

May 5, 2004

LICENSEE: Entergy

FACILITY: Grand Gulf ESP Site

SUBJECT: SUMMARY OF SITE AUDIT TO SUPPORT REVIEW OF EARLY SITE PERMIT  
FOR THE GRAND GULF SITE (TAC NO. MC1379)

An environmental review team, consisting of Nuclear Regulatory Commission (NRC) staff and contractors from Pacific Northwest National Laboratory (PNNL) conducted site audit activities at the Grand Gulf and River Bend sites during the week of April 12, 2004, to support the review of the Grand Gulf early site permit (ESP) application environmental review. The environmental review team consisted of 11 contractor and six NRC staff. The primary goals of the site visit were to review documentation and discuss the environmental report submitted as part of Entergy's application, gather information to ensure that environmental requirements codified in 10 CFR Parts 51 and 52 are met, and to interface with officials in Federal, State, and local government permitting and resource agencies to obtain related information. Attachment 1 is a list of the names and affiliations of those participating in the site audit at the Grand Gulf site.

The full environmental review team participated in an overview meeting with Entergy staff at the Grand Gulf site on Tuesday, April 13, 2004. Entergy staff presented a brief overview of its corporate structure and the layout of the plant, and conducted a guided site tour, focusing on areas relevant to the environmental review. These areas included the Mississippi River shoreline in the vicinity of the barge slip, cooling tower discharge and Ranney wells, the switchyard, meteorological tower, cooling towers, the parking and laydown areas, and the proposed footprint for additional unit construction. Attachment 2 contains information on the Mississippi River system and the Grand Gulf site that was provided to the NRC staff on the guided site tour. During the remainder of the site audit, review team members separated into smaller groups with Entergy representatives from corresponding environmental disciplines. These groups participated in various activities including tours of known historic and archaeological sites, a tour of the meteorological tower, a tour of water resources in the area, and a tour of the intake and discharge areas that make up the cooling system. Environmental review team members also discussed the process and documentation associated with Entergy's selection of alternate sites.

In addition to the onsite activities during the site audit, review team members met offsite with staff representing State and local government agencies and various local business and service agencies, including the Mississippi Department of Archives and History, Mississippi State Wildlife, Fisheries, and Parks, the Vicksburg District of the US Army Corps of Engineers, the Grand Gulf Military Park, Alcorn State University, Tensas Parish County Courthouse, and working group meetings with representatives from Claiborne, Jefferson, and Warren Counties.

At the conclusion of the Grand Gulf ESP site audit, the NRC and its contractor staff from PNNL summarized the information and documents needed to complete the environmental review. Entergy committed to provide the information and documents listed in Attachment 3 on the docket in support of its ESP application.

On Thursday, April 15, 2004, a downsized environmental review team of two NRC and seven PNNL staff visited the River Bend site to begin the alternate site portion of the early site permit review. Attachment 4 is a list of the names and affiliations of those participating in the site visit at the River Bend alternate site. In addition to the onsite activities associated with a general site tour, review team members met offsite with staff representing the State and local government agencies and various local business and service agencies, including the Louisiana Division of Historic Preservation, the Louisiana Division of Archaeology, and working group meetings with representatives from West and East Feliciana Parishes. The staff expects to conduct future site visits to the Pilgrim and FitzPatrick alternate sites during the spring or summer later this year.

The NRC and contractor staff are continuing the Grand Gulf ESP environmental review and expect to issue formal requests for additional information by the end of June.

**/RA/**

James H. Wilson, Senior Project Manager  
License Renewal and Environmental Impacts  
Division of Regulatory Improvement Programs  
Office of Nuclear Reactor Regulation

Docket No. 52-009

Attachments: As stated

cc: w/atts

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James H. Wilson, Senior Project Manager  
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cc: w/atts

DISTRIBUTION: See next page

RLEP R/F	TKenyon
DMatthews/FGillespie	JTappert
JWilson	BZalcman
CGuerrero	ADAMS/PUBLIC

Accession nos.:

1. Summary of Site Audit w/Att. 1, 3 and 4: **ML041270478**
2. Att. 2: Entergy ESP Application: **ML041170340**
3. Pkg: **ML041270525**

Document Name: C:\ORPCheckout\FileNET\ML041270478.wpd \*See previous concurrence

OFFICE	RLEP	RLEP	LA:RLEP	OGC (NLO)	SC:RLEP
NAME	CGuerrero*	JHWilson*	YEdmonds*	TSmith*	JTappert (BZ for)
DATE	04/29/04	04/29/04	04/29/04	05/4/04	05/5/04

OFFICIAL RECORD COPY

LIST OF ATTENDEES AND AFFILIATIONS  
GRAND GULF ESP SITE AUDIT  
GRAND GULF SITE  
APRIL 13, 2004

**Attendees**

R. Emch  
C. Guerrero  
T. Kenyon  
M. Masnik  
J. Wilson  
B. Zalcman  
R. Anand  
B. Harvey  
S. Koenick  
J. Lee  
G. Miller  
D. Anderson  
C. Brandt  
J. Becker  
A. Bunn  
T. Eschbach  
P. Hendrickson  
E. Hickey  
V. Ramsdell  
S. Saslow  
M. Scott  
D. Stapp  
L. Vail  
D. Felder  
S. Ginger  
K. Lunceford  
G. Williams  
M. Krupa  
G. Zinke  
M. Bourgeois  
R. Buckley  
C. Bottmiller  
D. Crawley  
L. Tong

**Affiliation**

U.S. Nuclear Regulatory Commission (NRC)  
NRC  
NRC  
NRC  
NRC  
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NRC  
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NRC  
Pacific Northwest National Laboratory (PNNL)  
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United States Fish and Wildlife Service (USFWS)  
USFWS  
USFWS  
Entergy  
Entergy  
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Entergy  
Entergy  
Entergy  
Entergy

LIST OF ATTENDEES AND AFFILIATIONS (Cont.)  
GRAND GULF ESP SITE AUDIT  
GRAND GULF SITE  
APRIL 13, 2004

<b><u>Attendees</u></b>	<b><u>Affiliation</u></b>
C. Holifield	Entergy
C. Abbott	Entergy
F. Guynn	Entergy
J. Kegerreis	Enercon
G. Cesare	Enercon
M. Morris	Enercon
R. Berger	Enercon
W. Wenstrom	Enercon
J. Pluhar	Enercon
D. Bean	Enercon
R. Evans	Enercon
L. Evans	Enercon
A. Schneider	Enercon
E. Trice	Enercon
K. Turner	McCallum-Turner

**Documentation Commitments Made at the Grand Gulf  
Environmental Review  
April 12 and 13, 2004**

Socioeconomic Issues – Mike Scott

1. ER Section 2.5, Page 2.5-10. Reference 1, URL, U.S. Census Bureau 2000, September 2002, <http://www.census.gov/>.: 2.5.1 These data were captured in Landview 5 and were aggregated. Provide documentation of how the aggregations were performed (copies of the electronic queries, list of census blocks queried, explanation of how the analysis was done, and the table number and title for the table from the 2000 census that was used).
2. ER Section 2.5, Page 2.5-10. Reference 2. There is an error in the application and Table 2.5-12 will change. Provide revised table data and exact table references for correct citation (number and title of census table(s) used.)
3. ER Section 2.5, Page 2.5.-10, Reference 3. Provide copy of front explanatory matter for tables actually used from the correct source and a correct specific citation. Provide example of applying county rates to a portion of Census block groups for two counties (Claiborne county – portion of block groups, Warren county – portion of block groups). Hard copy is preferred.
4. ER Section 2.5, Page 2.5-10, Reference 5. The reference is incorrect. Provide copy of record of telephone phone conversation that is the correct reference.
5. ER Section 2.5, Page 2.5.12, Reference 32. Actual source was one on persistent poverty counties (ref. 6) by Deborah Tuttle which utilized a figure from, and cited the 1995 document listed as Reference 32. Provide title page and table used from reference 6.
6. ER Section 2.5, Table 2.5.9. Area Employment by Industry. These data came from Census SF-3 data on employment by industry that were aggregated. Provide citation to what tables were used; provide a short discussion of what aggregations were performed.
7. ER Section 2.5, Page 2.5-10. Reference 9. This is a dynamic URL that changes number and date (and perhaps data) whenever used. Provide copies of data actually used. (already docketed)
8. ER Section 2.5, Page 2.5-10. Reference 10. (Tensas Parish economic data). Provide copy of data as accessed. Also provide a brief explanation of how the State of LA develops these economic data and a citation.
9. References for Section 2.5, URL, National Center for Education Statistics. Citation is very general. Provide copies of data downloaded. Provide explanation of protocol used for downloading data.
10. Section 2.5, Reference 15. Supply copies of phone record.
11. Section 2.5, Custer, Casey, Warner-Tully YMCA Camp, personal communication, Vicksburg, Mississippi, November 4, 2002. Provide copy of phone record.

12. Section 2.5, Reference 17. URL, Mississippi Wildlife Fisheries and Parks, Downloaded September 2000. Provide copy of data downloaded and the protocol used.
13. Section 2.5, References 18-20: 18. Lake Bruin State Park, Louisiana Boehringer Public Information Direction LSP, email correspondence to John Anderson, Enercon Services, Inc., September 20, 2002. 19. Ainsworth, John Mississippi Wildlife Fisheries and Parks, personal communications, Brookhaven, MS, October, 2002. 20. Goodson, Robert, Tensas Parish Chairman, LSU AgCenter Research & Extension, St. Joseph, LA, personal communication email to J.Anderson, Enercon Services, Inc., December 9, 2002. For 18, provide copy of data. For 19, provide copy of call record. 20 is an incorrect citation - provide copy of data and correct citation.
14. Section 2.5, Reference 22. Covington, Clifton, Claiborne County Extension Office, personal communication, Port Gibson, Mississippi, October 16, 2002. Based on discussion, the reference for the statement regarding the Mississippi Development Authority (MDA) helping local government should be the MDA mission statement. Provide a copy of the mission statement and the correct citation. Also provide a copy of the phone record for the personal communication with Covington.
15. Section 2.5, Reference 34. Myers, Rene, Nurse Station Manager, Claiborne County, Hospital personal communication, Port Gibson, Mississippi. May 2002. Provide a copy of the phone record for this communication.
16. Section 2.5, Reference 35. Kegerreis, Jim, Enercon Services, Inc, employee personal communication, Port Gibson, MS, November 2002. Provide a copy of the record of this communication.
17. Section 2.5, Reference 25. Paul Conguist, of Willowford, Gerhart, and Knight, personal communication, Port Gibson, Mississippi, October 1, 2002, and March 2003. Provide a copy of the record of this communication.
18. Section 4.4, References 5 and 6. 5 is Middleton, Carl, Mississippi Department of Transportation, Assistant District Engineer, Yazoo City, Mississippi, March 2003. 6 is Valentine, Ray, Mississippi Department of Transportation, Planning Department, Jackson, Mississippi, March 2003. Provide a copy of the record of these communications.
19. Section 4.4.2.6, Local Employment. Reference 5. Middleton, Carl, Mississippi Department of Transportation, Assistant District Engineer, Yazoo City, Mississippi, March 2003. This is not a correct reference, although Middleton may have provided some of the material. Provide the correct citation(s) and a copy of the referenced material.
20. Section 4.4.3.2. For the most recent year available, provide a table showing the distribution of Mississippi's in-lieu tax dollars collected under Mississippi Code Section 27-35-309 (3) for Grand Gulf and provided to individual local governments. Show emergency planning dollars and the remaining shares separately for all local governments receiving these dollars. Also note any dollars paid by Entergy to the state of Mississippi for Grand Gulf that may not have been allocated to local governments. Provide a citation for this data.

21. Provide a table showing the current number of plant workers for Grand Gulf plant by zip code or city.
22. ER Section 5.8.3, Reference 3. Mosby, Waldron A, GGNS Unit 1, 2003, Distribution of GGNS Employees, Email to Michael D. Bourgeois, Entergy Nuclear Potomac, Inc., April 3, 2003. Provide a copy of the record of this communication.
23. The ER assumed that 50% of the plant workforce at a new nuclear plant at the Grand Gulf site would come from the 50 miles surrounding Grand Gulf. Provide the basis for this assumption.
24. Provide a table showing the current number of plant workers for River Bend, FitzPatrick, and Pilgrim plants by zip code or city.
25. Provide tables showing local taxes paid to each local jurisdiction and the proportion these taxes are of those local governments' budgets at the River Bend, FitzPatrick, and Pilgrim plants, for the most recent tax year available.

#### Alternatives Issues – Paul Hendrickson

1. Provide the rationale for regionalist approach to screen alternatives.
2. Provide the rationale and scoring system for reduction of alternatives from 7 to 4.
3. Process flow chart – define the criteria used and tie to the screening document.
4. Provide the information that links the PPE to the screening results and evaluation that was provided in the screening document (just consider the 4 sites).
5. Provide the distance to natural gas source to supply 2000 MWe site.
6. Describe the conservation programs in Mississippi.

#### Land Use Issues - Dave Anderson

1. Provide information on mineral rights.
2. Provide References 4, 6, and 7.
3. Provide information on rail spur.
4. Provide information on location of dredge intake material disposal site.
5. Supply electronic copies of maps (prefer TIFF) that were in the ER (already docketed).
6. Describe the infrastructure improvements required at alternative sites.
7. Provide a list of competing Federal activities at the alternative sites.

#### Cultural Resources Issues - Darby Stapp

1. For the figure in the ER and the figure passed out on the tour - show areas with hatch marks: confirm which are construction areas and which are laydown areas.
2. Provide electronic (TIFF) copies of the aerial imagery provided in hard copy for the plant site (preconstruction of Unit 1 and recent).



Aquatic and Terrestrial Ecology Issues - Jim Becker and Amoret Bunn

1. Provide Section 2.4 in the FER for the original construction of Unit 1 and the publication date (already docketed)
2. Provide data on impingement and entrainment at FitzPatrick and Pilgrim (may already be on those dockets)
3. Entergy to submit a letter stating there was an administrative error and provide the missing Appendix 2.4A on Correspondence to NRC. This appendix was missing from the ER submittal. Provide the reference to the Intercom reconnaissance visit to GG site in August, October, November 2002

Hydrology Issues - Stu Saslow

1. Provide CORMIX model simulation - disk.
2. Provide Reference - Glenda Hill's June 17, 2002 written communication from USACE Vicksburg District.
3. Provide 11x17 set up drawings (hard copy or electronic copy) - could not read those submitted in the ER (received at GG audit closeout meeting by Brandt).
4. Entergy to submit a letter stating there was an administrative error and provide the missing Appendix 2.4A on Correspondence to NRC. This appendix was missing from the ER submittal.

Radiological/Severe Accidents/Transportation/Decommissioning Issues - Eva Hickey

1. Provide input and output data for GASPARII and LAPADII Codes
2. Table 4.5-6, results of analysis of dose to construction workers - it looks like the data of SKYSHINE (clarify - possibly add another table).
3. Table 4.5-1 from the ESP application - verify why the units for total body dose and skin dose are given in the mrem/y instead of mrem. In this same table and what is the source of the direct radiation measurements given?
4. Section 4.5.5, the assumptions that went into Table 4.5-6 – explain the differences between workforce numbers for the 2<sup>nd</sup> unit (first ER) and the numbers for the new plant (ESP).

Overall team needs – Charlie Brandt

1. Identify the location of borrow pits that will be used for construction.
2. Provide aerial photos (preferably TIFF) – immediate post-construction of Unit 1.
3. Provide Entergy corporate structure information sufficient to identify relationships among the GG and alternate site operators and land owners, and basis for selection of alternate sites in NE and South.

River Bend Commitments – from the 4/15 site visit

1. Describe the transmission lines rights-of-way management practices for Grand Gulf and the 3 alternative sites (or refer to information already on the docket).
2. Provide the aerial photo of River Bend site used during the site tour (hard copy or electronic).

LIST OF ATTENDEES AND AFFILIATIONS  
GRAND GULF ESP SITE AUDIT  
RIVER BEND SITE  
APRIL 15, 2004

**Attendees**

J. Wilson  
B. Zalcman  
C. Brandt  
J. Becker  
A. Bunn  
T. Eschbach  
P. Hendrickson  
D. Stapp  
L. Vail  
D. Soileau  
M. Bourgeois  
R. Buckley  
C. Bottmiller  
D. Lorfing  
W. Fountain  
R. King

**Affiliation**

U.S. Nuclear Regulatory Commission (NRC)  
NRC  
Pacific Northwest National Laboratory  
PNNL  
PNNL  
PNNL  
PNNL  
PNNL  
United States Fish and Wildlife Services (USFWS)  
Entergy  
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Entergy

## Grand Gulf Expanded Service List

cc:

The Honorable Phillip Martin, Chief  
Mississippi Band of Choctaw Indians  
P.O. Box 6010 - Choctaw Branch  
Choctaw, MS 39350

The Honorable Gregory E. Pyle, Chief  
Choctaw Nation of Oklahoma  
P. O. Drawer 1210  
Durant, OK 74702-1210

Earl J. Barbry Jr., State Historic  
Preservation Officer  
Tunica Biloxi Indian Tribe of Louisiana  
P.O. Box 1589  
Marksville, LA 71351

Mr. Tom Wagner  
Federal and State Review Program  
Interagency Coordinator  
Mississippi Department of Archives and  
History  
Historic Preservation  
P. O. Box 571  
Jackson, MS 39205-0571

Mr. Don Klima, Director  
Office of Federal Agency Programs  
Advisory Council on Historic Preservation  
Old Post Office Building  
1100 Pennsylvania Avenue, NW, Suite 809  
Washington, DC 20004

Mr. David Stilwell, Field Office Supervisor  
U.S. Fish and Wildlife Service  
New York Ecological Services Office  
3817 Luker Road  
Cortland, NY 13045

Mr. Mike Bartlett, Field Office Supervisor  
U.S. Fish and Wildlife Service  
New England Ecological Services Office  
70 Commercial Street, Suite 300  
Concord, NH 03301-5087

Charles A. Brandt  
Pacific Northwest National Laboratory  
P. O.Box 999  
M.S. K6-85  
Richland, WA 99352

Mr. Russ Watson  
Acting Field Office Supervisor  
U.S. Fish and Wildlife Service  
Louisiana Ecological Services Office  
646 Cajundome Blvd.  
Lafayette, LA 70506

Mr. Ray Aycock, Field Supervisor  
U.S. Fish and Wildlife Service  
Mississippi Ecological Services Office  
6578 Dogwood View Parkway  
Jackson, MS 39213

Ms. Georgia Cranmore  
Assistant Regional Administrator  
NOAA Fisheries Southeast Regional Office  
9721 Executive Center Drive North  
Saint Petersburg, FL 33702

Ms. Patricia Kurkul  
Regional Administrator  
NOAA Fisheries Northeast Regional Office  
1 Blackburn Drive  
Gloucester, MA 01930