



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D.C. 20555-0001

January 20, 2012

Dr. Sherry Surette  
Mississippi Natural Heritage Program  
Mississippi Museum of Natural Science  
Department of Wildlife, Fisheries and Parks  
2148 Riverside Drive  
Jackson MS 39202

SUBJECT: REQUEST FOR LIST OF PROTECTED SPECIES WITHIN THE AREA UNDER  
EVALUATION FOR THE GRAND GULF NUCLEAR STATION, UNIT 1,  
LICENSE RENEWAL APPLICATION REVIEW

Dear Dr. Surette:

The U.S. Nuclear Regulatory Commission (NRC or the staff) is reviewing an application to renew the operating license for Grand Gulf Nuclear Station, Unit 1 (GGNS). The application for renewal was submitted to the NRC by Entergy Operations, Inc. (Entergy) in a letter dated October 28, 2011, pursuant to Title 10 of the *Code of Federal Regulations* Part 54 (10 CFR Part 54).

The purpose of this letter is threefold: (1) to inform you of the NRC's National Environmental Policy Act (NEPA) scoping process and associated public meetings for the GGNS license renewal review; (2) to request your comments pertaining to the Fish and Wildlife Coordination Act; and (3) to request your concurrence with the NRC's list of Federally endangered and threatened species that may be affected by the proposed GGNS license renewal.

The NRC's Federal action is the decision whether to renew GGNS's operating license for an additional 20 years. GGNS is a single unit boiling-water reactor plant using a closed-cycle cooling water system that withdraws make-up water from the Mississippi River Alluvium groundwater aquifer through Ranney wells. The proposed action includes the use and continued maintenance of existing plant facilities and transmission lines. Entergy states that it has no plans for refurbishment or replacement activities to support renewal of the operating license.

GGNS is located approximately 25 miles south of Vicksburg in Claiborne County, Mississippi. The 2,100-acre GGNS site consists primarily of woodlands and former farms as well as two lakes (see Figure 1 of Enclosure 1). The land in the vicinity of the GGNS site is mostly rural. Entergy constructed three 500-kV transmission lines to connect GGNS to the power grid (see Figure 2 of Enclosure 1). The Baxter-Wilson line runs north for 22 miles from GGNS to the Baxter-Wilson substation just south of Vicksburg in Warren County. This line traverses rural, sparsely populated areas used for agriculture and forestry. The Franklin line runs southeast for 43.6 miles to the Franklin substation near McCall Creek in northeastern Franklin County. This line traverses the Bayou Pierre and Homochitto Rivers and Homochitto National Forest. Both transmission lines have a 200-foot-wide right-of-way. The third line is 300 feet long and is contained within the developed portion of the GGNS site. This line runs from the GGNS Unit 1 Turbine Building to the GGNS switchyard.

NRC's NEPA Scoping Process and Public Meetings

The NRC has established that, as part of the staff's review of any nuclear power plant license renewal action, a site-specific supplemental environmental impact statement (SEIS) to its "Generic Environmental Impact Statement for License Renewal of Nuclear Plants," NUREG-1437, will be prepared under the provisions of 10 CFR Part 51, the NRC's regulations that implement NEPA. The SEIS includes an analysis of pertinent environmental issues, including endangered or threatened species and impacts to fish and wildlife.

The NRC plans to hold two public license renewal overview and environmental scoping meetings on January 31, 2012. The first session will be held in the afternoon, and an identical session will be held later that evening. Both sessions will be held at the Port Gibson City Hall, 1005 College Street, Port Gibson, MS 39150. The afternoon session will be from 2:00 PM to 3:30 PM, and the evening session will be from 7:00 PM to 8:30 PM. In addition, the NRC plans to hold a one hour open house prior to each meeting to answer public questions. You and your staff are invited to attend the public meetings and open houses.

Fish and Wildlife Coordination Act

To support the SEIS preparation process, please provide any information you consider appropriate under the provisions of the Fish and Wildlife Coordination Act of 1934, as amended.

Endangered Species Act

To ensure compliance with the Endangered Species Act of 1973, as amended, the NRC staff will consider effects of the proposed license renewal on Federally listed species. The NRC has prepared the enclosed table (Enclosure 3) of Federally listed species that may occur in the vicinity of GGNS for your concurrence per 50 CFR 402(b)(2)(c).

Prior to submitting their application to the NRC, Entergy corresponded with your office regarding Federally listed species by letter dated February 4, 2011. You replied by letter dated February 23, 2011. Both the February 4, 2011, letter from Entergy and your February 23, 2011, response letter are enclosed for your reference (Enclosures 1 and 2). The NRC staff will also consider potential adverse impacts to State-listed species as part of its review. The NRC staff requests any information your office may have on the occurrence of Federally or State-listed species on or in the vicinity of GGNS to aid the staff's review process.

S. Surrette

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To ensure that your reply to this letter contributes to our review process in a timely manner please respond no later than March 15, 2012.

The GGNS license renewal application is available on the internet at <http://www.nrc.gov/reactors/operating/licensing/renewal/applications/gg1.html>. If you have any questions or require additional information, please contact David Drucker, License Renewal Project Manager, by phone at 301-415-6223 or by email at [David.Drucker@nrc.gov](mailto:David.Drucker@nrc.gov).

Sincerely,



David J. Wrona, Chief  
Projects Branch 2  
Division of License Renewal  
Office of Nuclear Reactor Regulation

Docket No. 50-416

Enclosures:  
As stated

cc w/encls: Listserv



February 4, 2011

Dr. Sherry Surette  
Mississippi Natural Heritage Program  
Mississippi Museum of Natural Science  
Department of Wildlife, Fisheries and Parks  
2148 Riverside Drive  
Jackson, MS 39202

SUBJECT: Grand Gulf Nuclear Station  
License Renewal Application

Dear Dr. Surette,

In 2011, Entergy plans to apply to the Nuclear Regulatory Commission (NRC) for renewal of the operating license for the Grand Gulf Nuclear Station (GGNS), which is located in Claiborne County, Mississippi on the east bank of the Mississippi River at River Mile 406, approximately 25 miles south of Vicksburg, Mississippi and 37 miles north-northeast of Natchez, Mississippi. The existing operating license for GGNS was issued for a 40-year term that expires in 2024. If the NRC approves the application, Entergy will then have the option to continue operating GGNS until 2044. In conjunction with this effort, Enercon is gathering information on Entergy's behalf relative to this license renewal project.

The NRC requires that the license renewal application for GGNS include an environmental report assessing potential environmental impacts from operation during the license renewal term. One of these potential environmental impacts would be the effect of license renewal on threatened or endangered species or designated critical habitat located on the GGNS site, its immediate environs (6-mile radius), and transmission line corridors constructed for purposes of connecting the plant to the existing transmission system. Accordingly, the NRC requires that the environmental report for each license renewal application assess such a potential effect (10 CFR 51.53). Later, during its review of the license renewal environmental report pursuant to the National Environmental Policy Act (NEPA), the NRC may request information from your office to ensure compliance with Section 7 of the Endangered Species Act.

Enercon is contacting you now in order to obtain input regarding issues that may need to be addressed in the GGNS license renewal environmental report, and to assist Entergy in identifying any information your staff believes would be helpful to expedite NRC's review. The 2,100 acre GGNS site consists primarily of woodlands and former farms as well as two lakes, Hamilton Lake and Gin Lake (see Figure 1). The land in the vicinity of the GGNS site is mostly rural. There are two transmission corridors containing a single-circuit 500-kV transmission lines that were constructed for purposes of connecting GGNS to the regional electricity grid (see Figure 2). These transmission

Dr. Sherry Surette  
Mississippi Natural Heritage Program  
Mississippi Museum of Natural Science  
Department of Wildlife, Fisheries and Parks  
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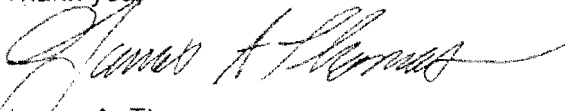
corridors are considered by the NRC to be within the scope of its environmental reviews for renewal of the GGNS operating license. Entergy's Transmission group owns and operates these two lines. The total length of the two corridors is approximately 66 miles, and cross Claiborne, Warren, Jefferson and Franklin Counties in Mississippi.

Based on a review of information available and previous consultations, Enercon has included Table 1 which lists federally- or state-listed threatened or endangered species at the station site, the immediate environs, or the transmission line corridors (see Figures 1 and 2). No designated critical habitat was identified by Enercon for these species during the review. However, even with the presence of these species or habitats, Entergy does not expect GGNS operations during the license renewal term to adversely affect any threatened and endangered species or designated critical habitats since there are no plans to alter current operations during the 20-year license renewal period, and any maintenance activities necessary to support continued operation of GGNS would be limited to currently developed areas of the site. Although administrative procedural controls are in place to comply with applicable state and federal laws to preserve biological resources when facility expansion or land disturbance activities do occur, no expansion is planned or needed in support of license renewal. In addition, Entergy's Transmission group has established maintenance procedures for transmission lines that involve minimal disturbance of land, wetlands, and streams and are protective of threatened and endangered species, and designated critical habitats when present.

After your review of the information provided in this letter, I would appreciate you sending a letter detailing any concerns you may have about potential impacts to threatened or endangered species or designated critical habitat on the GGNS property, immediate environs, or along the transmission line corridors, or alternatively, confirming our conclusion these species or habitats will not be adversely affected as a result of renewing the GGNS operating license for an additional 20 years. Entergy will include copies of this letter and your response in the environmental report submitted to the NRC as part of the GGNS license renewal application.

If you have any questions, please contact me at (918) 665-7693 or through my email address, [jthomas@enercon.com](mailto:jthomas@enercon.com). Thank you in advance for your assistance.

Thank you,



James A. Thomas  
Manager, Electric Utilities Environmental Services

Attachment – 6-Mile Map  
50-Mile Map

cc: Rick Buckley (Entergy)

**Table 1**  
**Federal and State-Listed Species**

<u>Scientific Name</u>	<u>Common Name</u>	<u>Federal Status</u>	<u>MS Status</u>	<u>LA Status</u>	<u>On-Site</u>	<u>Vicinity (6-mile)</u>	<u>Transmission ROW</u>
<b><u>Mammals</u></b>							
<i>Puma concolor coryi</i>	Florida Panther	E	E	E	No	No	No
<i>Ursus americanus luteolus</i>	Louisiana Black Bear	T	E	T	Yes	Yes	Yes
<i>Ursus americanus</i>	American Black Bear	T	E	–	Yes	Yes	Yes
<b><u>Birds</u></b>							
<i>Haliaeetus leucocephalus</i>	Bald Eagle	–	E	E	Yes	Yes	Yes
<i>Mycteria americana</i>	Wood Stork	E	E	–	Yes	Yes	Yes
<i>Sterna antillarum athalassos</i>	Interior Least Tern	E*	E*	E	No	Yes	Yes
<i>Picoides borealis</i>	Red-Cockaded Woodpecker	E	E	–	No	No	Yes
<i>Eudocimus albus</i>	White Ibis	–	S2, S3	–	Yes	Yes	Yes
<b><u>Reptiles</u></b>							
<i>Alligator mississippiensis</i>	American Alligator	T (S/A)	–	–	Yes	Yes	Yes
<b><u>Fish</u></b>							
<i>Scaphirhynchus albus</i>	Pallid Sturgeon	E	E	E	Yes	Yes	No
<i>Etheostoma rubrum</i>	Bayou Darter	T	E	–	No	Yes	No
<i>Crystallaria asprella</i>	Crystal Darter	–	E	–	Yes	Yes	No
<i>Macrhybopsis meeki</i>	Sicklefin Chub	–	S1	–	Yes	Yes	–
<b><u>Macroinvertebrates</u></b>							
<i>Potamilus capax</i>	Fat Pocketbook Mussel	E	E	–	No	No	Yes
<i>Quadrula cylindrica</i>	Rabbitsfoot Mussel	CS	–	–	No	Yes	Yes

Table 1 (Continued)

Federal and State-Listed Species

<u>Scientific Name</u>	<u>Common Name</u>	<u>Federal Status</u>	<u>MS Status</u>	<u>LA Status</u>	<u>On-Site</u>	<u>Vicinity (6-mile)</u>	<u>Transmission ROW</u>
<b><u>Insects</u></b>							
<i>Epitheca spinosa</i>	Robust Baskettail	–	S1	–	Yes	Yes	–
<b><u>Plants</u></b>							
<i>Lindera melissifolia</i>	Pondberry	E	E	–	No	No	Yes

T = Threatened

E = Endangered

CS = Candidate Species

S1 = Critically Imperiled in Mississippi

S2 = Imperiled in Mississippi

S3 = Rare or uncommon in Mississippi

T (S/A) = Threatened by similarity of appearance.

\* Interior least terns belong to a subspecies of least terns and are protected Federally, and by the state of Mississippi under the species name.

*Sterna antillarum athalassos* is the subspecies endemic to the project region and is therefore specified above.

Figure 1

Location of GGNS, 6-Mile Radius Map

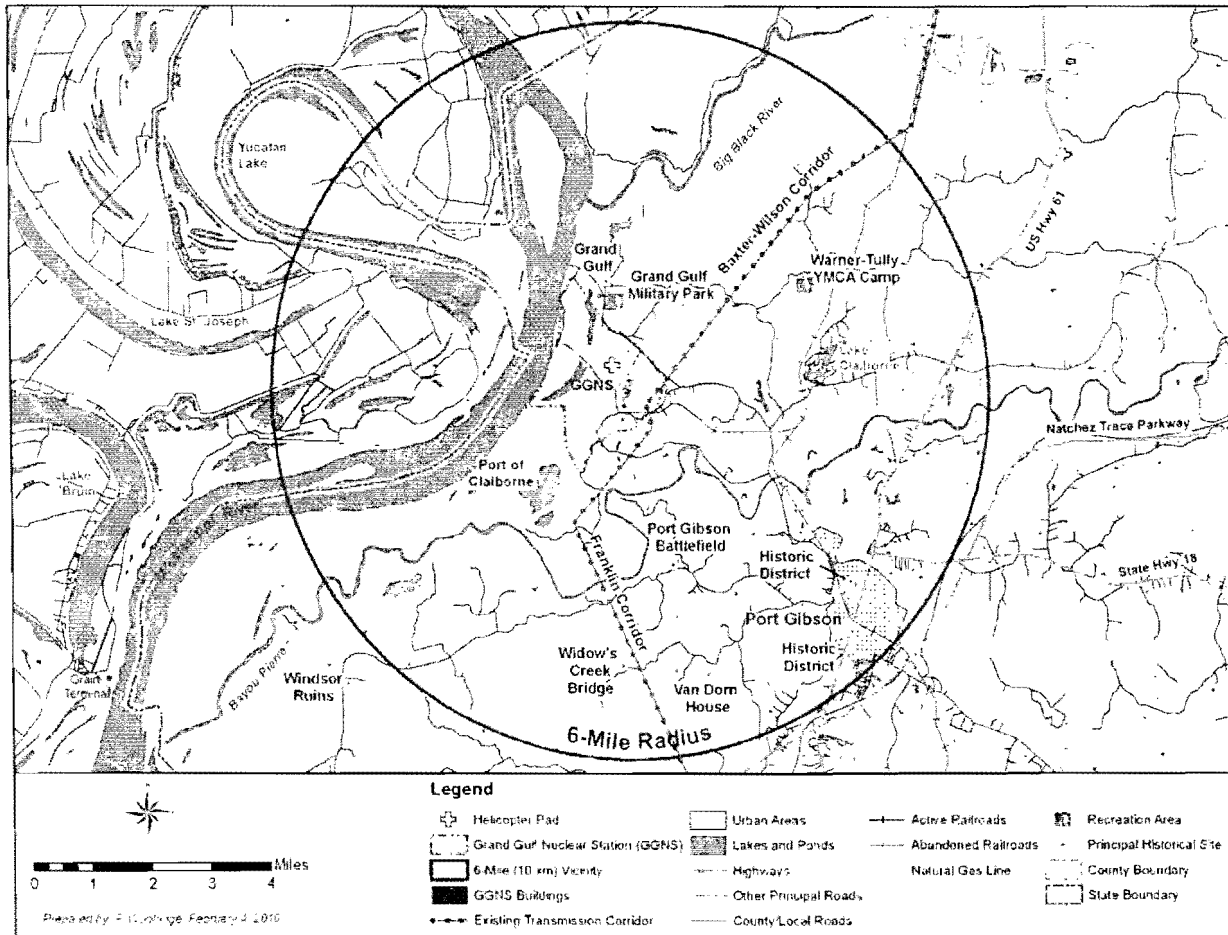
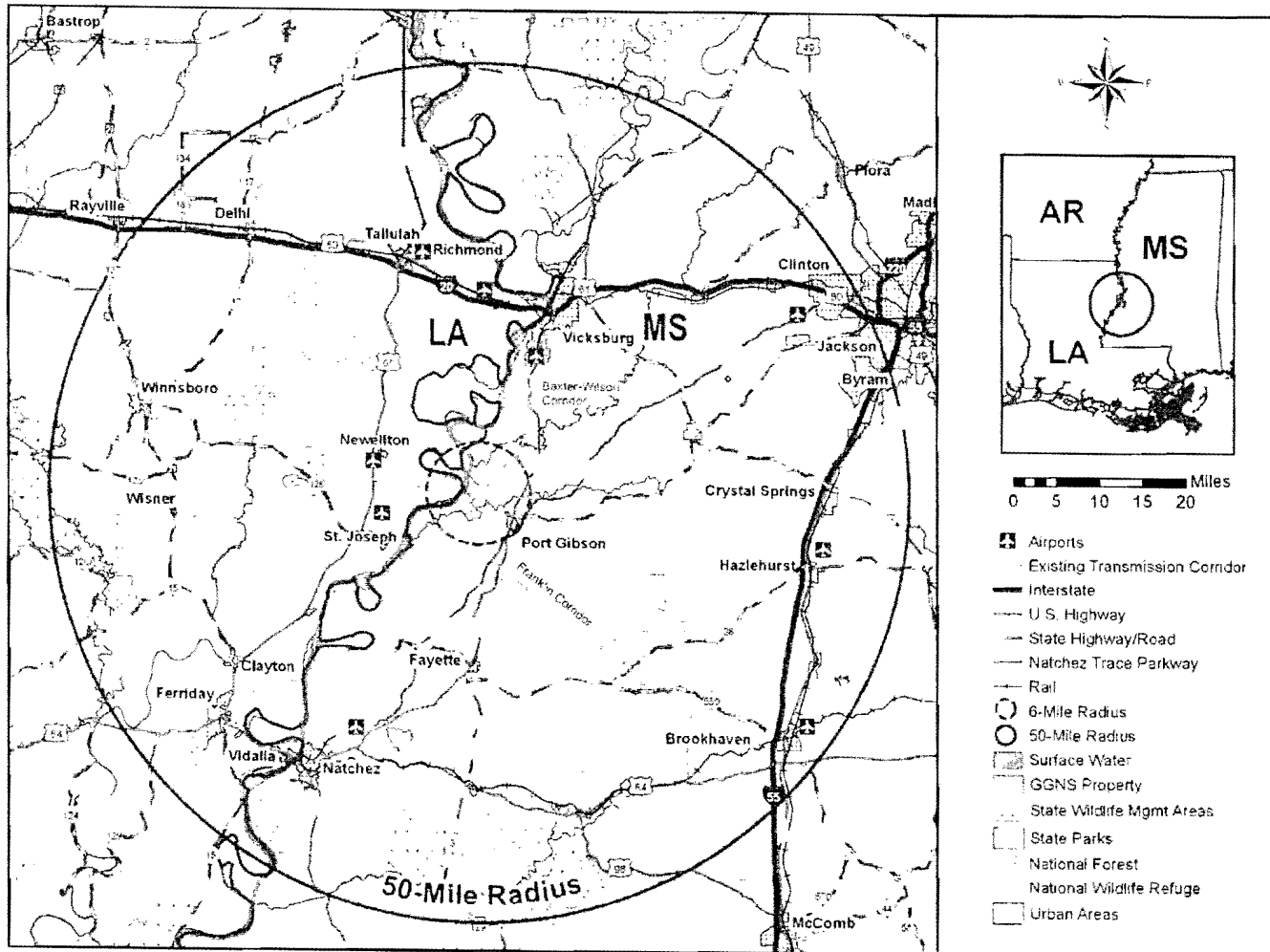




Figure 2

Location of GGNS, 50-Mile Radius Map



**MISSISSIPPI**  
**DEPARTMENT OF WILDLIFE, FISHERIES, AND PARKS**

Sam Polles, Ph.D.  
Executive Director

February 23, 2011

James Thomas  
Enercon  
5100 East Skelly Drive  
Suite 450  
Tulsa, OK 74135

Re: Entergy – Grand Gulf Nuclear Station  
Operating License Renewal  
Claiborne County, Mississippi

R# 8192

To Whom It May Concern,

In response to your request for information dated February 4, 2011, we have searched our database for occurrences of state or federally listed species and species of special concern that occur within 2 miles of the site of the proposed project. Please find our concerns and recommendations below.

Scientific Name	Common Name	Federal Status	State Status	State Rank
<i>Crystallaria asprella</i>	Crystal Darter		LE	S1
<i>Scaphirhynchus albus</i>	Pallid Surgeon	LE	LE	S1
<i>Ursus americanus luteolus</i>	Louisiana Black Bear	LT, SAT	LE	S1
<i>Macrhybopsis meeki</i>	Sicklefin Chub			S1
<i>Ursus americanus</i>	Black Bear	PS	LE	S1
<i>Eudocimus albus</i>	White Ibis			S2B,S3N
<i>Mycteria americana</i>	Wood Stork	PS:LE	LE	S2N
<i>Ichthyomyzon castaneus</i>	Chestnut Lamprey			S3
<i>Ictiobus niger</i>	Black Buffalo			S3
<i>Polyodon spathula</i>	Paddlefish			S3
<i>Cyprinella elongatus</i>	Blue Sucker			S3
<i>Plethodon websteri</i>	Webster's Salamander			S3

**State Rank**

S1 — Critically imperiled in Mississippi because of extreme rarity (5 or fewer occurrences or very few remaining individuals or acres) or because of some factor(s) making it vulnerable to extirpation.

S2 — Imperiled in Mississippi because of rarity (6 to 20 occurrences or few remaining individuals or acres) or because of some factor(s) making it vulnerable to extirpation.

S3 — Rare or uncommon in Mississippi (on the order of 21 to 100 occurrences).

**State and Federal Status**

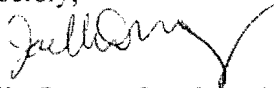
LE Endangered — A species which is in danger of extinction throughout all or a significant portion of its range

LT Threatened — A species likely to become endangered in foreseeable future throughout all or a significant portion of its range.

Based on information provided, we conclude that if best management practices are properly implemented, monitored, and maintained (particularly measures to prevent, or at least, minimize negative impacts to water quality), the proposed project likely poses no adverse threat to listed species or their habitats.

Please feel free to contact us if we can provide any additional information, resources, or assistance that will help minimize negative impacts to this area. We are happy to work with you to ensure that our state's precious natural heritage is conserved and preserved for future Mississippians.

Sincerely,



Joelle Carney, Database Manager/Biologist  
Mississippi Natural Heritage Program  
(601) 354-7303

The Mississippi Natural Heritage Program (MNHP) has compiled a database that is the most complete source of information about Mississippi's rare, threatened, and endangered plants, animals, and ecological communities. The quantity and quality of data collected by MNHP are dependent on the research and observations of many individuals and organizations. In many cases, this information is not the result of comprehensive or site-specific field surveys, most natural areas in Mississippi have not been thoroughly surveyed and new occurrences of plant and animal species are often discovered. Heritage reports summarize the existing information known to the MNHP at the time of the request and cannot always be considered a definitive statement on the presence, absence or condition of biological elements on a particular site.

**Table of Federally Listed Species in the Vicinity of Grand Gulf Nuclear Station  
and its Associated Transmission Lines**

Scientific	Name	Status <sup>(a)</sup>	County(ies) of Occurrence <sup>(b)</sup>			
			Claiborne	Franklin	Jefferson	Warren
<b>Birds</b>						
<i>Picoides borealis</i>	red-cockaded woodpecker	E		x	x	
<i>Sterna antillarum</i>	least tern (interior pop.)	E	x		x	x
<b>Clams</b>						
<i>Potamilus capax</i>	fat pocketbook	E	x		x	x
<i>Quadrula cylindrica cylindrica</i>	rabbitsfoot	C	x			x
<b>Fish</b>						
<i>Etheostoma rubrum</i>	bayou darter	T	x			
<i>Scaphirhynchus albus</i>	pallid sturgeon	E	x		x	x
<b>Mammals</b>						
<i>Ursus americanus luteolus</i>	Louisiana black bear	T	x	x	x	x

<sup>(a)</sup> C = candidate; E = endangered; T = threatened

<sup>(b)</sup> Grand Gulf Nuclear Station (GGNS) is located in Claiborne County, Mississippi. The transmission lines associated with GGNS traverse Claiborne, Franklin, Jefferson, and Warren Counties.

Data source: [FWS] U.S. Fish and Wildlife Service. 2011. Find Endangered Species Database. Available at <<http://www.fws.gov/endangered/>> (accessed 13 December 2011).

S. Surette

- 3 -

To ensure that your reply to this letter contributes to our review process in a timely manner please respond no later than March 15, 2012.

The GGNS license renewal application is available on the internet at <http://www.nrc.gov/reactors/operating/licensing/renewal/applications/gg1.html>. If you have any questions or require additional information, please contact David Drucker, License Renewal Project Manager, by phone at 301-415-6223 or by email at [David.Drucker@nrc.gov](mailto:David.Drucker@nrc.gov).

Sincerely,

*/RA/*

David J. Wrona, Chief  
Projects Branch 2  
Division of License Renewal  
Office of Nuclear Reactor Regulation

Docket No. 50-416

Enclosures:

As stated

cc w/encls: Listserv

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Letter to: S. Surette from D. Wrona, dated January 20, 2012

**SUBJECT: REQUEST FOR LIST OF FEDERAL PROTECTED SPECIES WITHIN THE  
AREA UNDER EVALUATION FOR THE GRAND GULF NUCLEAR STATION,  
UNIT 1, LICENSE RENEWAL APPLICATION REVIEW**

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D. Drucker

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