Pipeline Project, Kinder Morgan, Falls and Robertson Counties Texas. This project consisted of 20.63 miles (33.19 kilometers) of 30-inch natural gas pipeline. Mr. Norton served as Principal Investigator for the project. As such, he provided guidance on field methodologies, scheduled field crews, provided weekly status reports for the client and project manager, worked effectively with pipeline engineers in the field and ensured that budgetary and scheduling aspects were dealt with appropriately. During this project Mr.

Norton coordinated with the THC and successfully developed an avoidance plan for a possible gravesite that satisfied both the THC and Kinder Morgan.

2007 IH 45: FM1764 to the Causeway Bridge CSJ: 0500-04-104, 105; & 01-107, TxDOT, Harris County, Texas. This project consisted of exploratory trenching near Tiki Island for the proposed widening of IH 45. Mr. Norton served as the Principal Investigator for the project. His roles included coordination with TxDOT officials for the field effort, oversight of field investigations and documentation and permitting.

2007 Farrar to Texoma Energy Transfer Company Katy Pipeline, Ltd. in Limestone, Freestone, Leon, Houston, Trinity Polk, and Tyler Counties, Texas. This project consisted of 136 miles (219 kilometers) of 42-inch natural gas pipeline. Mr. Norton served as Principal Investigator for the project. In addition to his roles regarding project logistics and overseeing the cultural resources financial aspects, he worked exhaustively to ensure that state and federal cultural resource laws were adhered to by the client. As such, several sites potentially eligible for the National Registry for Historic Places were located during the survey, which resulted in Mr. Norton working closely with pipeline engineers to move the proposed line so that these sites were not impacted. In addition, several locations along the proposed route were in deep soils that required trenching, which involved coordination between the client and the US Corps of Engineers, Galveston District. The intensive cultural resources survey was completed and a permit was granted allowing the client to begin construction on time.

2007 Sherman Pipeline Project, Enterprise, Erath, Hood, Parker Wise Counties, Texas in the South Section and Wise, Denton, Collin and Grayson Counties, Texas in the North Section. This project consisted of 70 miles (112.63 kilometers) of 36-inch natural gas pipeline in the South Section and 92 miles (148.03 kilometers) of 36-inch natural gas pipeline in the North section. Mr. Norton served as Principal Investigator for the project. In particular, he provided guidance on field methodologies, assisted in scheduling field crews for work and worked effectively with the client and ensured that budgetary and scheduling aspects were dealt with appropriately.

2007 HPL 24-inch Trunkline Lateral Project, Katy Pipeline, Ltd. in Tyler and Hardin Counties, Texas. This project consisted of approximately 31.4 kilometers (19.5 miles) of proposed pipeline. Mr. Norton served as Principal Investigator for the project.

2007 Interconnect with Wagner and Brown Project, Natural Gas Pipeline Company of America in Carter County, Oklahoma. This particular project consisted of survey for a connecting pipeline. Due to the many previously recorded sites found deeply buried in the area, trenching was required for this project. Mr. Norton served as project coordinator for this effort. This entailed assisting with planning, mapping, and logistics for field crews.

2007 Houstonia Pipeline Replacement Project, Panhandle Eastern Pipe Line Company, LP in Cooper County, Missouri. Mr. Norton served as Principal Investigator for the cultural resources survey for this project. His duties included a file review at the Missouri State Historic Preservation Office (MOSHPO), coordination with MOSHPO regarding survey methodologies, coordination of the field effort, creating and maintaining a budget and report preparation. In Mr.

Norton's consultation with the MOSHPO it was determined that trenching in the recent Holocene soils on the Lamine River was required in addition to methodical shovel testing. All work was completed to MOSPHO and FERC standards and MOSPHO concurred with the findings allowing the client to begin construction on time.

2007 I-10/White Oak Bayou Flood Mitigation Ponds, Texas Department of Transportation in Harris County, Texas. Mr. Norton served as PBS&J's Project Archeologist for this proposed Texas Department of Transportation (TxDOT) project. The project included intensive archeological survey for one proposed detention pond situated next to White Oak Bayou near downtown Houston, Texas.

2007 Mary Wagner Road at Hostetter Creek Bridge Replacement Project, Texas Department of Transportation in Montgomery County, Texas. This project consisted of an intensive cultural resources survey for a proposed bridge replacement. Mr. Norton served as the project archeologist, wich entailed coordinating the field effort and ensuring that all field notes and forms were completed correctly. He also assisted in the report preparation.

2007 100-1, 2 and 3 Mainline Pipeline Replacement Project, El Paso Gas Company in Harris County, Texas. Mr. Norton served as the PBS&J's project manager for this effort. This project consisted of survey for the replacement of approximately 182.88 meters (600 feet) of pipeline.

2007 Wilson Storage to Channel 30-inch Pipeline Project, Enterprise Texas Pipeline, LLC in Wharton, Matagorda and Brazoria Counties, Texas. This project consisted of survey for approximately 25.5 kilometers (15.83 miles) of new pipeline. Mr. Norton served as PBS&J's Principal Investigator for the project which entailed advising crews on survey methodologies, coordination of the field efforts, creating and maintaining a budget and report preparation.

2007 Maypearl to Malone Pipeline Project, Energy Transfer Company in Ellis and Hill Counties, Texas. This project consisted of survey for approximately 32.5 kilometers (20.2 miles) of new pipeline. Mr. Norton served as PBS&J's Principal Investigator for the project which entailed advising crews on survey methodologies, coordination of the field efforts, creating and maintaining a budget and report preparation.

2007 Crighton Road Expansion Project in Montgomery County, Texas. For this project, Mr. Norton served as PBS&J's project archeologist. The project entailed a proposed widening and bridge replacement over Stewarts Creek just south of Conroe, Texas. The cultural survey was provided for both the City of Conroe and TxDOT. This project involved an intensive archeological survey. In addition, trenching was provided. All work conducted for this project adhered to the Potential Archeological Liability Map (PALM) developed by TxDOT.

2007 Southeast Expansion Project Third Party FERC Review, Gulf South Pipeline Company, LP in Choctaw County Alabama and Simpson, Smith, Jasper and Clarke Counties, Mississippi. Mr. Norton was tasked with the third-party review the cultural resources portion of Gulf South's FERC filing. This review entailed the examination of the document to ensure that state and FERC guidelines were followed and that the data were represented properly. These comments were submitted to FERC to provide comments and data request

to Gulf South Pipeline Company, LP.

2007 State Highway 87 Reconnaissance Survey, Texas Department of Transportation in Galveston, Jefferson and Chambers Counties, Texas. Mr. Norton served as the project archeologist for this reconnaissance effort. His duties included conducting background research of previuosly recorded sites and surveys conducted in the area, conducting a pedestrian survey with limited judgmental shovel testing and making recommendations on the potential for buried archeological sites and future survey methods.

2007 Fletcher Street at Sandy Creek Bridge Replacement Project, Texas Department of Transportation in Jasper County, Texas. This project consisted of an intensive cultural resources survey for a proposed bridge replacement. Mr. Norton served as PBS&Js project archeologist, wich entailed coordinating the field effort and ensuring that all field notes and forms were completed correctly. He also assisted in the report preparation.

2007 Mullins-Reynolds Road at Bessie's Creek Bridge Replacement Project, Texas Department of Transportation in Fort Bend County, Texas. This project consisted of an intensive cultural resources survey for a proposed bridge replacement. Mr. Norton served as PBS&J's project archeologist, wich entailed coordinating the field effort and ensuring that all field notes and forms were completed correctly. He also assisted in the report preparation.

2007 Louisburg 200 Line Hydrostatic Test Project, Panhandle Eastern Pipe Line Company, LP in Cass County, Missouri. Mr. Norton served as Principal Investigator for the cultural resources survey for a proposed hydrostatic test of an existing pipeline. His duties included a file review at the Missouri State Historic Preservation Office (MOSHPO), coordination with MOSHPO regarding survey methodologies, coordination of the field effort, creating and maintaining a budget and report preparation.

2007 County Road 323 at Walnut Run Creek Bridge Replacement Project, Texas Department of Transportation in Jasper County, Texas. This project consisted of an intensive cultural resources survey for a proposed bridge replacement. Mr. Norton served as PBS&J's project archeologist, wich entailed coordinating the field effort and ensuring that all field notes and forms were completed correctly. He also assisted in the report preparation.

2006 FM 1464 from Clodine-Reddick Drive to South of Pecan Drive, Texas Department of Transportation in Fort Bend County, Texas. Mr. Norton served as PBS&J's project archeologist and was responsible for the coordination of the field effort, mapping and report preparation. This project consisted of an intensive cultural resources survey for the rehabilitation of approximately 5.16 kilometers (3.21 miles) of FM 1464.

2006 Cheniere Sabine Pass Pipeline in Cameron Parish, Louisiana (Reroutes). Mr. Norton worked as PBS&J's project archeologist for this project. With guidance from Mr. Norton, PBS&J archeologists conducted an intensive archeological survey for areas where Cheniere decided to deviate from the originally permitted alignment. Mr. Norton worked closely with the project's engineers in the field to maximize efficiency of survey and construction planning.

2006 A Class III Inventory of Proposed Alabama-Coushatta Gas Wells #1, #2 and #3, The Meridian Resource and Exploration, LLC in Polk County, Texas. Mr. Norton served as an archeological technician on this project. In this capacity he conducted shovel tests, assisted in logistical issues and maintained field notes. He also compiled the data and prepared the document for the intensive cultural resources survey.

2006 CR 101 Ramp Construction, Texas Department of Transportation in Brazoria County, Texas. As PBS&J's project archeologist, Mr. Norton was responsible coordinating with both the TxDOT and a private developer, McGuyer Homebuilders, Inc. Under the guidance of Mr. Norton, PBS&J provided intensive archeological survey with trenching. Methodology adhered to TxDOTs PALM recommendations.

2006 Cypress Lake Crossing Development in Harris County, Texas. Mr. Norton worked as PBS&J's Principal Investigator for this proposed project by a private developer. The survey was for a proposed 620-acre housing development near Tomball, Texas. This project involved intensive survey with transect navigation through extremely dense vegetation using GPS equipment. The survey also resulted in the documentation of an early 20th century farmstead.

2006 Halls Bayou Reconnaissance Project, Harris County Flood Control in Harris County, Texas. As PBS&J's project archeologist on this project, Mr. Norton was responsible for a reconnaissance survey for the Harris County Flood Control District (HCFCD) for proposed flood management. Specifically, he made recommendations on locations along the bayou that should undergo intensive archeological survey.

2006 Texoma to Carthage Energy Transfer Company Katy Pipeline, Ltd. in Rusk and Panola Counties, Texas. Mr. Norton assisted with the Texoma to Carthage Pipeline Project, which consisted of approximately 51 kilometers (31.5 miles) of new 42-inch natural gas pipeline, through report preparation and assisting with field crews' navigation and logistics.

2006 Reed to Cleburne Energy Transfer Fuels, LP, Pipeline in Freestone, Navarro, Hill, and Johnson Counties, Texas. Mr. Norton served as PBS&J's project coordinator and assisted with planning, mapping, and logistics for field crews. He also assisted in report preparation. The proposed project consisted of approximately 135 kilometers (84 miles) of new 42-inch natural gas pipeline.

2006 Centralia Line 200 natural Gas Pipeline Project Panhandle Eastern Pipe Line Company, LP (PEPL) in Audrain, Ralls, and Pike Counties, Missouri. Mr. Norton served as Principal Investigator for the cultural resources survey for a proposed hydrostatic test of an existing pipeline. During the file review at the MOSHPO Mr. Norton discovered that a portion of the proposed workspace existed within prehistoric archeological site 23PI74 that had previously undergone national registry testing. In consultation with MOSHPO staff, Mr. Norton completed modified testing on the portion of the site existing within the client's proposed workspace and satisfied state requirements for documenting this portion of the site. Concurrence on PBS&J's findings was given by MOSHPO and the client was able to begin work on time.

2005 Bethel to Texoma Energy Transfer Company Katy Pipeline, Ltd. Pipeline in Anderson, Cherokee, and Rusk Counties, Texas. Mr. Norton

served as PBS&J's project coordinator and assisted with planning, mapping, and logistics for field crews. He also assisted in report preparation. The project consisted of approximately 122.28 kilometers (76.0 miles) of new 42-inch pipeline.

2005 Bethel to Farrar Energy Transfer Fuels, LP, Pipeline in Anderson, Freestone and Limestone Counties, Texas. Mr. Norton served as PBS&J's project coordinator and assisted with planning, mapping, and logistics for field crews. He also assisted in report preparation. The proposed project consisted of approximately 36 kilometers (22.4 miles) of new 42-inch natural gas pipeline.

2005 Reed to Farrar Energy Transfer Fuels, LP, Pipeline in Anderson, Cherokee, and Rusk Counties, Texas. Mr. Norton served as PBS&J's project archeologist on this project that spanned approximately 122.28 kilometers (76.0 miles). Mr. Norton led several field crews and advised crew chiefs on varying shovel testing methodologies as they applied to varying terrain.

2005 Bethel to Reed Energy Transfer Fuels, LP, Pipeline in Anderson and Freestone Counties, Texas. Mr. Norton served as PBS&J's project archeologist on this project that spanned approximately 37.49 kilometers (23.3 miles). Mr. Norton led several field crews and advised crew chiefs on varying shovel testing methodologies as they applied to varying terrain. Mr. Norton effectively worked with the client to avoid two sites recommended as potentially eligible for the National Register of Historic Places by altering the proposed pipeline route and avoided impacts to another site during construction. In addition, Mr. Norton assisted in preparing a report documenting the survey in time for the client to begin construction on schedule.

2005 Cheniere Creole Trail Pipeline Project, Cheniere Creole Trail Pipeline Company, Cameron, Calcasieu, Beauregard, Allen, Jefferson Davis, and Acadia Parishes, Louisiana. As PBS&J's project archeologist, Mr. Norton provided a variety of roles on the 466.7 kilometer (290 mile) long project. He scheduled and supervised a staff of up to twelve individuals, ensured that all Federal Energy Regulatory Commission and Louisiana Division of Archeology standards were followed, created a weekly status update for the client, worked closely with pipeline field engineers and land agents, assisted the client in protecting potentially eligible archeological sites and ensured that the project was completed within budget and on time.

2005 Creole Trail LNG Terminal Project, Cheniere Creole Trail Pipeline Company, Cameron Parish, Louisiana. As PBS&J's project archeologist, Mr. Norton assisted in the logistical planning during the project, which entailed scheduling a back hoe for trenching at a previously known site location and creating a methodology for surveying the marsh habitat effectively.

2005 Proposed Kosse Lignite Mine, Texas Utilities Mining Company, Limestone and Robertson County, Texas. Mr. Norton was a crew chief for an intensive cultural resources survey for a proposed area of lignite mine location. His duties included ensuring paperwork was properly completed and that work assigned to the crew was completed in a timely fashion.

2005 Lampasas-Buchanan Dam Transmission Line Replacement Project Burnet and Lampasas Counties, Texas. Mr. Norton served as a crew chief for the intensive cultural resources survey of the proposed rebuilding of an electric

transmission line for the Lower Colorado River Authority (LCRA). Specifically, he led field logistics and was in constant communication with LCRA representatives during the survey regarding landowner access and alignment issues.

2005 Callahan Divide Wild Rand Wind Turbine, Abilene, Texas. Mr. Norton was PBS&J's project archeologist for this project and led an intensive cultural resources survey of proposed turbine loci for wind farms on the Callahan Divide Wind Ranch. Specifically, he was responsible in navigating rugged terrain to document any cultural resources encountered within a proposed wind turbine location.

2004 Sam Houston Electric Cooperative Wolf Creek-Dorrell, Walker and San Jacinto Counties, Texas. Mr. Norton served as an archeological technician during the intensive cultural resources survey for the proposed 138-kV transmission line right-of-way (ROW). In this capacity he conducted shovel tests, assisted in logistical issues and maintained field notes.

2004 Proposed CGU Well Sites and Access Roads, Chevron USA, Inc. in Panola County, Texas. Mr. Norton assisted in the field effort as an archeological technician for surveying several proposed well pad locations and access roads. In this capacity he conducted shovel tests, assisted in logistical issues and maintained field notes.

2004 Site 22RA660, Rankin County, Mississippi. Mr. Norton was a crew member for this project, which included National Register of Historic Places eligibility testing. He also assisted in the analyses of artifacts, compiled these data and synthesized it into a comprehensive report.

2004 Sites 22GN680 and 22GN685, Greene County, Mississippi. Mr. Norton artifact analyses of the lithic debitage and stone tools recovered in the data recovery investigations of these sites. He gathered metric data and identified various stone and ceramic artifacts.

Prior to joining PBS&J, Mr. Norton worked as an artifact curator and archeology technician for the US Forest Service on the Chickasawhay Ranger District of the De Soto National Forest in Laurel, Mississippi. He also worked as an archeology technician at Aquarena Springs in San Marcos, Texas, as part of field school for Texas State University at San Marcos. While attending Texas State University, Mr. Norton additionally worked as an archeology technician at the Center for Archeological Studies in San Marcos and at the Blackman Eddy Site in the Cayo District of Belize.

Bioarcheology and Forensic Experience

Prior to joining PBS&J, Mr. Norton worked as a medicolegal death investigator and pathology technician for the Travis County Medical Examiner's Office in Austin, Texas. He also worked as a bioarcheology technician for data recovery investigation of a Late Prehistoric Caddoan cemetery in northeast Texas.

He worked as a laboratory manager for the Human Skeletal Identification Laboratory in San Marcos, Texas. In this capacity, Mr. Norton assisted in forensic casework and took part in directing the investigation of prehistoric Mayan human skeletal remains.

Mr. Norton worked as an assistant instructor teaching the fundamentals of human skeletal identification and recovery for a course presented to the Roseburg Police Department.

Mr. Norton worked as a laboratory assistant at the Biological Anthropology Laboratory at the University of Southern Mississippi. In this capacity, he aided in the investigation and documentation of prehistoric Mayan human skeletal remains and assisted in forensic casework.

Professional Development

1994-1998: Forensic Anthropology, Anatomy and Physiology, Vertebrate Anatomy and Mammology: Texas State University, San Marcos.

2001-2004: Physical Anthropology Seminar, Human Variation, Bioarcheology, Archeology Seminar, Prehistory of Southeastern Indians: The University of Southern Mississippi, Hattiesburg.

1999: Medicolegal Death Investigator Course School: St. Louis University, Missouri.

Medicolegal Investigation of Death Seminar: The University of Southern Mississippi.

Other Selected Publications and Reports

M.A. Thesis: *Intersite Relationship of the Widows Creek (1JA305) and Williams Landing (1JA306) Sites: A Holistic Evaluation Utilizing Diet, Health, Genetic, Cultural and Demographic Data*. Department of Anthropology, University of Southern Mississippi, Hattiesburg, 2004.

Mississippi Academy of Sciences: *Decomposition Patterns in South Mississippi,* Summer, 2004.

Midwestern Bioarcheology and Forensic Anthropology Association: *Melanin in Teeth?* 2002.