

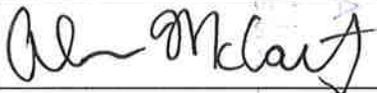
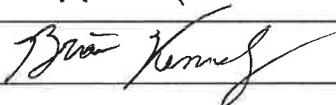
**BUREAU OF LAND MANAGEMENT
SOUTHEASTERN STATES FIELD OFFICE
411 Briarwood Drive, Suite 404
Jackson, Mississippi 39206**

ENVIRONMENTAL ASSESSMENT (EA) FORM

ES-020-2013-34

PROJECT NAME: EOI #852, Webster and Bossier Parishes, Louisiana Lease EA

TECHNICAL REVIEW:

<input checked="" type="checkbox"/>	Program	Reviewer	Signature	Date
<input checked="" type="checkbox"/>	Air Quality	Alison McCartney Natural Resource Specialist		9/20/13
<input checked="" type="checkbox"/>	ACEC	Alison McCartney Natural Resource Specialist	ASM	9/20/13
<input checked="" type="checkbox"/>	Botanical including T&E Spp.	Alison McCartney Natural Resource Specialist	ASM	9/20/13
	Communications (Dispatch)			
<input checked="" type="checkbox"/>	Cultural/Paleontology	John Sullivan Archeologist		9/20/13
<input checked="" type="checkbox"/>	Energy Policy	Alison McCartney Natural Resource Specialist	ASM	9/20/13
<input checked="" type="checkbox"/>	Environmental Justice	Alison McCartney Natural Resource Specialist	ASM	9/20/13
	Farmlands (Prime & Unique)			
	Fire Management			
<input checked="" type="checkbox"/>	Floodplain	Alison McCartney Natural Resource Specialist	ASM	9/20/13
<input checked="" type="checkbox"/>	Hazardous Material	Brian Kennedy Physical Scientist		9/20/13
<input checked="" type="checkbox"/>	Invasive & Non-Native Spp.	Alison McCartney Natural Resource Specialist	ASM	9/20/13
	Lands/Realty			
	Land Law Examiner			
	Law Enforcement			
<input checked="" type="checkbox"/>	Minerals	Alison McCartney Natural Resource Specialist	ASM	9/20/13
<input checked="" type="checkbox"/>	Native American Religious Concerns	John Sullivan Archeologist		9/20/13
	Operations			
	Range Management			
<input checked="" type="checkbox"/>	Recreation	Alison McCartney Natural Resource Specialist	ASM	9/20/13

X	Soils	Alison McCartney Natural Resource Specialist	ASM	9/20/13
	Surface Protection			
	Visual Resources			
	Water Rights			
X	Water Quality (Surface & Ground)	Alison McCartney Natural Resource Specialist	ASN	9/20/13
X	Wetlands/Riparian Zones	Alison McCartney Natural Resource Specialist	ASM	9/20/13
X	Wild & Scenic Rivers	Alison McCartney Natural Resource Specialist	ASM	9/20/13
X	Wilderness	Alison McCartney Natural Resource Specialist	ASM	9/20/13
	Wild Horse & Burro			
X	Wildlife including T&E Spp.	Alison McCartney Natural Resource Specialist	ASM	9/20/13

Prepared by: Alison McCartney
Alison McCartney
Natural Resource Specialist

Date: 9/20/13

Reviewed by: Gary Taylor
Gary Taylor
NEPA Coordinator

Date: 9/20/13

Reviewed by: Duane Winters
Duane Winters
Resource Supervisor

Date: 9/20/13

Reviewed by: John Reiss (Acting)
John Reiss
Acting Minerals Supervisor

Date: 9/20/13



United States Department of the Interior

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Environmental Assessment ES-020-2013-34

EOI #852, Webster and Bossier Parishes, Louisiana Lease EA

Prepared by: Alison McCartney
Date: September 20, 2013

CH 1 – PURPOSE OF AND NEED FOR THE PROPOSED ACTION

Introduction

This environmental assessment (EA) is prepared to address a proposed federal oil and gas lease nomination in Webster and Bossier Parishes, Louisiana pursuant to the Minerals Leasing Act of 1920, as amended. A federal oil and gas lease is a legal contract that grants exclusive rights to the lessee to develop federally owned oil and gas resources.

Need for the Proposed Action

The development of oil and natural gas is essential to meeting the nation's future needs for energy. Private exploration and development of federal oil and gas reserves are integral to the Bureau of Land Management's (BLM) oil and gas leasing programs under the authority of the Mineral Leasing Act 1920, as amended, the Mineral Leasing Act for Acquired Lands of 1947, as amended, the Federal Land Policy and Management Act of 1976 and the Energy Policy Act of 2005. The oil and gas leasing program managed by BLM encourages the development of domestic oil and gas reserves and reduction of U.S. dependence on foreign sources of energy. The tracts considered for lease in this analysis was nominated by an Expressions of Interest (EOI) from private industry.

On October 13, 2009, the BLM Southeastern States Field Office (SSFO) received a request from the BLM Eastern States Office for a National Environmental Policy Act (NEPA) analysis report on 15,195.37 acres of land with the following legal description: T18N, R9W, T18N, R10W, T18N, R11W, T19N R9W, T19N, R10W, T10N, R10W, Sec. 4, N/2NE, E/2NW, and T10N, R10W, Sec. 6, NWNW. Approximately 14,995.49 acres of this nomination is located at Camp Minden. The U.S. Army is the recognized sole owner of the land. The remaining 199.88 acres is located on privately owned land in Webster and Bossier Parishes, Louisiana Meridian, Louisiana.

Management Objectives of the Action

The objective of the proposed action is to make available for lease 15,195.37 acres in Webster and Bossier Parishes, Louisiana to provide exclusive rights to the lessee to develop federally owned oil and gas resources.

Land Use Plan Conformance

The proposed action does not conflict with any known State or local planning, ordinance or zoning. This area is not covered by a BLM Resource Management Plan. According to the regulations at 43 CFR 1610.8 (b) (1), however, this environmental assessment will be used as a basis for making a decision on the proposal.

Applicable Regulatory Requirements and Required Coordination

Applicable regulatory requirements and required coordination for lease development of federal oil and gas minerals is authorized by several statutes including: The Mineral Leasing Act, as amended and supplemented (30 U.S.C. 181), The Mineral Leasing Act of 1947, as amended (30 U.S.C. 351-359), The National Historic Preservation Act, The American Indian Religious Freedom Act, The Native American Graves Protection and Repatriation Act, E.O. 13007, and/or other statutes and executive orders.

The following agencies/tribes were contacted (Appendix C):

U.S. Fish and Wildlife Service, Louisiana Ecological Services
U.S. Army
Louisiana Military Department
Louisiana Natural Heritage Program
Louisiana State Historic Preservation Officer
Tunica-Biloxi Tribe of Louisiana
Coushatta Indian Tribe
Chitimacha Tribe of Louisiana
Quapaw Tribe of Oklahoma
Caddo Nation of Oklahoma
Muscogee (Creek) Nation of Oklahoma
Seminole Nation of Oklahoma
Alabama Coushatta Tribe of Texas
Alabama-Quassarte Tribal Town
Choctaw Nation of Oklahoma
Jena Band of Choctaw
Mississippi Band of Choctaw Indians
Thlopthlocco Tribal Town

The proposed lease was subject to public review for a 30-day period per publication of a newspaper of local distribution (Appendix E).

Decision(s) That Must Be Made

There are two decisions under consideration from the BLM for the proposed action. The first is to offer the federal oil and gas mineral estate for competitive leasing. The other decision would be to deny the action so that no development and surface disturbance would take place. BLM's policy is to promote oil and gas development as long as it meets the guidelines and regulations set forth by the National Environmental Policy Act of 1969 and other subsequent laws and policies passed by the U.S. Congress.

CH 2 – ALTERNATIVES INCLUDING THE PROPOSED ACTION

Introduction

Tracts of land totaling 15,195.37 acres have been nominated for a federal oil and gas lease in Webster and Bossier Parishes, Louisiana. A federal oil and gas lease is a legal contract that grants exclusive rights to the lessee to develop oil and gas resources that may exist on split estate property.

Location

This EOI is located in Webster and Bossier Parishes, Louisiana Meridian, Louisiana and has the following legal description: T18N, R9W, T18N, R10W, T18N, R11W, T19N R9W, T19N, R10W, T10N, R10W, Sec. 4, N/2NE, E/2NW, and T10N, R10W, Sec. 6, NWNW. The proposed project site consists of 3 separate tracts totaling 15,195.37 acres (Appendix A). The largest tract consists of 14,995.49 acres and is located at Camp Minden. Shreveport is located 22 miles to the east. The site is bordered by U.S. Highway 80 to the north, State Highway 164 to the south, Clarke Bayou to the west, and Bayou Dorcheat to the east. This nomination also includes 2 private parcels totaling 199.88 acres. The larger of the two parcels (~160 acres) is located along the northern border of Camp Minden with Highway 80 running through the middle of the tract. The second private parcel is located 2.06 miles west of the first private parcel.

Proposed Action

The BLM, SSFO received a nomination or EOI, to lease 15,195.37 acres of federal mineral estate for oil and gas development in Webster and Bossier Parishes, Louisiana. The lease would give the lessee exclusive rights to explore and develop oil and gas reserves on the lease, but does not in itself authorize surface disturbing activities. The competitive lease provides exclusive rights to develop the federal oil and gas resources, but does not obligate the company to drill a well on the federal mineral estate. The lease can be used to consolidate acreage to meet well spacing requirements, and/or the mineral estate may be acquired for speculative value. The BLM will require applicants to adhere to stipulations and lease notices/best management practices for oil or gas wells (Appendix B). The attached stipulations and lease notices/best management practices have been formulated while conducting our impact analysis and are made part of the proposed action.

The proposed nomination, if approved, would be offered for competitive sale with stipulations and notices generated through this and other consultations, as well as the National Environmental Policy Act (NEPA) process. Once awarded, the successful bidder is required to submit an Application for Permit to Drill (APD) to the BLM before any ground disturbance is authorized. In the APD, the company identifies a proposed drill site and provides the BLM with specific details on how and when they propose to drill the well within the constraints of the lease document. Upon receipt of an APD, BLM conducts an onsite inspection with the company, and when possible the private land owner or surface managing agency. NEPA and the Endangered Species Act (ESA) requirements must also be met at the APD stage and in those cases where there is the potential to affect federally or state-listed species, a site specific biological

assessment is written, including the results of any biological surveys that may be indicated. This is submitted to U.S. Fish and Wildlife Service and/or the state wildlife agency for consultation, as appropriate. The lessee is required, as per lease stipulations, to comply with the recommendations of these consultations.

Typically, after approval of an APD, the petroleum industry follows a general plan and process for all proposed drill sites, as follows:

Spacing for the tract will be 40 acres per well. Preparation for the drilling process includes construction of a road, drilling pad, and reserve pit. Constructed access roads normally have a running surface width of approximately 30 feet; the length is dependent upon the well site location in relation to existing roads or highways. The average length of road construction will be about 0.5 miles. Therefore, about 2 acres would be affected by road construction. Typically 2.5 acres are cleared and graded level for the construction of the drilling pad for a well. If the well is gas and productive, and the flowline is in the road, we can estimate that another 0.5 acres may be affected by flowline construction. The total disturbed area for drilling a productive well will be approximately 5 acres. These disturbances are typical for private or Federal Ownership well locations. The excavation reserve pit is usually about five feet deep and is lined with bentonite clay to retain drilling fluids, circulated mud, and cuttings. Plastic or butyl liners (or its equivalent), that meet state standards for thickness and quality, are used on occasions when soils are determined incapable of holding pit fluids.

Because of the cost of the drilling rig, drilling usually continues around the clock. Wells in this area are usually drilled in 30 days. Once drilling is completed, excess fluids are pumped out of the pit and disposed of in a state authorized disposal site and the cuttings are buried. Wells would be drilled by rotary drilling using mud as the circulating medium. Mud pumps would be used to force mud down the drillpipe, thereby forcing the rock cuttings out the wellbore. Water would normally be from a well drilled on the site, however, water could be pumped to the site from a local pond, stream or lake through a pipe laid on the surface. Approximately 1500 barrels of drilling mud would be typically kept on the location. If a tract is adjacent to a producing field and water production will be expected during the life of the field, separation, dehydration and other production processing may be necessary. Construction of facilities off the Federal lease may be needed to handle this processing. Some processing or temporary storage may be necessary on site.

During well pad construction, the topsoil is stockpiled to be used during restoration activities. If the well is successful, the drill pad would be reduced to about 100' x 100' with the remaining surface area, including the reserve pit, re-graded and restored as per the BLM and surface owner requirements. A lease notice in the proposed lease encourages the use of non-invasive cover plants during all restoration and stabilization activities. Final seed mixtures and plantings are determined with recommendations from BLM with approval of the land owner. The remaining 100' x 100' pad is maintained for the life of the well. The life of a productive well may be 25 years. Following abandonment, the pad is subject to the same restoration parameters.

The following information on the federal mineral tract is based on information collected during a site visits conducted in 2013, aerial photographs, and topographic maps. Mitigation methods for

potential negative impacts are listed in Appendix B as lease stipulations and lease notices. These recommended lease stipulations and notices have been developed to provide general habitat protection and setbacks to exclude sensitive habitats from oil and gas development. Recommended mitigation for the proposed action is suggested as stipulations for freshwater aquatic habitat, cultural resources and tribal consultations, endangered species and special plant species (Appendix B). Additional surveys may be required for special status species after site-specific proposals have been received by BLM during the development phase.

No Action

Under the No Action Alternative, the request to offer the proposed tract for an oil and gas lease would be denied. Potential economic benefits of production from this lease would be jeopardized.

CH. 3 – DESCRIPTION OF THE AFFECTED ENVIRONMENT

Introduction

EOI #852 is located in Webster and Bossier Parishes in northwest Louisiana. The parcel is entirely within the West Gulf Coastal Plain Ecoregion within the Coastal Plain Province. This region is characterized by a southward facing plain of low, slightly hilly terrain that becomes a flat plain to the south and a broad marshy zone near the coast (USGS 1998).

This nomination is located on privately owned lands in Caddo Parish, Louisiana Meridian, Louisiana with the following legal description: T18N, R9W, T18N, R10W, T18N, R11W, T19N R9W, T19N, R10W, T10N, R10W, Sec. 4, N/2NE, E/2NW, and T10N, R10W, Sec. 6, NWNW. The proposed project site consists of 3 separate tracts totaling 15,195.37 acres (Appendix A). The largest tract consists of 14,995.49 acres and is located at Camp Minden. Shreveport is located 22 miles to the east. The site is bordered by U.S. Highway 80 to the north, State Highway 164 to the south, Clarke Bayou to the west, and Bayou Dorcheat to the east. This nomination also includes 2 private parcels totaling 199.88 acres. The larger of the two parcels (~160 acres) is located along the northern border of Camp Minden with Highway 80 running through the middle of the tract. The second private parcel is located 2.06 miles west of the first private parcel.

Description of Project Area

Based on review of the elements listed on the SSFO NEPA Form and consideration of the Purpose and Need statement prepared for this EA, the following elements will be addressed in this EA: Air Quality, Environmental Justice, Cultural Resources, Native American Religious Concerns, Invasive/Exotic Species, Soils, Special Status Species, Migratory Birds of Concern, Wildlife and Vegetation, Wastes, Hazardous or Solid, Water Quality, Surface/Ground, Wetland/Riparian Areas/Floodplains, and Energy Policy.

Air Quality

The Clean Air Act of 1970, as amended, requires the establishment of National Ambient Air Quality Standards (NAAQS). Both primary and secondary standards are now in effect. Primary standards define levels of air quality that the Administrator of the Environmental Protection Agency (EPA) judges to be necessary, with an adequate margin of safety, to protect the public health. Secondary standards define levels of air quality that the Administrator of the EPA judges to be necessary to protect the public from any known or anticipated adverse effects of a pollutant. The NAAQS pollutants are monitored in Louisiana by the Louisiana Department of Environmental Quality (LDEQ). These include carbon monoxide, nitrogen dioxide, ozone, sulfur dioxide, total suspended particulate, particulate matter less than 10 microns, and lead. Ambient air quality measurements taken by the Louisiana Division for Environmental Quality (LDEQ) indicate that ambient air quality for the state is within the standards, except in the Baton Rouge area where air quality is in nonattainment for ozone (2008). The proposed project site is 262 miles northwest of Baton Rouge.

Class I areas for air quality have been designated for the United States. Under the Clean Air Act, a Class I area is one in which visibility is protected more stringently than under the national ambient air quality standards. These areas include national parks, wilderness areas, monuments, and other areas of special national and cultural significance. There is only one Class I area in Louisiana; Breton Wilderness Area. This 5,000 acre National Wildlife Refuge (NWR) is an island located in the Gulf of Mexico near Venice, Louisiana. This NWR is located over 418 miles south of the proposed project site.

Environmental Justice

Title IV of the Civil Rights Act of 1964 and related statutes ensure that individuals are not excluded from participation in, denied the benefit of, or subjected to discrimination under any program or activity receiving federal assistance on the basis of race, color, national origin, age, sex, or disability. Executive Order 12898 on Environmental Justice directs that programs, policies, and activities not have a disproportionately high and adverse human health and environmental effect on minority and low-income populations.

Cultural Resources

A literature search was conducted at the Louisiana Division of Archaeology online site files. While sections of the lease area have been surveyed and there are recorded sites within the tract and within one mile of the leasing area, the proposed lease area may still have other sites that would qualify as historic properties (36 CFR 61). A professionally conducted survey for historic properties would add information on human utilization of this area.

Native American Religious Concerns

Federally recognized Native Americans have been contacted about this proposed undertaking. However, currently, there are no known sites used by Native Americans for religious purposes, Traditional Cultural Properties (TCP's) or Sacred Sites on this tract. If any such sites are

present, access would be by an agreement between the landowner and the Native Americans. The BLM has no authority over access to this tract. The BLM's responsibility is limited to the area of surface disturbance if or when a proposal for development is submitted.

Invasive Exotic Species

Field surveys for invasive species on Camp Minden were last conducted in August 2002 (Louisiana Military Department 2010). During these surveys numerous invasive species were found and recorded. Below is a list of invasive species that have been documented to occur on Camp Minden.

Common Name	Scientific Name
Chinaberry	<i>Milia azedarach</i>
Chinese tallow	<i>Sapium sebiferum</i>
Mimosa	<i>Albizia julibrissin</i>
Paper mulberry	<i>Broussonetia papyrifera</i>
Chinese privet	<i>Ligustrum sinense</i>
Chinese wisteria	<i>Wisteria sinensis</i>
Japanese climbing fern	<i>Lygodium japonica</i>
Japanese honeysuckle	<i>Lonicera japonica</i>
Kudzu	<i>Pueraria montana</i>
Bahiagrass	<i>Paspalum notatum</i>
Bermudagrass	<i>Cynodon dactylon</i>
Exotic bamboo	<i>Phyllostachys aurea</i>
Johnsongrass	<i>Sorghum halepense</i>
Vaseygrass	<i>Paspalum urvillei</i>
Red imported fire ants	<i>Solenopsis</i> sp.

Invasive species were not observed on the two private parcels during site visits conducted in 2013.

Soils

Soil types on Camp Minden were determined by using the USDA Soil Survey of Fort Louisiana (USDA 2004). The primary soil association is Kolin-Gore-Wrightsville, which covers roughly 78% of the installation. Overall, 13 soils have been mapped for Camp Minden and are primarily silty and sandy loams with a clay subsoil. Below is a list of the 13 soils found at Camp Minden.

Bienville loamy fine sand, 1-5% slopes
Cahaba fine sandy loam, 1-3% slopes
Gore silt loam, 1-5% slopes
Gore silt loam, 5-12% slopes
Gordon silt loam, 1-3% slopes
Guyton-Ouachita silt loams, frequently flooded

Guyton silt loam
Kolin silt loam, 1-5% slopes
Pinetucky fine sandy loam, 1-5%
Pinetucky fine sandy loam, 5-8%
Ruston fine sandy loam, 1-3% slopes
Smithdale fine sandy loam, 5-12% slopes
Wrightsville silt loam

T10N, R10W, Sec. 4

There is 1 soil type found on this parcel: Kolin silt loam, 1 – 3% slopes. This soil can be found on stream terraces and has a parent material of loamy over clayey alluvium. It is moderately well drained with a high available water capacity (11.1 inches).

Sec. 6

There are 2 soil types found on this parcel: Kolin silt loam, 1 – 3% slopes and Wrightsville silt loam. Kolin silt loam comprises 19% of the parcel and Wrightsville silt loam comprises 81%. Wrightsville silt loam can be found on stream terraces and has a parent material of silty over clayey alluvium. It is poorly drained with a high available water capacity (about 11.1 inches).

Special Status Species

Current state and federal lists of rare, threatened, endangered, and candidate species were reviewed with regards to potential impacts from the proposed project. Infrared aerial photography, topographic maps, and websites for the National Resources Conservation Service (NRCS) Web Soil Survey, the U.S. Fish and Wildlife Service (USFWS) and the Louisiana Natural Heritage Program (LNHP) were also accessed to determine potential affects that the proposed project could have on special status species. Table 1 provides the USFWS list of federally listed species that occur in Bossier and Webster Parishes. Also included in the table is BLMs determination for potential effects that the proposed lease could have on each species. Below the table is a description of each species, known habitat requirements, and justification for the determination.

Species	Federal Status	Determination
Interior Least Tern (<i>Sterna antillarum athalassos</i>)	Endangered	No Effect Due to Unsuitable Habitat
Red-cockaded Woodpecker (<i>Picoides borealis</i>)	Endangered	No Effect Due to Unsuitable Habitat
Louisiana Black Bear (<i>Ursus americanus luteolus</i>)	Threatened	No Effect Due to Unsuitable Habitat
Bald Eagle (<i>Haliaeetus leucocephalus</i>)	Delisted	No Effect Due to Unsuitable Habitat

Interior Least Tern (*Sterna antillarum athalassos*) (Endangered)

The Interior Least Tern is a small (8-9 inches long) bird typically with a white head and a black cap, snowy white underside and forehead, grayish back and wings, orange legs, and a yellow bill with a black tip. It flies over water with fast jerky wing beats and bill pointing slightly downward. To feed, terns hover over and dive into standing or flowing water to catch small fish. The interior least tern is federally and state listed as endangered. It breeds on sand bars of rivers and lakes. In Louisiana, the interior least tern nests on sand bars associated with the Mississippi River and the upper portion of the Red River. There are no documented winter records for this species in Louisiana (LDWF, 2004a). Suitable habitat is not present for the interior least tern at the proposed project sites.

Red-cockaded Woodpecker (*Picooides borealis*) (Endangered)

The red-cockaded woodpecker is both federally and state-listed as endangered. Appropriate habitat for the woodpecker includes mature pine forests and mixed pine-upland hardwood forest with little or no hardwood mid-story. The average cavity tree age ranges from 60 to 126 years for longleaf pine, 70 to 90 years for loblolly pine, and 75 to 149 years for shortleaf pine. The woodpeckers forage in habitat consisting of pine stands with an average DBH of 9 inches or greater, and in pole stands with 4 to 9 inches DBH. There are fewer than 400 known colonies of the red-cockaded woodpecker in Louisiana, most of which are in Kisatchie National Forest (LDWF, 2004a).

There are no active red-cockaded woodpecker (RCW) cluster sites on Camp Minden (Louisiana Military Department 2010). However, surveys conducted by The Nature Conservancy in 1990, 1993, and 1994 revealed the presence of inactive cavity trees at one location of the installation. Based on the condition of these cavity trees, it was estimated that they have not been active since the mid-1980's. None of these cavity trees exhibit any signs of recent RCW activity, and many are being used by other species of woodpecker. The majority of the pine stands on Camp Minden are either too heavily stocked, too young, or contain too great a hardwood component in the midstory to provide potential nesting habitat. Currently, the only potential nesting habitat is restricted to the thinned and burned stands of the Flatwoods Demonstration Area. No active RCW colonies are known within the immediate vicinity of Camp Minden. Suitable habitat for RCWs is not available on the private parcels included in this nomination.

Louisiana Black Bear (*Ursus americanus lueolus*) (Threatened)

The Louisiana black bear (*Ursus americanus luteolus*) is federally listed as threatened. This species typically inhabits bottomland hardwood (BLH) communities but other habitat types may be utilized. Remoteness is an important spatial feature of black bear habitat. In the Southeast, remoteness is relative to forest tract size and the presence of roads. High quality cover for bedding, denning, and escape cover is of great importance as forests become smaller, more fragmented, and as human encroachment and disturbance in bear habitat increases.

Presently there are two known breeding bear subpopulations occurring in two Louisiana river basins; the Tensas River Basin, located in northeastern Louisiana, and the Atchafalaya River Basin located in south-central Louisiana. There are reported sightings of bears outside of these areas, but it is unknown whether these bears are reproducing or are only wandering subadults and males.

There is no documentation to support inhabitation or regular occurrence of Louisiana black bears on Camp Minden (Louisiana Military Department 2010). According to the Louisiana Natural Heritage Program, there are rare bear sightings within both Bossier and Webster Parishes. The closest known population occurs in and around Caddo Lake National Wildlife Refuge approximately forty miles northwest of the facility. Therefore, it is possible, due to their wide-ranging habits, that bears could utilize forested tracts of land within or around Camp Minden, including the 2 private parcels included in this nomination.

Bald Eagle (*Haliaeetus leucocephalus*) (Delisted)

De-listed on June 28, 2007, the Bald Eagle continues to be protected under the Bald and Golden Eagle Protection Act of 1940 and the Migratory Bird Treaty Act. Bald Eagles typically build their nests in tall trees or cliffs that offer unrestricted flight patterns and visibility, within 1 to 2 miles of large water bodies. In Louisiana, the Bald Eagle nests primarily in southeastern coastal parishes, and is occasionally observed on large lakes in the northern or central parishes during the winter. These parcels do not contain suitable habitat for bald eagles.

Migratory Bird Species of Concern

The following provides a list of migratory birds of conservation concern with the potential to occur at the proposed project sites based on species preference for bottomland hardwood forests in all successional stages (Peterson 1980, Hamel 1992, and USFWS 2020). Because the nominated parcels have forests in several different successional stages, some of the species will have multiple suitability listings:

Species	Habitat Suitability
Little blue heron	Suitable, Optimal
Swallow-tailed kite	Marginal, Suitable, Optimal
Yellow Rail	Marginal
Red-headed woodpecker	Marginal, Suitable, Optimal
Wood thrush	Marginal, Optimal
Prairie warbler	Marginal
Cerulean warbler	Suitable
Prothonotary warbler	Suitable, Optimal
Worm-eating warbler	Marginal, Suitable
Swainson’s warbler	Suitable, Optimal
Kentucky warbler	Marginal, Optimal
Louisiana waterthrush	Marginal

The following provides a list of migratory birds with the potential to occur on some of the nominated parcels based on species preference for pine/mixed hardwood forests:

Species	Habitat Suitability
American swallow-tailed kite	Marginal
American kestrel	Marginal, Suitable, Optimal
Chuck-will's-widow	Suitable, Optimal
Red-headed woodpecker	Marginal
Brown-headed nuthatch	Marginal
Bewick's wren	Marginal
Wood thrush	Marginal, Suitable
Prairie warbler	Marginal, Optimal
Worm-eating warbler	Marginal
Kentucky warbler	Marginal
Louisiana waterthrush	Marginal
Bachman's sparrow	Marginal, Suitable
Smith's Longspur	Marginal
Harris's sparrow	Marginal

No migratory bird species of concern are known to occur on the proposed tracts, although several could be utilizing the parcels.

Wildlife and Vegetation

The proposed project site consists of 3 separate tracts totaling 15,195.37 acres (Appendix A). The largest tract consists of 14,995.49 acres and is located at Camp Minden. Shreveport is located 22 miles to the east. The site is bordered by U.S. Highway 80 to the north, State Highway 164 to the south, Clarke Bayou to the west, and Bayou Dorcheat to the east. This nomination also includes 2 private parcels totaling 199.88 acres. The larger of the two parcels (~160 acres) is located along the northern border of Camp Minden with Highway 80 running through the middle of the tract. The second private parcel is located 2.06 miles west of the first private parcel.

Vegetational communities on Camp Minden can best be described using the Louisiana Natural Heritage Program natural community descriptions and are based on those identified in the Floristic Survey of Camp Minden. Below is a list of vegetational communities found on Camp Minden.

Pine-Oak/Hickory Flatwoods	Natural community found in relatively level, topographically higher positions between streams; moderately altered by disturbance and absence of fire
Flatwood Depression Forest	Natural community found in low depressional areas; because of frequent inundation with water, relatively undisturbed
Mixed Hardwood/Loblolly Pine Forest	Natural community with some good examples remaining; however, current distribution, composition, and structure have probably been significantly altered by disturbance

Hardwood Slope Forest	Small community slightly altered by disturbance
Riparian Forest	Natural community with some good examples remaining, although most have been significantly altered by past silviculture
Bottomland Hardwood Forest	Natural community found along Bayou Dorcheat - mildly altered in extent and composition, although relatively undisturbed
Cypress Swamp	Natural community occurring in the alluvial floodplain of Bayou Dorcheat; mildly altered by silviculture
Open Field	Man-made plant community completely altered by clearing and maintaining as pasture

The easternmost private parcel has been entirely cleared and contains grasses and shrubs. The western tract is ~200 feet north of I-20 and consists of planted loblolly pine with some hardwood trees. The surrounding area is rural with pine plantations and cleared areas.

A wide variety of wildlife species inhabit Camp Minden, and they are dispersed throughout the various habitats on the installation. It is estimated that 51 species of mammals and 74 species of reptiles and amphibians are known to inhabit the areas in and around the facility (Louisiana Military Department 2010). Approximately 80% of the 411 species of birds in the State of Louisiana are recorded as having been seen at or near Camp Minden. In addition, a variety of fish species have been identified in Bayou Dorcheat, Clarke Bayou, Boone Creek, and Caney Branch, and some of the borrow pits on the facility have been stocked with largemouth bass (*Micropterus salmoides*) and bluegill (*Lepomis macrochirus*).

Wastes, Hazardous or Solid

During the on site inspections, no hazardous or solid waste disposal sites were found on the lease tracts.

Water Quality, Surface/Ground

Surface Water Quality

The most frequently cited suspected causes of impairment for all water bodies combined in Louisiana are fecal coliforms, primarily from septic tanks and municipal sewage treatment systems; low dissolved oxygen from sewage, agriculture, or natural causes; sediment-related problems such as turbidity, suspended solids, and siltation caused by agriculture, forestry, sewage systems, construction, hydro-modification, resource extraction, or natural processes; and mercury related to fish consumption advisories, due primarily to atmospheric deposition of mercury on the watershed. Many of the suspected sources of water quality impairment are known collectively as nonpoint source pollution because it typically does not come from a single point of discharge but runs across the land when it rains and is carried through small canals and streams to major water bodies (LDEQ 2008).

Many of Louisiana's water bodies remain impaired for the designated use of fish and wildlife propagation. This is largely because there are many possible causes and sources of impairment impacting this use, and any one of these causes can result in a water body being considered impaired for fish and wildlife propagation. There are more than 30 different suspected causes of impairment reported as impacting fish and wildlife propagation. With the exception of mercury, all of the top eight suspected causes of impairment generally can be related to nonpoint sources of pollution. The remaining causes of impairment generally are related to various forms of industry, small business, or municipal sources (LDEQ 2008).

Bayou Dorcheat, Clarke Bayou, Boone Creek, and Caney Branch, and numerous intermittent streams and ponds are located on Camp Minden.

Ground Water Quality

The results of the Baseline Monitoring Program indicate that water quality is good in Louisiana aquifers. Although the overall quality of the state's ground water is good, there are more than 200 sites where active investigation or remediation of contaminated ground water is taking place, not including underground storage tank or Superfund sites. There also were 14 public water supply systems impacted by VOC contamination of ground water between 1989 and 2002 (GWPC 2009b).

The proposed site is located within the Mississippi embayment aquifer system which consists of 6 aquifers that crop out as an arcuate band of poorly consolidated to unconsolidated, bedded sand, silt and clay. Geologic units of the aquifer system range from Late Cretaceous to middle Eocene in age. These tracts are located within the Middle Claiborne aquifer. Aquifers of the Mississippi embayment aquifer system consist of an interbedded sequence of poorly consolidated fluvial, deltaic, and marine deposits in which diagenesis or postdepositional geochemical processes have not greatly altered the original pattern of permeability. The hydraulic conductivity of the unconsolidated to poorly consolidated sediments that compose the aquifers of the Mississippi embayment aquifer system does not appear to have been greatly reduced by cementation or compactions. Consequently, the distribution of hydraulic conductivity and transmissivity of the Mississippi embayment aquifer system can be inferred from maps of sediment lithofacies, if a direct correlation between sediment type and aquifer permeability is assumed.

Wetlands/Riparian Areas/Floodplains

A delineation of wetlands and other regulated waters at Camp Minden was performed in 2000 by the U.S. Army Engineers Research and Development Center, Waterways Experiment Station (Louisiana Military Department 2010). The results of the study are as follows: Areas potentially subject to Section 404 Clean Water Act jurisdiction on Camp Minden include seasonal and perennial wetlands, intermittent and perennial tributaries, and ponds. The majority of the wetland areas identified were palustrine-forested systems. Typically, these wetlands were found to be associated with low areas adjacent to stream systems or with depressional areas on the generally higher level upland areas. Approximately 3,315 acres of wetlands, 24 miles of perennial and intermittent streams, and 42 acres of ponds were determined to be jurisdictional during the study. There are no wetlands on the private parcels.

Energy Policy

The area contains no features related to energy development, production, supply or distribution.

Ch. 4 - ENVIRONMENTAL IMPACTS OF THE PROPOSED ACTION AND ALTERNATIVES

Introduction

This chapter assesses potential environmental consequences associated with direct, indirect, and cumulative effects of the Proposed Action and alternatives.

Based on review of the elements listed on the SSFO NEPA Form and consideration of the Purpose and Need statement prepared for this EA, the following elements will be addressed in this EA: Air Quality, Environmental Justice, Cultural Resources, Native American Religious Concerns, Invasive/Exotic Species, Soils, Special Status Species, Migratory Birds of Concern, Wildlife and Vegetation, Wastes, Hazardous or Solid, Water Quality, Surface/Ground, Wetland/Riparian Areas/Floodplains, and Energy Policy.

Air Quality

If the lease is developed for oil and gas production, impacts to air quality associated with construction, drilling, production and abandonment could come from the following sources: (1.) fugitive dust generated from vehicle traffic along dirt or gravel roads during transportation of employees and equipment; (2.) exhaust from heavy machinery, vehicles, compressors, drilling rig prime movers, generators, and other internal combustion engines used during site construction, drilling, flowline installation, production, and abandonment and other production equipment such as pumps, separators, heater treaters, boilers; and (3.) fugitive VOC escaping from leaky pipe valves, flanges, and storage tanks during loading of crude on to tank trucks, and accidental releases/spills of hydrocarbons.

Fugitive dust created during road, drill pad, flowline construction, and abandonment would increase suspended particulates in the air. Also, the regulated air pollutants nitrogen oxides (NO_x), sulfur oxides (SO_x), VOC, and particulates (Pm) will be emitted from the above referenced sources. These conditions could temporarily impact the ambient air quality in the immediate vicinity of the leased area. The generation of suspended particulates, a regulated pollutant, could cause a temporary and localized disturbance to people who work in the area. However, the impacts from the combined frequency and volume of fugitive dust and regulated air pollutants are expected to be minimal, very localized, and of short duration.

Environmental Justice

There is no adverse human health and environmental effects anticipated from potential development on minority and low-income populations in the areas surrounding this tract.

Cultural Resources and Native American Religious Concerns

Cultural resource surveys have not been conducted, therefore direct and indirect impacts may occur to cultural resources or to a potentially sacred Native American religious site if there is ground disturbance. Direct impacts are those such as completely destroying a site by bulldozing the area and workers picking up artifacts. Indirect impacts are those such as erosion or compaction of the soil on the site. However, if sites are located and recorded before ground disturbance begins, these impacts can be avoided or mitigated.

A stipulation regarding cultural resources and Native American religious concerns applies to this lease (Appendix B) and is applicable for all the proposed parcels. The stipulation states that the BLM will not approve any ground disturbing activities that may affect historic properties and/or resources until it completes its obligations under applicable requirements of the National Historic Preservation Act and other authorities. If currently unknown burial sites are discovered during development activities associated with this lease, these activities must cease immediately, applicable law on unknown burials will be followed and, if necessary, consultation with the appropriate tribe/group of federally recognized Native Americans will take place.

Invasive/Exotic Species

Surface disturbing activities have the potential to introduce or promote the spread of invasive, nonnative plant species. Impacts are dependent on the species planted during restoration activities and the management of the site during and following restoration. Revegetating areas after soil disturbance with competitive grasses greatly reduces the ability for invasive species to take hold in an area. The Natural Resources Conservation Service recommends the mixture below for revegetation efforts in Louisiana:

Blend #1 LA (weight in pure live seed or PLS lb/ac)

- Switchgrass 60% = 2.4 lb
- IL Bundleflower 20% = 2.4 lb
- Partridge Pea 15% = 1.2 lb
- Black-eyed Susan 3% = .03 lb
- Plains Coreopsis 2% = .02 lb

A lease notice regarding invasive/exotic species applies to this lease (Appendix B). The lease notice states that the use of native or non-invasive plants in seeding mixtures will be encouraged to stabilize disturbed areas and during restoration activities. Construction sites will be surveyed for invasive species prior to ground disturbance. If invasive species are found, the proper control measures will be used to either eradicate the species from the area or minimize its spread to other areas.

Soils

Well site and access road construction would have direct impacts to soils. These impacts would be limited to those areas where vegetation is removed and construction occurs. The direct

impacts would be of two types: (1) physical removal, leveling and mixing of surface soils and (2) soil compaction. The first impact would be caused by site preparation for construction of the well pad, related structures, road construction, flowline construction and wind and water erosion after vegetation is removed. This would cause a mixing of soil horizons and cause a short term loss of soil productivity. The second impact, soil compaction, would be caused by vehicle and machinery travel. Compaction decreases air and water infiltration into the soil profile thus reducing soil productivity. The indirect impact would be that of erosion and siltation of drainages and streams. Prompt cultivation and re-vegetation of impacted soil areas should reduce the possibility of soil erosion thus preventing an increase of siltation into drainages or streams from run-off. Site specific conditions of approval would be developed prior to approval of an APD to address soil erosion.

Special Status Species

There is no available habitat at the proposed site for the red-cockaded woodpecker or Louisiana black bear. As a result, BLM has determined that there will be no effect on these species from the proposed project. Informal consultation was initiated with FWS. FWS responded that the proposed project is not likely to affect the red-cockaded woodpecker or Louisiana black bear.

Consultation with the LNHP occurred and they reviewed their files for records indicating the occurrence of rare plants and animals, outstanding natural communities, natural or scenic rivers, or other elements of special concern within or near the project site. The LNHP database indicates that the Bachman's sparrow (*Peucaea aestivalis*) may occur within the project area. This species is considered rare in Louisiana and holds a state rank of S3. This is a small ground-nesting sparrow that is endemic to the southeastern U.S. and a permanent resident in Louisiana. The Bachman's sparrow is most common in longleaf pine savannas, which are characterized by an open overstory and a ground cover of perennial grasses and forbs. Important factors contributing to the decline of this species includes conversion of longleaf pine stands to plantations of fast-growing pines, shortage of newly abandoned farmland and urbanization. No additional records were found (Appendix C).

Approval of the proposed lease does not in itself authorize any ground disturbance. If there is any future ground disturbance activities, the lessee will be required to submit an Application for Permit to Drill (APD). Additional consultation with FWS will occur at that time, if necessary. Due to changes in species habits, habitats, and our knowledge thereof, stipulations and lease notices regarding rare species apply to this proposal. The stipulation states that the BLM may recommend modifications to exploration and development proposals to further the conservation and management objectives for threatened, endangered, or other special status plant or animal species or their habitat to avoid BLM-approved activity that would contribute to a need to list such a species or their habitat

To protect threatened, endangered, candidate, proposed, and BLM sensitive plant species a second stipulation applies to this lease and applies to all proposed parcels. The stipulation states that all suitable special status plant species habitat will be identified during environmental review of any proposed surface use activity. If field examination indicates that habitat of one or more of these species is present, the BLM will require a survey by a qualified botanist for special status

plants during periods appropriate to each species. Operations will not be allowed in areas where sensitive plants would be affected.

Migratory Bird Species of Concern

The list of migratory birds that have the potential to occur on the proposed tract is based on the presence of pine/mixed hardwood forests and bottomland hardwood forests. Nesting and foraging habitat for birds will be altered if forests are cut for oil and gas development. Many of the species with the potential to occur on this tract could move to similar habitats in surrounding areas. After the well is put into production and during reclamation activities bird species diversity would be altered depending on successional stage of the site and adequacy of restoration efforts.

To protect perch and roosting sites and terrestrial habitats for and to avoid potential impacts to migratory birds and federally listed wildlife a lease notice applies to this lease and applies to all proposed parcels. The lease notice provides recommendations regarding reserve pits, maximum design speeds for roads, and powerline construction to minimize effects on migratory birds.

Wildlife and Vegetation

The Reasonable Foreseeable Development Scenario (RFD) for EOI # 852 predicts that 64 federal wells will be drilled from 24 pads. The total disturbance predicted would be 143.35 acres, with 137.74 acres disturbed for the well pad and pit, 13.77 acres for the access road, and 8.16 acres reclaimed. (Appendix D).

Many of the species expected to occur on this site have broad habitat requirements and would continue to be found in a variety of habitats in the surrounding areas. Wildlife use of the site after the well is put into production would vary depending on vegetation and succession stage. Once put into production, the well pad would be reduced in size and the reserve pit would be graded and seeded. The producing well site would be subject to regular maintenance and inspection. Wildlife use of the site is dependent on the adequacy of restoration. However, over the life of the well, some of the acreage would be excluded from utilization by most wildlife species.

Wastes, Hazardous or Solid

The operations would typically generate the following wastes; (a) discharge of drilling fluids and cuttings into the reserve pits; (b) wastes generated from used lubrication oils, hydraulic fluids, and other fluids used during production of oil and gas, some of which may be characteristic or listed hazardous waste; and (c) service company wastes from exploration and production activities as well as containment of some general trash. Certain wastes unique to the exploration, development, and production of crude oil and natural gas have been exempted from Federal Regulations as hazardous waste under Subtitle C of the Resource Conservation and Recovery Act (RCRA) of 1976. The exempt waste must be intrinsic to exploration, development or production activities and is not generated as part of a transportation or manufacturing operation. The drilling fluids, drill cuttings, and produced waters are classified as a RCRA exempt waste,

and the proposed action would not introduce hazardous substances into the environment if they are managed and disposed of properly under Federal, State, and local waste management regulations and guidelines.

Water Quality, Surface/Ground

The proposed project site contains an intermittent stream which flows southward to Bayou Brushy. Since the general gradient of the acreage slopes toward Bayou Brushy, surface runoff, sediments transported by erosional activity, and developmental effluent have a potential to flow into the Bayou. Construction would cause some minor erosion and re-deposition of soil a short distance away from the construction area. Site specific conditions of approval would be developed prior to approval of an APD to protect surface water quality. This may include but is not limited to construction of ditches, berms, terraces or other similar structures. Areas not needed for production would be reclaimed and stabilized to control erosion.

Improper casing and/or cementation can result in contamination of ground water aquifers. The BLM requires that the operator must isolate freshwater-bearing formations and other usable water containing 10,000 ppm or less of total dissolved solids (TDS) and other mineral-bearing formations and protect them from contamination by using proper casings. In addition, the BLM requires lining the reserve and water pit with a suitable liner on a case-by-case basis.

Wetlands/Riparian Areas/Floodplains

To protect the water quality of watersheds and natural stream substrate and morphology and to avoid potential impacts to aquatic species and their habitat, a stipulation regarding freshwater aquatic habitat applies to this lease. The stipulation states that no surface occupancy or disturbance, including discharges, are permitted within 250 feet of a river, stream, wetland spring, headwater, wet meadow, wet pine savanna, pond, tributary, lake, coastal slough, sand bar, vernal pools, calcareous seepage marsh, or small, marshy calcareous stream.

No Action

Under this alternative, the parcels within the proposed action would remain unleased at this point in time. It could be offered for leasing in the future, but may be subject to additional environmental analysis at that point in time. If the parcels were not leased there would be no direct impacts to the potential drill location and therefore no effects on all of the critical elements above except Cultural Resources and Native American Religious Concerns (see below). As compared to the proposed action, there would be less disturbance resulting from oil and gas related actions.

Cultural Resources

If the area is not leased and cultural resource surveys are not conducted, direct and indirect impacts may occur. Direct impacts are those such as completely destroying a site by "relic hunters" or by people picking up artifacts. Other direct impacts may be the mixing of layers in a site by plowing or the destruction of a site by land leveling. Indirect impacts are those such as

after timber thinning or clear-cutting erosion of the remains of a site. Hunting activities may cause other impacts to the surface such as the deposition of spent ammunition shells and other items. However, the use of the property is the purview of the land owner, and any cultural resource site and its artifacts are the property of the land owner.

Native American Religious Concerns

Under this alternative, places of Native American Religious Practice could be impacted by activities of the landowner, unless there was a formal agreement between the landowner and the Native American tribe. Direct impacts could be the destruction of a site, and an indirect impact could be the landowner placing a fee on the use of the area.

Cumulative Impacts

Cumulative impacts are the impacts to the environment which result from the incremental impact of the action when added to other past, present, and reasonable foreseeable future actions. Since the proposed action would not authorize surface occupancy, no environmental impacts are anticipated on the lease. Hence, the proposed action will not contribute to the impacts to other past, present, or reasonable foreseeable actions. For Cultural Resources and Native American Religious Concerns this is dependent upon cultural resource surveys being conducted.

Energy Policy

Energy Policy Act of 2005 – Sets forth an energy research and development program covering: (1) energy efficiency; (2) renewable energy; (3) oil and gas; (4) coal; (5) Indian energy; (6) nuclear matters and security; (7) vehicles and motor fuels, including ethanol; (8) hydrogen; (9) electricity; (10) energy tax incentives; (11) hydropower and geothermal energy; and (12) climate change technology.

Title III: Oil and Gas

Subtitle B: Natural Gas

(Sec. 313) Designates FERC as the lead agency for coordinating federal permits and other authorizations and compliance with the National Environmental Policy Act of 1969 (NEPA). Directs FERC to establish a schedule for all federal authorizations.

Subtitle C: Production

(Sec. 322) Amends the Safe Drinking Water Act to exclude from the definition of underground injection the underground injection of fluids or propping agents (other than diesel fuels) pursuant to hydraulic fracturing operations related to oil or gas, or geothermal production activities.

Subtitle F: Access to Federal Lands

(Sec. 361) Requires the Secretary of the Interior to perform an internal review of current federal onshore oil and gas leasing and permitting practices.

(Sec. 364) Amends the Energy Act of 2000 to revise the requirement that the Secretary of the Interior, when inventorying all onshore federal lands, identify impediments or restrictions upon oil and gas development.

(Sec. 366) Amends the Mineral Leasing Act to set deadlines for an expedited permit application process.

(Sec. 368) Prescribes guidelines governing energy right-of-way corridors on federal land. Directs the Secretaries of Agriculture, of Commerce, of Defense, of Energy, and of the Interior (the Secretaries), in consultation with FERC, states, tribal or local government entities, affected utility industries, and other interested persons, are directed to consult with each other and to: (1) designate corridors for oil, gas, and hydrogen pipelines and electricity transmission and distribution facilities on federal land in the 11 contiguous Western States; (2) incorporate the designated corridors into the relevant energy land use and resource management or equivalent plans; and (3) ensure that additional corridors are promptly identified and designated.

(Sec. 371) Amends the Mineral Leasing Act to cite conditions for the reinstatement of oil and gas leases terminated for certain failure to pay rentals.

Subtitle G: Miscellaneous

(Sec. 390) States that action by the Secretary of the Interior in managing the public lands, or the Secretary of Agriculture in managing National Forest System Lands, with respect to certain oil or gas drilling related activities shall be subject to rebuttable presumption that the use of a categorical exclusion under NEPA would apply if the activity is conducted pursuant to the Mineral Leasing Act for the purpose of exploration or development of oil or gas.

CH. 5 - LIST OF AGENCIES AND PERSONS CONSULTED:

The following agencies/tribes were contacted (Appendix C):

U.S. Fish and Wildlife Service, Louisiana Ecological Services
Louisiana Natural Heritage Program
Louisiana State Historic Preservation Officer
Tunica-Biloxi Tribe of Louisiana
Coushatta Indian Tribe
Chitimacha Tribe of Louisiana
Quapaw Tribe of Oklahoma
Caddo Nation of Oklahoma
Muscogee (Creek) Nation of Oklahoma
Seminole Nation of Oklahoma
Alabama Coushatta Tribe of Texas
Alabama-Quassarte Tribal Town
Choctaw Nation of Oklahoma
Jena Band of Choctaw
Mississippi Band of Choctaw Indians
Thlopthlocco Tribal Town

Literature Cited

LDEQ, Louisiana Department of Environmental Quality. 2008. Final Draft 2008 Louisiana Water Quality Inventory: Integrated Report.

LDWF, Louisiana Department of Wildlife and Fisheries. 2004. Rare Species Tracking List and Fact Sheet. Louisiana Natural Heritage Program.

Louisiana Military Department. 2010. Updated Integrated Natgural Resources Management Plan; Camp Minden.

Hamel, P. 1992. The Land Manager's Guide to the Birds of the South.

Peterson, R. 1980. Birds of Eastern and Central North America.

USDA, United States Department of Agriculture. 2007. Nonindigenous Species List – Louisiana. Southeast Ecological Science Center.

USFWS, U.S. Fish and Wildlife Service. 2002. Birds of Conservation Concern.

List of Preparers

Specialist Name

Title, Organization

Alison McCartney

Natural Resource Specialist

John Sullivan

Archaeologist

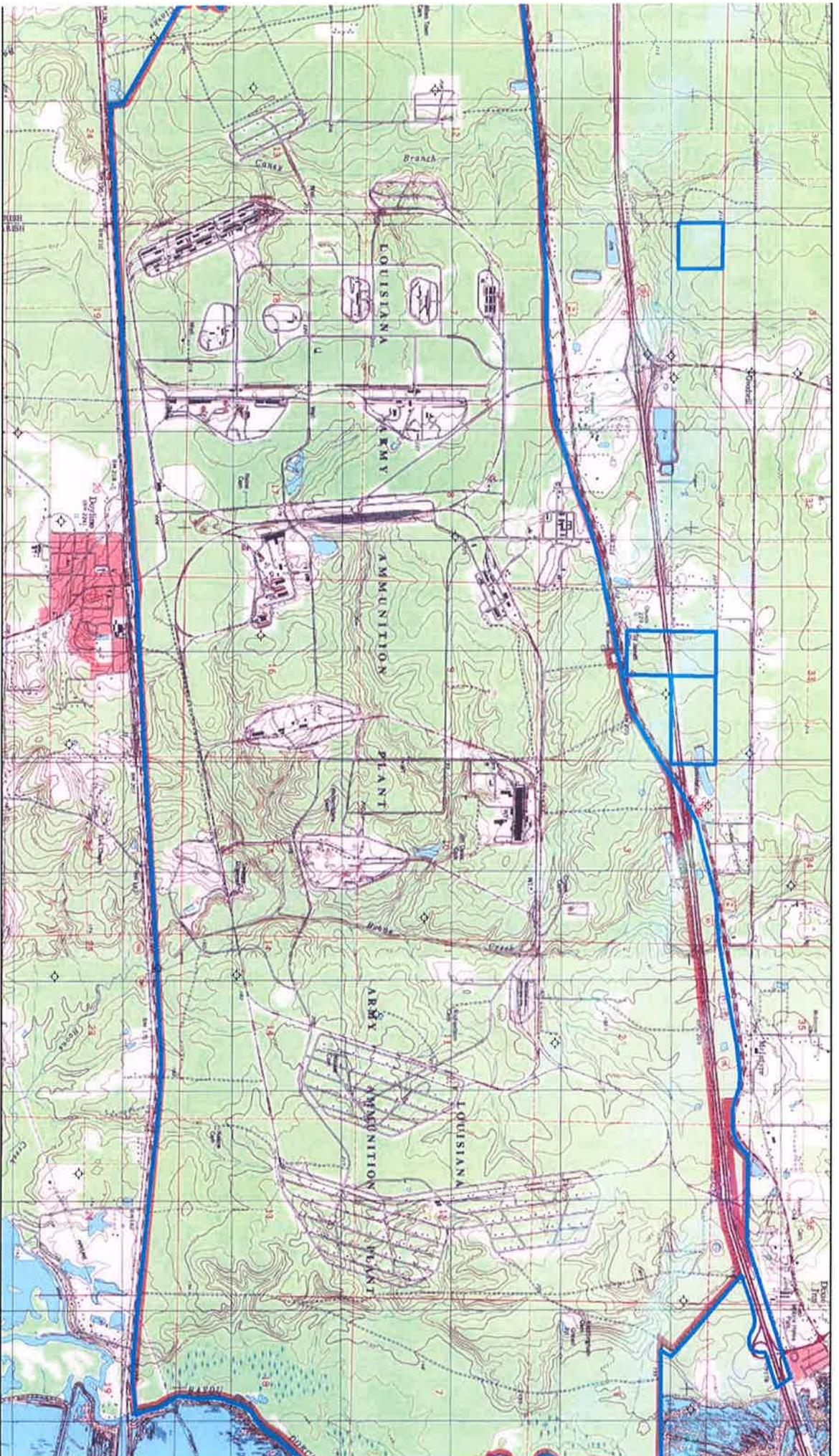
Gary Taylor

Planning and Environmental Coordinator

APPENDIX A

Proposed Lease Tract Locations

Proposed Federal Oil and Gas Lease
EOI 852



Proposed Lease Area:

sed Lease Area

Wells

ole: Temporarily Abandoned

v. CO2 Storage, WDW, Pseudo Orig, Mining Borthole

portions of the following USGS 1:24,000 Topographic Quadrangles: Dogline, Minden South

Webster and Bossier Parish, Louisiana, Louisiana Meridian
State land. Formerly the Louisiana Ammunition Plant located within
T. 18N., R. 9W., T. 18N., R. 10W., T. 18N., R. 11W.,
T. 19N., R. 9W., and T. 19N., R. 10W.
Approximately 14,995.49 acres

Webster Parish, Louisiana, Louisiana Meridian
Private surface split estate lands:
T. 10N., R. 10W., Sec. 4, N1/2NE1/4, E1/2NW1/4 and
T. 10N., R. 10W., Sec. 6, NW1/4NW1/4
Approximately 199.88 acres.

U.S. Department of the Interior
Bureau of Land Management
Eastern States
Southeastern States Field Office
Jackson, Mississippi

No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of this data for individual use or aggregate use with other data.

APPENDIX B

Proposed Lease Stipulations and Lease Notices

Stipulations

Cultural Resources and Tribal Consultation

Stipulation: This lease may be found to contain historic properties and/or resources protected under the National Historic Preservation Act (NHPA), American Indian Religious Freedom Act, Native American Graves Protection and Repatriation Act, E.O. 13007, or other statutes and executive orders. The BLM will not approve any ground disturbing activities that may affect any such properties or resources until it completes its obligations under applicable requirements of the NHPA and other authorities. These obligations may include a requirement that you provide a cultural resources survey conducted by a professional archaeologist approved by the State Historic Preservation Office (SHPO). If currently unknown burial sites are discovered during development activities associated with this lease, these activities must cease immediately, applicable law on unknown burials will be followed and, if necessary, consultation with the appropriate tribe/group of federally recognized Native Americans will take place. The BLM may require modification to exploration or development proposals to protect such properties, or disapprove any activity that is likely to result in adverse effects that cannot be successfully avoided, minimized or mitigated.

Endangered Species

Stipulation: The lease area may now or hereafter contain plants, animals, or their habitats determined to be threatened, endangered, or other special status species. BLM may recommend modifications to exploration and development proposals to further its conservation and management objective to avoid BLM-approved activity that will contribute to a need to list such a species or their habitat. BLM may require modifications to or disapprove proposed activity that is likely to result in jeopardy to the continued existence of a proposed or listed threatened or endangered species or result in the destruction or adverse modification of a designated or proposed critical habitat. BLM will not approve any ground-disturbing activity that may affect any such species or critical habitat until it completes its obligations under applicable requirements of the Endangered Species Act as amended, 16 U.S.C. ' 1531 et seq., including completion of any required procedure for conference or consultation.

Exception: None

Modification: None

Waiver: None

Sensitive Plant Species

Stipulation (CSU): All suitable special status plant species habitat will be identified during environmental review of any proposed surface use activity. If field examination indicates that habitat of one or more of these species is present, the BLM will require a survey by a qualified botanist for special status plants during periods appropriate to each species. Operations will not be allowed in areas where sensitive plants would be affected.

Objective: To protect threatened, endangered, candidate, proposed, and BLM sensitive plant species.

Exception: An exception may be granted if the operator agrees to implement measures developed in consultation with USFWS and in coordination with State agencies.

Modification: The stipulation may be modified if it is determined that a portion of the lease area does not contain sensitive plant species habitat.

Waiver: The stipulation may be waived if, based on field surveys, it is determined that the lease area does not contain sensitive plant species habitat.

Freshwater Aquatic Habitat

Stipulation (NSO): No surface occupancy or disturbance, including discharges, are permitted within 250 feet of a river, stream, wetland spring, headwater, wet meadow, wet pine savanna, pond, tributary, lake, coastal slough, sand bar, vernal pools, calcareous seepage marsh, or small, marshy calcareous stream. If the slope exceeds 10 percent, the buffer may be extended to 600 feet to provide adequate protection for aquatic habitats and associated species.

Objective: To protect the water quality of watersheds and natural stream substrate and morphology and to avoid potential impacts to aquatic species and their habitat.

Exception: An exception may be granted if the operator agrees to 1) span creeks, rivers, wetlands, and floodplains by attaching pipelines to bridges; 2) directionally drill wells and pipelines from upland sites under creeks, rivers, other waters, and wetlands or 3) implement other measures developed in consultation with USFWS and in coordination with State agencies.

Modification: The buffer may be reduced if the adjacent waterway has been surveyed for 100 yards upstream and 300 yards downstream of the site, and the results document the lack of suitable/occupied/critical habitat for listed species which may be affected by the project, as determined by the BLM and USFWS.

Waiver: None

Lease Notices/Best Management Practices

Migratory Birds and Federally Listed Wildlife

Objective: To protect perch and roosting sites and terrestrial habitats for and to avoid potential impacts to migratory birds and federally listed wildlife.

Any reserve pit that is not closed within 10 days after a well is completed and that contains water must be netted or covered with floating balls, or another method must be used to exclude migratory birds.

All powerlines must be built to protect raptors and other migratory birds, including bald eagles, from accidental electrocution, using methods detailed by the Avian Power Line Interaction Committee (APLIC 2006)

Perching and Nesting Birds and Bats

Objective: To prevent birds and bats from entering or nesting in or on open vent stack equipment.

Open vent stack equipment, such as heater-treaters, separators, and dehydrator units, will be designed and constructed to prevent birds and bats from entering or nesting in or on such units and, to the extent practical, to discourage birds from perching on the stacks. Installing cone-shaped mesh covers on all open vents is one suggested method. Flat mesh covers are not expected to discourage perching and will not be acceptable.

Invasive and Non-Native Species

Objective: To discourage the spread of invasive, non-native plants.

Use of native or non-invasive plants in seeding mixtures will be encouraged to stabilize disturbed areas and during restoration activities. Construction sites will be surveyed for invasive species prior to ground disturbance. If invasive species are found, the proper control measures will be used to either eradicate the species from the area or minimize its spread to other areas. If cogongrass is found on site, equipment will be washed before exiting the site to prevent the spread of this highly invasive species to other locations. Post-construction monitoring for cogongrass and other invasive plant species should be conducted to ensure early detection control. In the case of split-estate lands, final seed mixtures will be formulated in consultation with the private landowner.

Pesticide Application

Objective: To protect the water quality of watersheds and natural stream substrate and morphology supporting special status species and their host species.

Any ground application of herbicides or other pesticides, sterilants, or adjuvants within 150 feet of listed species or habitat will require site-specific control measures developed in coordination or formal consultation with USFWS. No aerial application of herbicides or pesticides will be permitted.

APPENDIX C

Correspondence



BOBBY JINDAL
GOVERNOR

State of Louisiana
DEPARTMENT OF WILDLIFE AND FISHERIES
OFFICE OF WILDLIFE

ROBERT J. BARHAM
SECRETARY
JIMMY L. ANTHONY
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Company Bureau of Land Management
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City, State, Zip Jackson, MS 39206
Project EOI #852
Project ID 3232013
Invoice Number 13082101

RECEIVED

AUG 26 2013

BUREAU OF LAND MANAGEMENT
SSFO

Personnel of the Habitat Section of the Coastal & Nongame Resources Division have reviewed the preliminary data for the captioned project.

Suitable habitat for the federally and state endangered red-cockaded woodpecker (*Picoides borealis*) (RCW) may occur within the project area. RCW nesting and foraging habitats are defined as pines ≥ 60 years old and/or pines ≥ 30 years old that are at least 10-inches in diameter at breast height (DBH). RCWs will nest in most species of southern yellow pine, including longleaf pine (*Pinus palustris*), loblolly pine (*Pinus taeda*), short-leaf pine (*Pinus echinata*) and slash pine (*Pinus elliottii*). If pines ≥ 30 years old that are at least 10-inches DBH are to be removed from the project site, a survey of potential RCW nesting habitat should be conducted by personnel experienced in management and/or monitoring of the species (USFWS 2003). Surveys should be conducted as described in Appendix 4 of the RCW Recovery Plan, Second Revision. Contact Eric Baka at 318-487-5885 for more information regarding this species.

The LNHP database indicates that the Bachman's sparrow (*Peucaea aestivalis*) may occur within the project area. This species is considered rare in Louisiana and holds a state rank of S3. This is a small ground-nesting sparrow that is endemic to the southeastern United States and a permanent resident in Louisiana. The Bachman's sparrow is most common in longleaf pine (*Pinus palustris*) savannas, which are characterized by an open overstory and a ground cover of perennial grasses and forbs. Important factors contributing to the decline of this species includes conversion of longleaf pine stands to plantations of fast-growing pines, shortage of newly abandoned farmland and urbanization. Timber management practices that produce suitable habitat for red-cockaded woodpeckers (*Picoides borealis*) also provide habitat for Bachman's sparrows. If you have any questions or need additional information, please contact Beau Gregory at 337-491-2576.

After careful review of our database, no other impacts to rare, threatened, or endangered species or critical habitats are anticipated for the proposed project. No state or federal parks, wildlife refuges, scenic streams, or wildlife management areas are known at the specified site within Louisiana's boundaries.

The Louisiana Natural Heritage Program (LNHP) has compiled data on rare, endangered, or otherwise significant plant and animal species, plant communities, and other natural features throughout the state of Louisiana. Heritage reports summarize the existing information known at the time of the request regarding the location in question. The quantity and quality of data collected by the LNHP are dependent on the research and observations of many individuals. In most cases, this information is not the result of comprehensive or site-specific field surveys; many natural areas in Louisiana have not been surveyed. This report does not address the occurrence of wetlands at the site in question. Heritage reports should not be considered final statements on the biological elements or areas being considered, nor should they be substituted for on-site surveys required for environmental assessments. LNHP requires that this office be acknowledged in all reports as the

source of all data provided here. If at any time Heritage tracked species are encountered within the project area, please contact the LNHP Data Manager at 225-765-2643. If you have any questions, or need additional information, please call 225-765-2357.

Sincerely,



Amity Bass, Coordinator
Natural Heritage Program



United States Department of the Interior

FISH AND WILDLIFE SERVICE
646 Cajundome Blvd.
Suite 400
Lafayette, Louisiana 70506



September 4, 2013

RECEIVED

SEP - 9 2013

BUREAU OF LAND MANAGEMENT
SSFO

Ms. Alison McCartney
Permit Section Chief, Regulatory Branch
Bureau of Land Management
411 Briarwood Drive
Jackson, MS 39206

Dear Ms. McCartney:

Please reference your August 9, 2013, electronic mail and attachments requesting initiation of informal consultation under Section 7 of the Endangered Species Act (ESA) of 1973 (87 Stat. 884, as amended; 16 U.S.C. 1531 et seq.) for an Expressions of Interest (EOI) submitted to the Bureau of Land management (BLM) requesting the opportunity to lease federal minerals in Webster Parish, Louisiana. The Fish and Wildlife Service (Service) has reviewed the information and offers the following comments in accordance with the ESA.

Your attached biological assessment (BA) indicated that the EOI consists of two tracts of private surface land with federal mineral rights totaling 199.88 acres. The eastern-most tract consists of 159.88 acres of grass and shrub land that has been entirely cleared of trees, with Interstate 20 running through the middle. The western-most 40-acre tract consists of hardwoods and young planted pine. The surrounding area is clear cuts and pine plantations, with Camp Minden less than six miles due south of the EOI tracts. None of the habitat within the EOI area is suitable for the endangered red-cockaded woodpecker (*Picoides borealis*) or the threatened Louisiana black bear (*Ursus americanus luteolus*), thus we support your determination that the proposed project would not affect these species.

We appreciate the opportunity to consult with you on the proposed project. If you need further assistance, please contact Monica Sikes of this office at 337/291-3118.

Sincerely,

Brad S. Rieck
Deputy Supervisor
Louisiana Ecological Services

cc: LDWF, Natural Heritage Program, Baton Rouge, LA



United States Department of the Interior



Bureau of Land Management

Southeastern States Field Office

411 Briarwood Drive, Suite 404

Jackson, Mississippi 39206

<http://www.es.blm.gov>

IN REPLY REFER TO: 8100 (020) JMS Bossier and Webster Parishes EOI 852

May 31, 2013

Ms. Pam Breaux
State Historic Preservation Officer
Louisiana Office of Cultural Development
P.O. Box 44247
Baton Rouge, LA 70804-44247

Dear Ms. Breaux:

The Bureau of Land Management (BLM) has received an Expression of Interest (EOI 582) to lease federal minerals under State (Louisiana Army Ammunition Plant) and privately owned surfaces, i.e. split-estate minerals. The Bureau's Reasonably Foreseeable Development Scenario for this proposed lease is 64 horizontal wells from 24 pads with no more than 151.51 acres initial disturbance, this includes access roads, pads and pipelines, to access federal minerals. The legal locations of the approximately 15,195.37 acres of federal mineral tracts are as follows (map enclosed):

Louisiana Meridian

Bossier and Webster Parishes (Eastwood, Doyline and Minden South
Quadrangles)

State Surface T. 18 N., R. 9 W., T. 18 N., R. 10 W., T. 18 N., R. 11 W.,
T. 19 N., R. 9 W. and T. 19 N., R. 10 W (Approx. 14,995.49 ac.)

Louisiana Meridian

Webster Parish (Doyline Quadrangle)

Private Surface T. 10 N., R. 10 W., Sec. 4 N1/2NE1/4, E1/2NW1/4 and
T. 10 N., R. 10 W., Sec. 6 NW1/4NW1/4 (Approx. 199.88 ac.)

However, proposed development locations have not been determined on a site-specific basis. Specific locations proposed for development are determined by the developer and surface owners. The BLM's surface responsibilities rest only within the boundaries of any proposed



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development. A review of the Louisiana Division of Archaeology online site files shows sites within the State owned property. There are no listings of sites on the privately owned proposed lease sale tracts.

A section of the lease document will state that before the BLM approves any development proposal, a survey that meets current professional standards and a report that meets Louisiana Division of Archaeology requirements. The report must be approved by both the Louisiana Division of Archaeology and the BLM before any ground disturbing activities take place, also any needed consultation will be concluded before ground-disturbing activities begin.

Your concurrence of these procedures for Section 106 compliance is requested in 30 days. If you have any questions or concerns, please contact John M. Sullivan, Archeologist, at (601) 977-5439 or email at John_M_Sullivan@BLM.Gov.

Sincerely,

**Original Signed
Duane Winters**

Duane Winters
Assistant Field Manager
Division of Lands and Renewable Resources

Enclosures
1- Map

bc:

SSFO CF & RF

ES RF

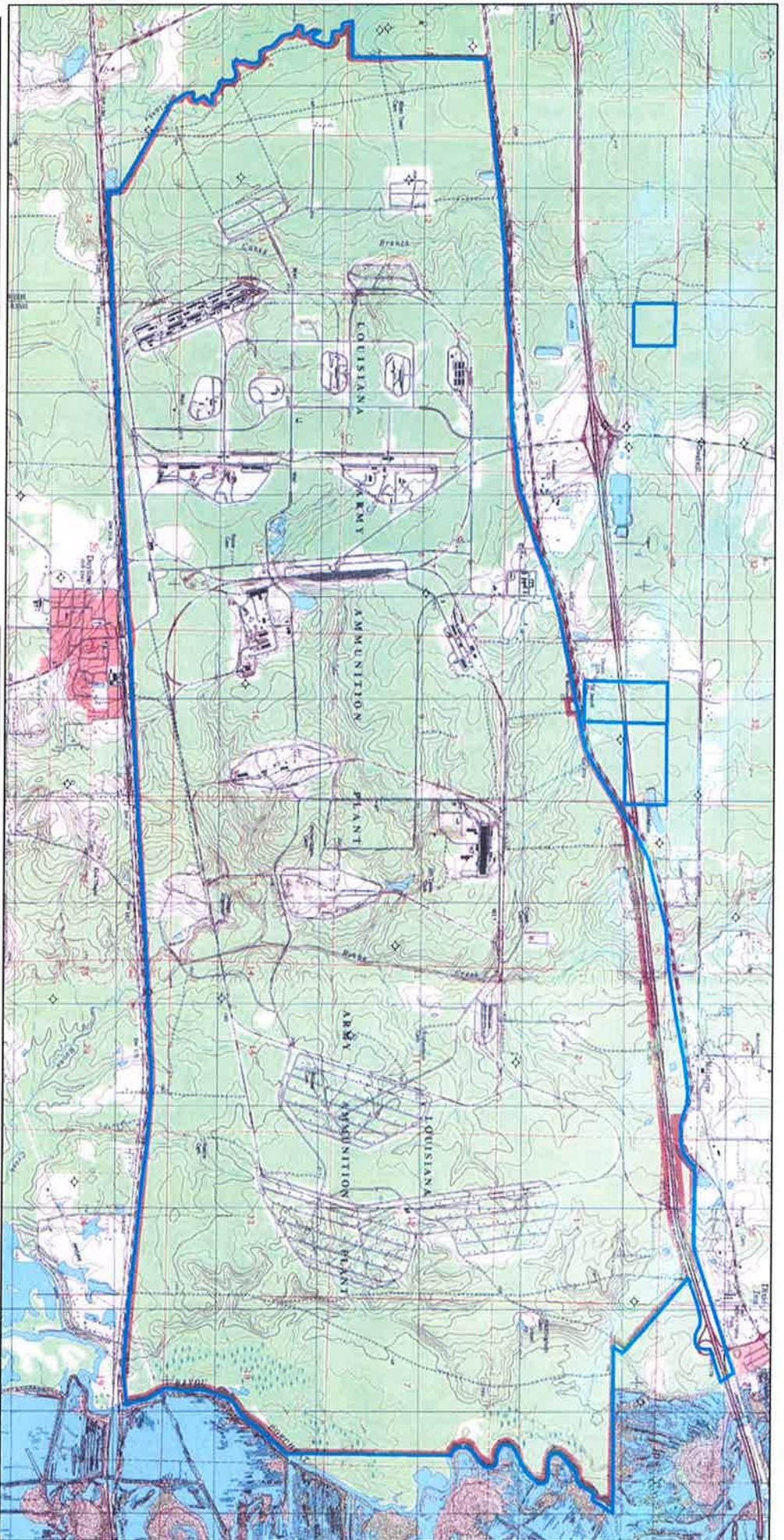
DWinters

AMcCartney

ES020: JMSullivan:05/31/13:601-977-5400:Bossier/Webster.T.18N.R.9W.Sec.All.EOI 852.SHPO.Ltr



Proposed Federal Oil and Gas Lease
 EOI 852



- Legend**
- Proposed Lease Area
 - ◆ Oil and Gas Wells
 - ◆ Dry Hole - Temporarily Abandoned
 - ◆ Inj. Sm. CO2 Storage WDW, Pseudo Orig. Mining Borehole

Proposed Lease Area:

Webster and Bossier Parishes, Louisiana, Louisiana Meridian
 State land Formerly the Louisiana Ammunition Plant located within:
 T. 18N., R. 9W., T. 18N., R. 10W., T. 18N., R. 11W.,
 T. 19N., R. 9W., and T. 19N., R. 10W.
 Approximately 14,985.49 acres

Webster Parish, Louisiana, Louisiana Meridian
 Private surface soft-estate lands:
 T. 10N., R. 10W., Sec. 4, N1/2SE1/4, E1/2NW1/4 and
 T. 10N., R. 10W., Sec. 6, NW1/4NW1/4
 Approximately 198.88 acres

U.S. Department of the Interior
 Bureau of Land Management
 Southeastern State Field Office
 Jackson, Mississippi

No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of this data for individual use or aggregate use with other data.



This map contains portions of the following USGS 1:24,000 Topographic Quadrangles: Doyline, Minden South



United States Department of the Interior



Bureau of Land Management

Southeastern States Field Office

411 Briarwood Drive, Suite 404

Jackson, Mississippi 39206

<http://www.es.blm.gov>

IN REPLY REFER TO: 8100 (020) JMS Bossier and Webster Parishes EOI 852

May 31, 2013

Chairman Earl Barbry, Sr.
Tunica-Biloxi Tribe of Louisiana
P.O. Box 332
Marksville, Louisiana 70523

Dear Chairman Barbry:

The Bureau of Land Management (BLM) has received an Expression of Interest (EOI 582) to lease federal minerals under State (Louisiana Army Ammunition Plant) and privately owned surfaces, i.e. split-estate minerals. The Bureau's Reasonably Foreseeable Development Scenario for this proposed lease is 64 horizontal wells from 24 pads with no more than 151.51 acres initial disturbance, this includes access roads, pads and pipelines, to access federal minerals. The legal locations of the approximately 15,195.37 acres of federal mineral tracts are as follows (map enclosed):

Louisiana Meridian

Bossier and Webster Parishes (Eastwood, Doyline and Minden South
Quadrangles)

State Surface T. 18 N., R. 9 W., T. 18 N., R. 10 W., T. 18 N., R. 11 W.,
T. 19 N., R. 9 W. and T. 19 N., R. 10 W (Approx. 14,995.49 ac.)

Louisiana Meridian

Webster Parish (Doyline Quadrangle)

Private Surface T. 10 N., R. 10 W., Sec. 4 N1/2NE1/4, E1/2NW1/4 and
T. 10 N., R. 10 W., Sec. 6 NW1/4NW1/4 (Approx. 199.88 ac.)

However, proposed development locations have not been determined on a site-specific basis. Specific locations proposed for development are determined by the developer and surface owners. The BLM's surface responsibilities rest only within the boundaries of any proposed



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within the State owned property. There are no listings of sites on the privately owned proposed lease sale tracts.

A section of the lease document will state that before the BLM approves any development proposal, a survey that meets current professional standards and a report that meets Louisiana Division of Archaeology requirements. The report must be approved by both the Louisiana Division of Archaeology and the BLM before any ground disturbing activities take place. Any needed consultation will be concluded before ground-disturbing activities begin.

If you are aware of any sites or areas which are currently used for religious purposes or you recognize as sacred sites on these privately owned lands, please let us know so that impacts will not occur. As provided by law, these locations will be held in confidence.

Your information is requested within 30 days. If you have any questions, comments, or concerns about the BLM's processes or procedures concerning its consideration of cultural resources for this undertaking, please contact John M. Sullivan, Archaeologist, at (601) 977-5400 or email at John_M_Sullivan@BLM.Gov.

Sincerely,

Original Signed
Bruce Dawson
Bruce Dawson,
Field Manager

Enclosures

1- Map

cc via email: Mr. Earl Barbry, Jr., Tribal Historic Preservation Officer

bc:

SSFO CF & RF

ES RF

DWinters

AMcCartney

ES020: JMSullivan:05/31/13:601-977-5400:Bossier/Webster.T.18N.R.9W.Sec.All.EOI 852.SHPO.Ltr



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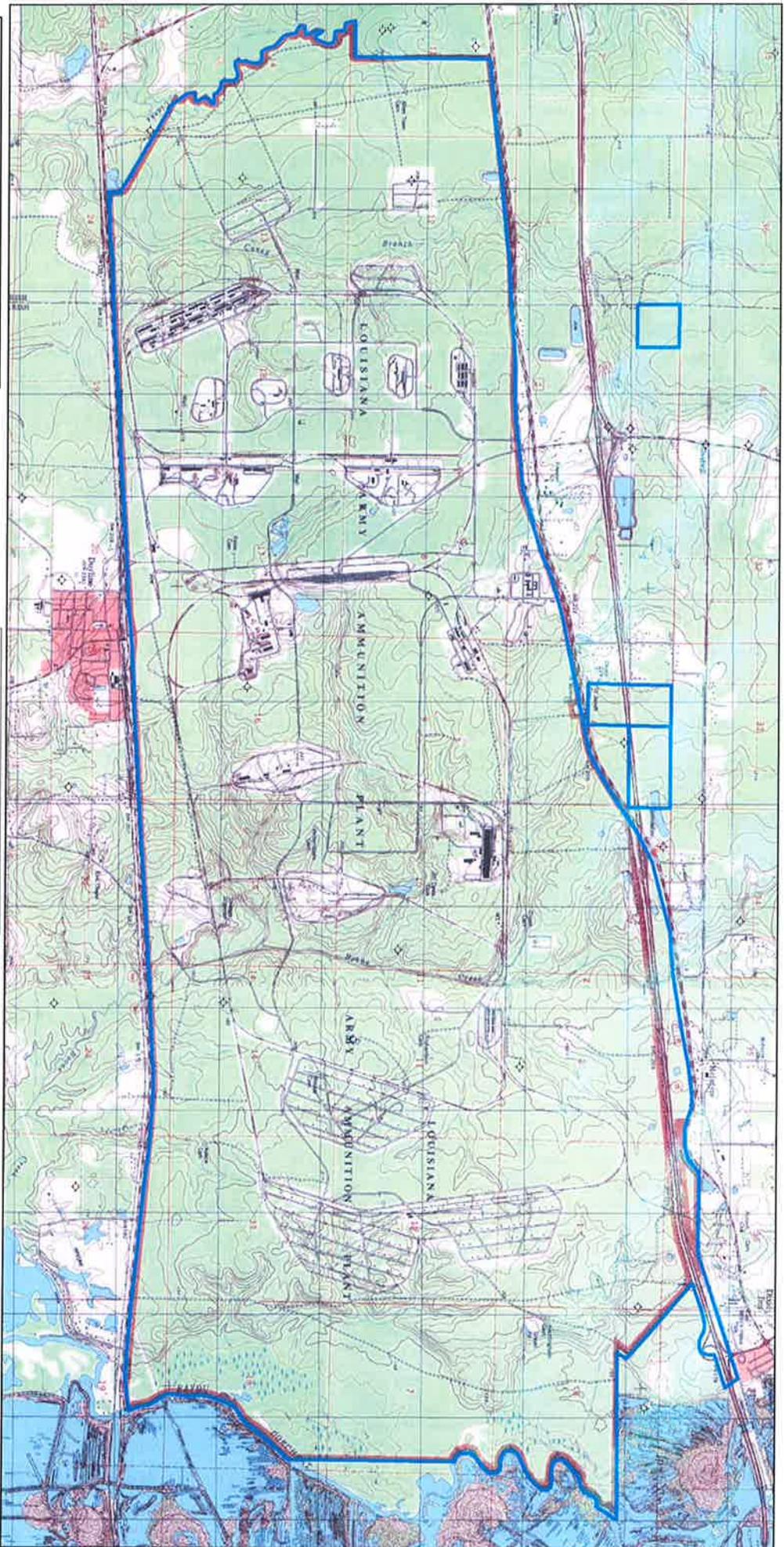
Original to:	cc: to these:
Mr. Earl Barbry, Sr., Chairman Tunica-Biloxi Tribe of Louisiana P.O. Box 331 Marksville, Louisiana 70523	Mr. Earl Barbry, Jr., Tribal Historic Preservation Officer Tunica - Biloxi Tribe 151 Melacon Dr. Marksville, LA 71351 earlii@tunica.org
Send Hard Copy to Mike Tarpley Kevin Sickey, Chairman Coushatta Indian Tribe P.O. Box 818 Elton, LA 70532	Linda Langley, Tribal Historic Preservation Officer Mike Tarpley, Deputy THPO P.O. Box 818 Elton, LA 70532 llangley@mcneese.edu ; kokua.aina57@gmail.com
John Paul Darden, Chairman Chitimacha Tribe of Louisiana P.O. Box 661 Charenton, LA 70523	Kimberly S. Walden, Tribal Historic Preservation Officer Chitimacha Tribe of Louisiana P.O. Box 661 Charenton, LA 70523 kim@chitimacha.gov
John Berrey, Chairman Quapaw Tribe of Oklahoma P.O. Box 765 Quapaw, Oklahoma 74345	Jean Ann Lambert, Tribal Historic Preservation Officer P.O. Box 1556 Miami, OK 74355 jlambert@quapawtribe.com
Brenda Shemayme Edwards, Chairwoman Caddo Nation of Oklahoma P.O. Box 487 Binger, Oklahoma 73009	Mr. Robert Cast, Tribal Historic Preservation Officer Caddo Nation of Oklahoma P.O. Box 487 Binger, OK 73009 rcast@caddonation.org ; mboatone@caddonation.org
George Tiger, Principal Chief Muscogee (Creek) Nation of Oklahoma P.O. Box 580 Okmulgee, Oklahoma 74447	Emman Spain, Cultural/Historic Preservation Office Muscogee (Creek) Nation of Oklahoma P.O. Box 580 Okmulgee, OK 74447 espain@muscogeenation-nsn.gov
Leonard Harjo, Principal Chief Seminole Nation of Oklahoma P.O. Box 1498 Wewoka, Oklahoma 74884	Natalie Deer, Cultural Preservation Office P.O. Box 1768 Seminole, OK 74868-1768 ndeere@seminolenation.com
Only send email to Preservation Officer Colabe III Clem Sylestine, Second Chief Alabama-Coushatta Tribe of Texas 571 State Park Road 56 Livingston, TX 77351	Bryant J. Celestine, Historical Preservation Alabama-Coushatta Tribe of Texas 571 State Park Road 56 Livingston, TX 77351 celestine.bryant@actribe.org



Original to:	cc: to these:
<p>Only send email to Preservation Officer Tarpie Yargee, Chief Alabama-Quassarte Tribal Town P.O. Box 187 Wetumka, OK 74883</p>	<p>Augustine Asbury, 2nd Chief/ Cultural Preservation Officer P.O. Box 187 Wetumka, OK 74883 aqttcultural@yahoo.com</p>
<p>Only send email to Preservation Officer Gregory Pyle, Chief Choctaw Nation of Oklahoma Drawer 1210 Durant, Oklahoma 74702-1210</p>	<p>Ian Thompson PhD, RPA, THPO, Tribal Archaeologist, Director Historic Preservation Dept. Johnnie L. Jacobs, Section 106 Coordinator 580-775-0914, 580-920-3181 (Fax) 1-800-522-6170 ext. 2216 P.O. Drawer 1210 Durant, OK 74702 ithompson@choctawnation.com; jjacobs@choctawnation.com</p>
<p>B. Cheryl Smith, Chief Jena Band of Choctaw P.O. Box 2717 Jena LA 71342</p>	<p>Dana Masters, Tribal Council and Cultural Preservation Officer Jena Band of Choctaw P.O. Box 2717 Jena LA 71342 danammasters@aol.com; jbc.thpo106@aol.com</p>
<p>Phyliss J. Anderson, Chief Mississippi Band of Choctaw Indians P.O. Box 6010 Philadelphia, MS 39350</p>	<p>Mr. Ken Carleton, Tribal Historic Preservation Officer Mississippi Band of Choctaw Indians P.O. Box 6257 Philadelphia, MS 39350 kcarleton@choctaw.org</p>
<p>George Scott, Mekko Thlopthlocco Tribal Town P.O. Box 188 Okemah, Oklahoma 74859</p>	<p>Charles Coleman, Cultural/Historic Preservation Office P.O. Box 188 Okemah, Oklahoma 74859 chascolemans@prodgy.net</p>



Proposed Federal Oil and Gas Lease
EOI 852



- Legend**
- Proposed Lease Area
 - Dry Hole, Temporarily Abandoned
 - ◆ Inj. STV, CO2 Storage WDW, Pseudo Orig, Mining Borehole

Proposed Lease Area:
 Webster and Bossier Parish, Louisiana, Louisiana Meridian State land, Formerly the Louisiana Ammunition Plant located within: T. 18N., R. 9W., T. 18N., R. 10W., T. 18N., R. 11W., T. 19N., R. 9W., and T. 19N., R. 10W.
 Approximately 14,995.48 acres

Webster Parish, Louisiana, Louisiana Meridian State surface split estate lands:
 T. 18N., R. 10W., Sec. 6, NW1/4NW1/4 and T. 19N., R. 10W., Sec. 6, NW1/4NW1/4
 Approximately 19,686 acres

U.S. Department of the Interior
 Bureau of Land Management
 Eastern States
 Southeastern States Field Office
 Jackson, Mississippi

No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of this data for individual use or aggregate use with other data.



This map contains portions of the following USGS 1:24,000 Topographic Quadrangles: Doyle, Minden South

Appendix D

Reasonably Foreseeable Development Scenario

REASONABLY FORESEEABLE DEVELOPMENT SCENARIO

Case File Number: EOI 852

Project Number: DOI-BLM-ES-0020-2010-0005-EA

Acres: 15,577.23

Location: LA, Webster and Bossier Parishes, Louisiana Meridian, T18N, R9W, T18N, R10W, T18N, R11W, T19N R9W, T19N, R10W

I. Reasonably Foreseeable Development

A. RFD Baseline Scenario Assumptions and Discussion

Objective horizon is Haynesville Shale. Mineral commodity is natural gas.

Federal acreage will be incorporated into a state determined drilling unit. Drilling and production units are 640 acres. Project 64 wells drilled from 24 pads

A 30' wide well access road will be constructed consisting of a 16' wide travel surface with a 7' buffer on each side.

If productive, multiple wells may be drilled from the existing pad.

If productive, oil and gas handling and production facilities will be constructed on the existing pad.

If productive, the reserve pit and part of the drill pad will be reclaimed when drilling and completion activities are concluded.

All disturbed acreage will be reclaimed if the well is non-productive.

B. Surface Disturbance Due to Oil and Gas Activity

Access Road: 13.77 acres

Well Pads & Pits: 137.74 acres (24X500'X500')

Utility and/or Pipeline R.O.W: 0 – Use access road ROW

Initial Disturbance: 151.51

Partial Reclamation of Drill Site: 8.16 acres

Net Disturbance for Productive Well: 143.35

APPENDIX E

Public Notice

FINDING OF NO SIGNIFICANT IMPACT/DECISION RECORD

FINDING OF NO SIGNIFICANT IMPACT

Based on the analysis of potential environmental impacts contained in the attached environmental assessment (EA), I have determined that the proposed action will not have any significant impacts on the human environment and an environmental impact statement (EIS) is not required.

Bruce Dawson
Bruce Dawson

9-20-2013

Date

Field Manager

DECISION RECORD

It is my decision to authorize the offer to lease for Oil and Gas the proposed tracts located in Caddo Parish, Louisiana Meridian, Louisiana with legal descriptions: T18N, R9W, T18N, R10W, T18N, R11W, T19N R9W, T19N, R10W, T10N, R10W, Sec. 4, N/2NE, E/2NW, and T10N, R10W, Sec. 6, NWNW (15,195.37 acres). This nomination is located on privately owned land in Caddo Parish, Louisiana Meridian, Louisiana.

Rationale for Decision

The decision to allow the proposed action does not result in any undue or unnecessary environmental degradation and is consistent with the laws and regulations of the Federal, State, or local government. The proposed action was subject to a 30-day public review.

Jessica Rubado, Acting DSD, Natural Resources

Date

