

March 24, 2005

Mr. William A. Eaton, Vice President
System Energy Resources, Inc.
Entergy Nuclear, M-ECH-38
1340 Echelon Parkway
Jackson, MS 39213

SUBJECT: POTENTIAL OPEN ITEMS FOR THE DRAFT SAFETY EVALUATION REPORT
FOR THE GRAND GULF EARLY SITE PERMIT APPLICATION

Dear Mr. Eaton:

By letter dated October 16, 2003, System Energy Resources, Inc. (SERI), tendered its application for an early site permit (ESP) for the Grand Gulf site, in accordance with Subpart A, "Early Site Permits," of Title 10 of the *Code of Federal Regulations*, Part 52 (10 CFR Part 52), "Early Site Permits; Standard Design Certifications; and Combined Licenses for Nuclear Power Plants." The U.S. Nuclear Regulatory Commission (NRC) formally accepted this document as a docketed application for an ESP on November 21, 2003. The staff has reviewed the ESP application and is developing a draft safety evaluation report (DSER).

In the process of reviewing the information provided by SERI in its ESP application and in response to the staff's requests for additional information, the staff has tentatively concluded that additional information is needed to complete the final safety evaluation report (FSER).

The staff plans to issue the DSER on April 7, 2005. In accordance with the review schedule provided in the letter dated November 21, 2003, the NRC staff is requesting that SERI respond fully to all open items by June 21, 2005, to support the timely issuance of the FSER.

In the interest of expediting SERI's response to the open items, we are enclosing a list and brief description of each open item tentatively identified by the staff (see Enclosure 1). We emphasize that these open items are still under staff review, and therefore, may be changed or deleted. Further, management review may reveal additional open items before the DSER is issued. To ensure that your responses address the staff-approved open items provided in the DSER, please do not respond to these open items before you receive the completed DSER. In addition, because of the need to focus staff resources on the timely completion of the DSER, we will not be able to meet with you to discuss any questions or concerns you may have on the tentative open items until after we issue the DSER.

W. Eaton

-2-

We hope that you find Enclosure 1 informative and useful. Please contact Mr. Raj K. Anand, the NRC project manager for the review of the SERI Grand Gulf ESP application, at (301) 415-1146 or RKA@nrc.gov if you have any questions or comments concerning this matter.

Sincerely,

/RA/

William D. Beckner, Program Director
New, Research and Test Reactors Program
Division of Regulatory Improvement Programs
Office of Nuclear Reactor Regulation

Docket No. 52-009

Enclosure: As stated

cc w/o encl.: See next page

W. Eaton

-2-

We hope that you find Enclosure 1 informative and useful. Please contact Mr. Raj K. Anand, the NRC project manager for the review of the SERI Grand Gulf ESP application, at (301) 415-1146 or RKA@nrc.gov if you have any questions or comments concerning this matter.

Sincerely,

/RA/

William D. Beckner, Program Director
New, Research and Test Reactors Program
Division of Regulatory Improvement Programs
Office of Nuclear Reactor Regulation

Docket No. 52-009

Enclosure: As stated

cc w/o encl.: See next page

Distribution:

Hard Copy:

RNRP Rdg.
RAnand
JSegala
WBeckner
LDudes

Email:

NGilles	DThatcher	PPrescott	RAnand
RBarrett	YLi	RDennig	BBoger
JCushing	MRubin	AKugler	KCampe
EWeiss	SBlack	JLee	SMorris
ATardiff	KManoly	GImbro	DMatthews
JAnderson	DBarss	GBagchi	RHarvey
AFernandez	RWeisman		

ACCESSION NO. ML050740064

OFFICE	PM:RNRP	SC:RNRP	OGC/NLO	D:RNRP
NAME	RAnand	LDudes	MWoods	WBeckner
DATE	03/15/05	03/16/05	03/21/05	03/22/05

OFFICIAL RECORD COPY

Table 1.6-1 Open Items

Open Item No.	DSER Section	Subject
2.1-1	2.1.2.3	Demonstrate that the applicant has the legal right to control the exclusion area or has an irrevocable right to obtain such control.
2.1-2	2.1.3.3	Include weighted transient population data in Tables 2.1-1 and 2.1-2 of the SSAR.
2.3-1	2.3.1.3	Provide acceptable 100-year return period maximum and minimum dry-bulb temperatures.
2.3-2	2.3.1.3	Identify an additional ultimate heat sink (UHS) meteorological site characteristic for use in evaluating the potential for water to freeze in the UHS water storage facility.
2.3-3	2.3.1.3	Identify a 3-second gust wind speed that represents a 100-year return period for the ESP site.
2.3-4	2.3.5.3	Identify x/Q and D/Q values for the nearest milk cow and meat cow.
2.4-1	2.4.1	Provide corrected UTM coordinates of the center of the proposed powerblock and/or revise Figure 2.1-1 in the SSAR to show the correct location and coordinates.
2.4-2	2.4.1	Provide information on the elevation (depth) of the zone that could be disturbed by the construction of the new facility, such that the local subsurface environment and its alignment with the existing hydrogeological environment could be altered.
2.4-3	2.4.1	Provide more details regarding dewatering wells to allow the staff to determine whether ground surface subsidence could affect safety-related structures and piping. Provide information related to the location of dewatering wells in relation to safety-related structures and associated monitoring of the ground water table.
2.4-4	2.4.1	Provide more details regarding the floodwater level estimation, including data and methods used to arrive at the floodwater elevation of 133.25 feet MSL.
2.4-5	2.4.2	Revise and present estimates of the local intense precipitation as shown in Table 2.4-7 of the SSAR using the guidelines of HMR 52.
2.4-6	2.4.13	Provide further description of the rationale for considering Sr-90 and Cs-137 in the radionuclide transport analysis.

Open Item No.	DSER Section	Subject
2.4-7	2.4.13	Factors, such as soil, sediment, and rock characteristics; adsorption and retention coefficients; ground water velocity; and distances to the nearest body of surface water are important to hydrological radionuclide transport. Provide these site characteristics from onsite measurements.
2.5-1	2.5.2	Provide justification for not updating the background seismic source for the ESP site.
2.5-2	2.5.2	Provide and evaluate the criteria or weights used for ranking of model clusters and the judgements involved in balancing data consistency and adherence to seismological principles in the EPRI 2003 ground motion evaluation. Explain how recordings from a single earthquake can provide well-resolved values of both crustal quality factor (Q) and site kappa, also explain why the Q value of 317 at 1 Hz is much lower than values found in other studies of eastern North American earthquakes, and why other studies find less frequency dependence of Q in the eastern North American than in the western North American.
2.5-3	2.5.2	Provide an explanation why the magnitude and distance bin corresponding to the SRSZ makes no contribution to the hazard deaggregation.
2.5-4	2.5.4	If the new Category I foundations will be lower than those at the existing Grand Gulf Nuclear Station, discuss and evaluate the impact on the anticipated construction procedures.
2.5-5	2.5.2 and 2.5.4	Provide the basis for selecting the generic base case profile for the ESP site, and explain the reasoning for using shear wave velocities varying from 700 m/s to 1000 m/s at a depth of 0.62 miles in the sensitivity test, also discuss the uncertainty associated with the selected kappa values and the effect of scattering kappa on the results.
2.5-6	2.5.5	Present qualitative assessment of slope escarpment stability with the consideration of potential impact of difference in elevations on SSI evaluations of safety - related facilities.

Open Item No.	DSER Section	Subject
13.3-1		Provide responses to the following issues related to State and local emergency plans:
	13.3.3.7	Describe the communications arrangements with fixed and mobile medical support for the State of Mississippi and with mobile medical support for Claiborne County. [Assoc. RAI: 13.3-61/Supp. 2 Criterion: F.2]
	13.3.3.8	Describe the dissemination of information regarding the special needs of the handicapped to the general public in the State of Louisiana on a periodic basis. [Assoc. RAI: 13.3-62/Supp. 2 Criterion: G.1]
	13.3.3.11	Describe the means for the use of radioprotective drugs for emergency workers and institutionalized persons within the plume exposure pathway EPZ in the States of Louisiana and Mississippi whose immediate evacuation may be infeasible or very difficult. [Assoc. RAIs: 13.3-64 and 13.3-65/Supp. 2 Criterion: J.4.e]
	13.3.3.12	Describe the State of Mississippi's guidance related to bioassay or whole body counting for determining offsite emergency worker doses from the uptake of radioactive material (e.g., ingestion). [Assoc. RAI: 13.3-66/Supp. 2 Criterion: K.3.a]
	13.3.3.13	Clarify the apparent inconsistencies between the LPRRP and Enclosure I to Attachment 2 to LPRRP Supplement II regarding the description of contacts and arrangements for local and backup hospital services. [Assoc. RAI: 13.3-67/Supp. 2 Criterion: L.1]
	13.3.3.13	Describe the special radiological capabilities for the hospitals listed in Tab 2 of LPRRP Chapter 10. [Assoc. RAI: 13.3-68/Supp. 2 Criterion: L.2]
	13.3.3.11	Provide information regarding the availability and capacity of school buses or other transportation methods, the availability of drivers, and the process for mobilizing transportation for students, residents, transients, and special needs populations in Claiborne County and Tensas Parish during an evacuation (e.g., evacuations may require a single trip or they may require return trips). [Assoc. RAIs: 13.3-79.c and 13.3-87/Supp. 2 Criterion: J.3]
	13.3.3.11	Provide a map(s) illustrating evacuation/shelter areas in the State of Mississippi for the MREPP Annex O. [Assoc. RAI: 13.3-63/Supp. 2 Criterion: J.4.a]

Open Item No.	DSER Section	Subject
	13.3.3.11	Information on shelter capacities is not contained in, and therefore, not evaluated by FEMA under the LPRRP. Provide sheltering capacities for relocation centers in the State of Louisiana or documentation of evaluation performed to determine whether adequate capacity exists. [Assoc. RAI: 13.3-75/Supp. 2 Criterion: J.4.g]
13.3-2	13.3.3.8	Describe in Part 4 the applicant's responsibility for making information available to offsite authorities for distribution consistent with MREPP Annex J. [Assoc. RAI: 13.3-72/Supp. 2 Criterion: G.1]
13.3-3	13.3.3.9	Describe the adequacy of the TSC, OSC, and EOF and related equipment used to support emergency response activities, to address, with specificity, such facility and equipment features as location, size, structure, habitability, communications, staffing and training, radiation monitoring, instrumentation, data system equipment, power supplies, technical data and data systems, and record availability and management. [Assoc. RAI: 13.3-34/Supp. 2 Criteria: H.1 and H.2]
13.3-4	13.3.3.11	Address whether discussions on results of the 2003 ETE study were held with officials from the States of Mississippi and Louisiana involved in implementing traffic management plans, according to Appendix 4 to NUREG-0654/FEMA-REP-1 and NUREG/CR-4831, or provide confirmation that State reviews were not required based on discussions with appropriate officials. [Assoc. RAI: 13.3-96/Supp. 2 Criteria: J.3]

GRAND GULF EARLY SITE PERMIT
SERVICE LIST

Mr. George A. Zinke
Manager, Project Management
Nuclear Business Development
Entergy Nuclear, M-ECH-683
1340 Echelon Parkway
Jackson, MS 39213

Mr. Michael A. Krupa
Acting Director, Nuclear Safety Assurance
Grand Gulf Nuclear Station
Bald Hill Road – Waterloo Road
Port Gibson, MS 39150

Mr. William A. Eaton
Vice President
System Energy Resources Inc.
Entergy Operations, M-ECH-38
1340 Echelon Parkway
Jackson, MS 39213

Ms. Patricia L. Campbell
Morgan Lewis
1111 Pennsylvania Avenue
Washington, DC 20004

Mr. Michael D. Bourgeois
Manager, Project Management
Nuclear Business Development
Entergy Nuclear, M-ECH-683
1340 Echelon Parkway
Jackson, MS 39213

Ms. Frances G. Buford
Acting Director, Nuclear Safety Assurance
Entergy Nuclear South, M-ECH-414
1340 Echelon Parkway
Jackson, MS 39213

Mr. William K. Hughey
Sr. Manager, Business Development
Entergy Nuclear, M-ECH-683
1340 Echelon Parkway
Jackson, MS 39213

Mr. Bob Evans
Enercon Services Inc.
12850 Middlebrook Road, Suite 108
Germantown, MD 20874

Mr. George A. Williams
Site Vice President
Grand Gulf Nuclear Station
Bald Hill Road - Waterloo Road
Port Gibson, MS 39150

Federal, State and local

Attorney General
Department of Justice
State of Louisiana
P. O. Box 94005
Baton Rouge, LA 70804-9005

Attorney General
Asst. Attorney General
State of Mississippi
P. O. Box 220
Jackson, MS 39205-0220

Mr. Robert W. Goff, Program Director
Division of Radiological Health
Mississippi State Dept. of Health
P.O. Box 1700
Jackson, MS 39215-1700

Mr. Phil Bass, Director
Office of Pollution Control
Department of Environmental Quality
P.O. Box 10385
Jackson, MS 39289

Mr. Jerry Cain, Chief
Environmental Permits Division
Department of Environmental Quality
P. O. Box 10385
Jackson, MS 39289

Ms. Kathleen B. Blanco
Office of the Governor
P.O. Box 94004, State of Louisiana
Baton Rouge, LA 70804-9004

Governor Haley Barbour
Office of the Governor
P.O. Box 139, State of Mississippi
Jackson, MS 39205

Mr. Rick Foster, Director
Emergency Management for Tensas
Parish
P.O. Box 768
St. Joseph, LA 71366

Military Department
Louisiana Dept. of Homeland
Security/Emergency Preparedness
Col. Mike Brown, Asst. Director
7667 Independence Boulevard
Baton Rouge, LA 70806

GRAND GULF EARLY SITE PERMIT
SERVICE LIST

-2-

Mr. Robert R. Latham, Jr., Director
Mississippi Emergency Management
Agency
P.O. Box 4501, Fondren Station
Jackson, Mississippi 39296-4501

Mr. David Lochbaum
Union of Concerned Scientists
1707 H Street, NW
Suite 600
Washington, DC 20006-3919

Ms. Bobbie Young, Director
Claiborne County Emergency Management
Agency
P. O. Box 558
Port Gibson, MS 39150

Mr. Paul Gunter
Director of the Reactor Watchdog Project
Nuclear Information & Resource Service
1424 16th Street, NW, Suite 404
Washington, DC 20036

Mr. Lawrence A. Robertson
RAC Chair
FEMA Region IV
3003 Chamblee-Tucker Road
Atlanta, GA 30341

Mr. James Riccio
Greenpeace
702 H Street, NW, Suite 300
Washington, DC 20001

Ms. Prosanta Chowdhury, Project Leader
Louisiana Department of Environmental
Quality
Office of Environmental Compliance
Nuclear Power Plant Emergency
Preparedness
P. O. Box 4312
Baton Rouge, LA 70821-4312

Mr. Brendan Hoffman
Research Associate on Nuclear Energy
Public Citizens Critical Mass Energy
and Environmental Program
215 Pennsylvania Avenue, SE
Washington, DC 20003

Ms. Lisa Hammond
Chief, Technological Services Branch
FEMA Region VI
800 N. Loop 288
Denton, TX 76209-3606

Mr. Marvin Fertel
Senior Vice President
and Chief Nuclear Officer
Nuclear Energy Institute
Suite 400
1776 I Street, NW
Washington, DC 20006-3708

Ms. Vanessa E. Quinn, Chief
Radiological Emergency Preparedness
Section
Department of Homeland Security/FEMA
500 C Street, S.W.
Washington, D.C. 20472

Mr. Adrian Heymer
Nuclear Energy Institute
Suite 400
1776 I Street, NW
Washington, DC 20006-3708

Mr. Thomas P. Miller
U.S. Department of Energy
Headquarters - Germantown
19901 Germantown Road
Germantown, MD 20874-1290

Mr. Russell Bell
Nuclear Energy Institute
Suite 400
1776 I Street, NW
Washington, DC 20006-3708

Mr. Gary Wright, Manager
Division of Nuclear Safety
Illinois Emergency Management Agency
1035 Outer Park Drive
Springfield, IL 62704

Mr. Ernie H. Kennedy
Vice President New Plants
Nuclear Plant Projects
Westinghouse Electric Company
2000 Day Hill Road
Windsor, CT 06095-0500

Ms. Nancy Butler, Director
Harriette Person Memorial Library
606 Main St.
Port Gibson, MS 39150

GRAND GULF EARLY SITE PERMIT
SERVICE LIST

-3-

Dr. Regis A. Matzie
Senior Vice President and
Chief Technology Officer
Westinghouse Electric Company
2000 Day Hill Road
Windsor, CT 06095-0500

Mr. Glenn H. Archinoff
AECL Technologies
481 North Frederick Avenue
Suite 405
Gaithersburg, MD. 20877

Mr. Ed Wallace, General Manager
Projects
PBMR Pty LTD
PO Box 9396
Centurion 0046
Republic of South Africa

Mr. Tom Clements
6703 Guide Avenue
Takoma Park, MD 20912

Mr. Paul Leventhal
Nuclear Control Institute
1000 Connecticut Avenue, NW
Suite 410
Washington, DC 20036

Dr. Jack W. Roe
Vice President
Advanced Technologies & Laboratories
International, Inc.
20010 Century Boulevard, Suite 500
Germantown, MD 20874

Mr. Charles Brinkman
Westinghouse Electric Co.
Washington Operations
12300 Twinbrook Pkwy., Suite 330
Rockville, MD 20852

Dr. Glenn R. George
PA Consulting Group
130 Potter Street
Haddonfield, NJ 08033

Mr. Joseph D. Hegner
Lead Engineer - Licensing
Dominion Generation
Early Site Permitting Project
5000 Dominion Boulevard
Glen Allen, VA 23060

Mr. Thomas Mundy
Director, Project Development
Exelon Generation
200 Exelon Way, KSA3-N
Kennett Square, PA 19348

Mr. Jerald S. Holm
Framatome ANP, Inc.
3315 Old Forest Road
P.O. Box 10935
Lynchburg, VA 24506-0935

Ms. Kathryn Sutton, Esq.
Morgan, Lewis & Bocklus, LLP
111 Pennsylvania Avenue, NW
Washington, DC 20004

External Email

gerald.holm@framatome-anp.com
gzinke@entergy.com
eddie.grant@exeloncorp.com
gcesare@enercon.com
mwetterhahn@winston.com
whorin@winston.com