Appendix E

Comments on the Draft Environmental Impact Statement and Responses

Appendix E

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Public Comments Concerning the Draft Environmental Impact Statement

This environmental impact statement (EIS) has been prepared in response to an application submitted to the U.S. Nuclear Regulatory Commission (NRC) by System Energy Resources, Inc. (SERI) for an early site permit (ESP) (SERI 2005). The proposed action requested in SERI's application is for the NRC to (1) approve a site within the existing Grand Gulf Nuclear Station boundaries as suitable for the construction and operation of a new nuclear power generating facility, and (2) issue an ESP for the proposed site identified as the Grand Gulf ESP site co-located with the existing Grand Gulf Nuclear Station. This EIS includes the NRC staff's analysis that considers and weighs the environmental impacts of constructing and operating one or more new nuclear units at the Grand Gulf ESP site or at alternative sites, and mitigation measures available for reducing or avoiding adverse impacts. It also includes the staff's recommendation to the Commission regarding the proposed action.

As part of the NRC review of the application, the NRC solicited comments from the public on a draft of this EIS (DEIS). A 75-day comment period began on April 29, 2005, when the U.S. Environmental Protection Agency (EPA) issued a Notice of Availability (70 FR 22308) of the DEIS to allow members of the public to comment on the results of the NRC staff's review. On June 28, 2005, a public meeting was held in Port Gibson, Mississippi. At the meeting, the staff described the results of the NRC environmental review, answered questions related to the review, and provided members of the public with information to assist them in formulating their comments.

As part of the process to solicit public comments on the DEIS, the staff:

- Placed a copy of the DEIS at the Port Gibson Library
- Made the DEIS available in the NRC's Public Document Room in Rockville, Maryland
- Placed a copy of the DEIS on the NRC website at: www.nrc.gov/reading-rm/doc-collections/nuregs/staff/sr1817/index.html
- Provided a copy of the DEIS to any member of the public that requested one

- Sent copies of the DEIS to certain Federal, State, and local agencies
- Published a notice of availability of the DEIS in the *Federal Register* on April 29, 2005 (70 FR 22308)
- Filed a DEIS with EPA
- Announced and held a public meeting on June 28, 2005, in Port Gibson, Mississippi to describe the results of the environmental review, answer any related questions, and take public comments.

Approximately 150 people attended this meeting and 22 attendees provided oral comments. A certified court reporter recorded these oral comments and prepared written transcripts of the meeting. The transcripts of the public meetings are part of the public record for the proposed project and were used to establish correspondence between comments contained in this volume of the EIS to oral comments received at the public meeting. In addition to the comments received at the public meeting, the NRC received 348 letters and e-mail messages with comments. The comment period closed on July 14, 2005; however, the NRC did, to the degree permitted by the schedule, consider comments submitted after the comment period ended.

The comment letters, e-mail messages, and the transcripts of the public meeting are available from the Publicly Available Records component of NRC's Agencywide Document Access and Management System (ADAMS). ADAMS is accessible at www.nrc.gov/reading-rm/adams.html, which provides access through the NRC's Public Electronic Reading Room link. Persons who do not have access to ADAMS or who encounter problems in accessing the documents located in ADAMS, should contact the NRC's Public Document Room reference staff at 1-800-397-4209 or 301-415-4737, or by e-mail at pdr@nrc.gov. The NRC staff has reviewed each written comment and the transcript of the public meeting.

Disposition of Comments

This volume contains all of the comments abstracted from the comment letters and e-mail messages, provided to the staff during the comment period as well as the comments from the transcripts.

Each set of comments from a given commenter was given a unique alpha identifier (commenter ID letter), allowing each set of comments from a commenter to be traced back to the transcript, letter, or e-mail in which the comments were submitted. Each individual who made a statement during the public meeting or sent a letter or e-mail was given an additional alpha identifier D for comments received on the DEIS. Commenters whose e-mail message was part of a mass

mailing campaign were assigned the letters MM instead of D. Of the 348 commenters, 305 were part of the mass mailing campaign. If the comment letters received were duplicates sent by the same person but on different days, they were labeled as duplicates, and were addressed as one commenter letter. If the letters were different, each letter was addressed individually.

After the comment period, the staff considered and dispositioned all comments received. To identify each individual comment, the NRC staff reviewed the transcript of the public meeting and each letter and e-mail received related to the DEIS. As part of the review, the staff identified statements that they believed were related to the proposed action and recorded the statements as comments. Each comment was assigned to a specific subject area, and similar comments were grouped together. Finally, responses were prepared for each comment or group of comments.

For each comment, the staff determined whether a comment:

- Related to the Grand Gulf ESP and discussed a specific environmental impact
- Related to an issue considered outside the scope of this environmental review (emergency response, alternative energy sources, cost of power, need for power, operational safety, safeguards and security related to terrorism)
- Opposed or supported nuclear power
- Opposed or supported the Grand Gulf ESP
- Discussed NRC's ESP process
- Discussed the National Environmental Policy Act of 1969 (NEPA) requirements.

This appendix presents the comments and the NRC responses to them grouped by similar issues as follows:

- Major Issues and Responses
- Technical Comments Within the Scope of this EIS
- ESP Process, NEPA Compliance, Comments Supporting or Opposing the ESP
- Comments Outside the Scope of this EIS
- References

- Commenter Reference Tables.

When the comments resulted in a change in the text of the DEIS, the corresponding response refers the reader to the appropriate section of the report where the change was made. Revisions to the text from the DEIS are indicated by vertical lines beside the text. Table E.1 provides a list of commenters identified by name, affiliation (if given), comment number, and the source of the comment. Mass mailing comments are designated MM.

Many comments addressed topics and issues that are not part of the environmental review for this proposed action. These comments included questions about the NRC's safety review, general statements of support or opposition to nuclear power, observations regarding national nuclear waste management policies, comments on the NRC regulatory process in general, and comments on NRC regulations. These comments are summarized, but detailed responses to such comments are not provided because they addressed issues that do not directly relate to the environmental effects of this proposed action and are thus outside the scope of the NEPA review of this proposed action. If appropriate, these comments were forwarded to the cognizant organization within the NRC for consideration.

Many comments specifically addressed the scope of the environmental review, analyses, and issues contained in the DEIS, including comments about potential impacts, proposed mitigation, the agency review process, and the public comment period. Detailed responses to each of these comments are provided in this appendix.

Table E-1. Individuals Providing Comments on the Draft Environmental Impact Statement

Commenter ID	Commenter	Affiliation (if stated)	Comment Source and ADAMS Accession #
D-A	Amelda Arnold	Mayor	Public Meeting Transcript (ML052150003)
D-B	Ray Perryman	Jefferson County Board of Supervisors	Public Meeting Transcript (ML052150003)
D-C	David Bailey	Concerned Citizen	Public Meeting Transcript (ML052150003)
D-D	Evan Doss	Concerned Citizen	Public Meeting Transcript (ML052150003)

Table E-1. (contd)

Commenter ID	Commenter	Affiliation (if stated)	Comment Source and ADAMS Accession #
D-E	Norris McDonald	African American Environmentalist Association	Public Meeting Transcript (ML052150003)
D-F	Jim Reinsch	American Nuclear Society	Public Meeting Transcript (ML052150003)
D-G	Ruth Pullen	Concerned Citizen	Public Meeting Transcript (ML052150003)
D-H	Paul Gunter	Nuclear Information and Resource Service	Public Meeting Transcript (ML052150003)
D-I	Brendan Hoffman	Concerned Citizen	Public Meeting Transcript (ML052150003)
D-J	John Shorts	Claiborne County Board of Supervisors	Public Meeting Transcript (ML052150003)
D-K	George Williams	Concerned Citizen	Public Meeting Transcript (ML052150003)
D-L	Carolyn Shanks	Entergy Mississippi	Public Meeting Transcript (ML052150003)
D-M	Phil Seaquest	Concerned Citizen	Public Meeting Transcript (ML052150003)
D-N	Martha Ferris	Concerned Citizen	Public Meeting Transcript (ML052150003)
D-O	Robert Butler	Concerned Citizen	Public Meeting Transcript (ML052150003)
D-P	Michael Stuart	Concerned Citizen	Public Meeting Transcript (ML052150003)
D-Q	Nancy Mascarella	American Nuclear Society	Public Meeting Transcript (ML052150003)
D-R	Kelly Taylor	Concerned Citizen	Public Meeting Transcript (ML052150003)
D-S	Bill Casino	Concerned Citizen	Public Meeting Transcript (ML052150003)

Table E-1. (contd)

Commenter ID	Commenter	Affiliation (if stated)	Comment Source and ADAMS Accession #
D-T	Scott Peterson	Nuclear Energy Institute	Public Meeting Transcript (ML052150003)
D-U	Robert Gage	River Hills Bank	Public Meeting Transcript (ML052150003)
D-V	Doug Nasif	Main Street Program Port Gibson	Public Meeting Transcript (ML052150003)
D-W	E.R. Lutken	Concerned Citizen	E-Mail (ML052640240)
D-X	Greg Johnson	Concerned Citizen	E-Mail (ML052240044)
D-Y	Tom Lutken	Concerned Citizen	E-Mail (ML052240043)
D-Z	Elaine P. Koepp	Concerned Citizen	E-Mail (ML052640203)
D-AA	Linda C. Ferris	Concerned Citizen	E-Mail (ML052640222)
D-AB	Wendy King	Concerned Citizen	E-Mail (ML052640244)
D-AC	Robert W. Lincoln	Concerned Citizen	E-Mail (ML052640211)
D-AD	Glenda	Concerned Citizen	E-Mail (ML052640201)
D-AE	Pierre Catala	Concerned Citizen	E-Mail (ML052640321)
D-AF	Vicky Marshall-Beasley	Concerned Citizen	E-Mail (ML052640342)
D-AG	Paulette Swartzfager	Concerned Citizen	E-Mail (ML052640270)
D-AH	Stephen R. Spencer	Department of Interior	E-Mail (ML052560502)
D-AI	Wendy King	Concerned Citizen	E-Mail (ML052640274)
D-AJ	M.thibodeaux@att.net	Concerned Citizen	E-Mail (ML052560609)
D-AK	Thomas M. Pullen, Jr.	Concerned Citizen	E-Mail (ML052560513)
D-AL	M.thibodeaux@att.net	Concerned Citizen	E-Mail (ML052560477)
D-AM	Joseph P. Malherek	Public Citizen	E-Mail (ML052560498)
D-AN	Ruth Pullen	Concerned Citizen	E-Mail (ML052560508)
D-AO	Jan Hillegas	Concerned Citizen	E-Mail (ML052640286)
D-AP	George Zinke	SERI	E-Mail (ML052560489)

Table E-1. (contd)

Commenter ID	Commenter	Affiliation (if stated)	Comment Source and ADAMS Accession #
D-AQ	Alexander C. Martin	Concerned Citizen	Fax (ML052560495)
D-AR	Paul Gunter	Nuclear Information and Resource Service	E-Mail (ML052560485)
D-AS	Terry Carter	Concerned Citizen	Letter (ML052220350)
D-AT	Joseph J. Mangano	Radiation and Public Health Project	Letter (ML051960026)
D-AU	Ray Perryman	Supervisor, District 5, Jefferson County	Letter (ML052130102)
D-AV	Evan Doss	Concerned Citizen	Letter (ML052130102)
D-AW	Norris McDonald	African American Environmentalist Association	Letter (ML052130102)
D-AX	Scott Peterson	Nuclear Energy Institute	Letter (ML052130102)
D-AY	Shelley Ferris	Concerned Citizen	Letter (ML052090155)
D-AZ	Heinz J. Mueller	EPA	Letter (ML052090157)
D-BA	Brendan Hoffman	Public Citizen	E-Mail (ML052560498)
D-BB	Joetta Venneman	Concerned Citizen	E-Mail (ML052640325)
D-BC	Brian Carey	Concerned Citizen	E-Mail (ML052640317)
D-BD	Jim and Virginia Wagner	Concerned Citizen	E-Mail (ML052640228)
D-BE	Lanny Stricherz	Concerned Citizen	E-Mail (ML052640235)
D-BF	Elaine Trogman	Concerned Citizen	E-Mail (ML052640328)
D-BG	Don Richardson	Concerned Citizen	E-Mail (ML052640332)
D-BH	T. K. McCranie	Concerned Citizen	E-Mail (ML052640339)
D-BI	Melanie Cordell	Concerned Citizen	E-Mail (ML052640346)
D-BJ	Irene Euchler	Concerned Citizen	E-Mail (ML052640350)
D-BK	Carol Campbell	Concerned Citizen	E-Mail (ML052640278)
D-BL	Aviv Goldsmith	Concerned Citizen	E-Mail (ML052640280)

Table E-1. (contd)

Commenter ID	Commenter	Affiliation (if stated)	Comment Source and ADAMS Accession #
D-BM	Sharon Lobert	Concerned Citizen	E-Mail (ML052640287)
MM-1	Robert Lassiter and Family	Concerned Citizen	E-Mail (ML052510092)
MM-2	Jeremy Schneider	Concerned Citizen	E-Mail (ML052510092)
MM-3	Laura Juozunas	Concerned Citizen	E-Mail (ML052510092)
MM-4	Paul Dallaire	Concerned Citizen	E-Mail (ML052510092)
MM-5	Ben Demar	Concerned Citizen	E-Mail (ML052510092)
MM-6	Mark Kendall	Concerned Citizen	E-Mail (ML052510092)
MM-7	Michael McGillivray	Concerned Citizen	E-Mail (ML052510092)
MM-8	Adam Eggleston	Concerned Citizen	E-Mail (ML052510092)
MM-9	Sandra Blackburn	Concerned Citizen	E-Mail (ML052510092)
MM-10	Jennifer M Weishaar	Concerned Citizen	E-Mail (ML052510092)
MM-11	Paula Beneke	Concerned Citizen	E-Mail (ML052510092)
MM-12	Jimmie Smith	Concerned Citizen	E-Mail (ML052510092)
MM-13	Robert Schultz	Concerned Citizen	E-Mail (ML052510092)
MM-14	Scott Edmonson	Concerned Citizen	E-Mail (ML052510092)
MM-15	Rael Nidess	Concerned Citizen	E-Mail (ML052510092)
MM-16	Rachel Wolf	Concerned Citizen	E-Mail (ML052510092)
MM-17	Timothy Wampler	Concerned Citizen	E-Mail (ML052510092)
MM-18	Lecia Ferguson	Concerned Citizen	E-Mail (ML052510092)
MM-19	Tim Hibbs	Concerned Citizen	E-Mail (ML052510092)
MM-20	Gilbert Eidam	Concerned Citizen	E-Mail (ML052510092)
MM-21	Dirk Johnson	Concerned Citizen	E-Mail (ML052510092)
MM-22	Mark Reback	Concerned Citizen	E-Mail (ML052510092)
MM-23	George Robinson	Concerned Citizen	E-Mail (ML052510092)
MM-24	Audrey Burns	Concerned Citizen	E-Mail (ML052510092)

Table E-1. (contd)

Commenter ID	Commenter	Affiliation (if stated)	Comment Source and ADAMS Accession #
MM-25	Jacob Lyons	Concerned Citizen	E-Mail (ML052510092)
MM-26	Andrew Neuhauser	Concerned Citizen	E-Mail (ML052510092)
MM-27	William N. Howald	Concerned Citizen	E-Mail (ML052510092)
MM-28	Michael Otto	Concerned Citizen	E-Mail (ML052510092)
MM-29	Jim Hunt	Concerned Citizen	E-Mail (ML052510092)
MM-30	Albert Valencia	Concerned Citizen	E-Mail (ML052510092)
MM-31	Dorrine Marshall	Concerned Citizen	E-Mail (ML052510092)
MM-32	Celia Santowski	Concerned Citizen	E-Mail (ML052510092)
MM-33	Kaj Dorstenia	Concerned Citizen	E-Mail (ML052510092)
MM-34	Frances Lynch	Concerned Citizen	E-Mail (ML052510092)
MM-35	George Davis	Concerned Citizen	E-Mail (ML052510092)
MM-36	Loree Rager	Concerned Citizen	E-Mail (ML052510092)
MM-37	Mario Rivera	Concerned Citizen	E-Mail (ML052510092)
MM-38	Rick LeBeau	Concerned Citizen	E-Mail (ML052510092)
MM-39	Sandra Batey	Concerned Citizen	E-Mail (ML052510092)
MM-40	Gene Burke	Concerned Citizen	E-Mail (ML052510092)
MM-41	Vicky Monroe	Concerned Citizen	E-Mail (ML052510092)
MM-42	John Kohler	Concerned Citizen	E-Mail (ML052510092)
MM-43	Larry Smith	Concerned Citizen	E-Mail (ML052510092)
MM-44	Betty Combs	Concerned Citizen	E-Mail (ML052510092)
MM-45	Jane Shelly	Concerned Citizen	E-Mail (ML052510092)
MM-46	Vernon Whitney	Concerned Citizen	E-Mail (ML052510092)
MM-47	Joe Salazar	Concerned Citizen	E-Mail (ML052510092)
MM-48	Rev. A. A. Patrick	Concerned Citizen	E-Mail (ML052510092)
MM-49	Nancy S. Lovejoy	Concerned Citizen	E-Mail (ML052510092)

Table E-1. (contd)

Commenter ID	Commenter	Affiliation (if stated)	Comment Source and ADAMS Accession #
MM-50	Charles Wieland	Concerned Citizen	E-Mail (ML052510092)
MM-51	Al Buono	Concerned Citizen	E-Mail (ML052510092)
MM-52	Len Carella	Concerned Citizen	E-Mail (ML052510092)
MM-53	Dewey Keeton III	Concerned Citizen	E-Mail (ML052510092)
MM-54	Jeffrey Schultz	Concerned Citizen	E-Mail (ML052510092)
MM-55	Jeff Grayson Miller	Concerned Citizen	E-Mail (ML052510092)
MM-56	William E. Kowatch	Concerned Citizen	E-Mail (ML052510092)
MM-57	Mary Levendos	Concerned Citizen	E-Mail (ML052510092)
MM-58	Matthew McClure	Concerned Citizen	E-Mail (ML052510092)
MM-59	Chrisropher Henry	Concerned Citizen	E-Mail (ML052510092)
MM-60	Leonard & Eleanor Johnson	Concerned Citizen	E-Mail (ML052510092)
MM-61	Dian Demmer	Concerned Citizen	E-Mail (ML052510092)
MM-62	Jim Eldon	Concerned Citizen	E-Mail (ML052510092)
MM-63	Ron Rattner	Concerned Citizen	E-Mail (ML052510092)
MM-64	John Payne	Concerned Citizen	E-Mail (ML052510092)
MM-65	Brent Barnes	Concerned Citizen	E-Mail (ML052510092)
MM-66	Judy Meeker	Concerned Citizen	E-Mail (ML052510092)
MM-67	Daniel Robbins	Concerned Citizen	E-Mail (ML052510092)
MM-68	Phillip Rockey	Concerned Citizen	E-Mail (ML052510092)
MM-69	Darlene Swanson	Concerned Citizen	E-Mail (ML052510092)
MM-70	Delight Matthews	Concerned Citizen	E-Mail (ML052510092)
MM-71	Sarahjane Geraldi	Concerned Citizen	E-Mail (ML052510092)
MM-72	Seth Shulman	Concerned Citizen	E-Mail (ML052510092)
MM-73	Robert Rutkowski	Concerned Citizen	E-Mail (ML052510092)
MM-74	Okolo Thomas	Concerned Citizen	E-Mail (ML052510092)

Table E-1. (contd)

Commenter ID	Commenter	Affiliation (if stated)	Comment Source and ADAMS Accession #
MM-75	Rachel Sythe	Concerned Citizen	E-Mail (ML052510092)
MM-76	Jack Runnels	Concerned Citizen	E-Mail (ML052510092)
MM-77	Kilolo Thomas	Concerned Citizen	E-Mail (ML052510092)
MM-78	Ann Thomas	Concerned Citizen	E-Mail (ML052510092)
MM-80	Jeanne Wilhelm	Concerned Citizen	E-Mail (ML052510092)
MM-81	Todd Walker	Concerned Citizen	E-Mail (ML052510092)
MM-82	Lori Albee	Concerned Citizen	E-Mail (ML052510092)
MM-83	Rev. Gordon Hills	Concerned Citizen	E-Mail (ML052510092)
MM-84	Susan Emge Milliner	Concerned Citizen	E-Mail (ML052510092)
MM-85	Rita Yribar	Concerned Citizen	E-Mail (ML052510092)
MM-86	Margerite Gamboa	Concerned Citizen	E-Mail (ML052510092)
MM-87	Robert Pancner	Concerned Citizen	E-Mail (ML052510092)
MM-88	Heidi Smith	Concerned Citizen	E-Mail (ML052510092)
MM-89	Clay Caldwell	Concerned Citizen	E-Mail (ML052510092)
MM-90	Geraldine Dimondstein	Concerned Citizen	E-Mail (ML052510092)
MM-91	Gregory Nerode	Concerned Citizen	E-Mail (ML052510092)
MM-92	Steve Latsch	Concerned Citizen	E-Mail (ML052510092)
MM-93	James Scurrah	Concerned Citizen	E-Mail (ML052510092)
MM-94	David Turnoy	Concerned Citizen	E-Mail (ML052510092)
MM-95	Leslie Dack	Concerned Citizen	E-Mail (ML052510092)
MM-96	Alice Slater	Concerned Citizen	E-Mail (ML052510092)
MM-97	Timothy Stebler	Concerned Citizen	E-Mail (ML052510092)
MM-98	John Bromer	Concerned Citizen	E-Mail (ML052510092)
MM-99	Dan Ingall	Concerned Citizen	Letter (ML052090159)
MM-100	Don Cramer	Concerned Citizen	E-Mail (ML052510092)

Table E-1. (contd)

Commenter ID	Commenter	Affiliation (if stated)	Comment Source and ADAMS Accession #
MM-101	John Barfield	Concerned Citizen	E-Mail (ML052510092)
MM-102	William Rouse	Concerned Citizen	E-Mail (ML052510092)
MM-103	Micahel Cavanaugh	Concerned Citizen	E-Mail (ML052510092)
MM-104	Charles Alvarez	Concerned Citizen	E-Mail (ML052510092)
MM-105	John F. Galbraith Jr.	Concerned Citizen	E-Mail (ML052510092)
MM-106	Anoushka Habibi	Concerned Citizen	E-Mail (ML052510092)
MM-107	Sherry Redd	Concerned Citizen	E-Mail (ML052510092)
MM-108	Russ Dunham	Concerned Citizen	E-Mail (ML052510092)
MM-110	Christopher Toon	Concerned Citizen	E-Mail (ML052510092)
MM-111	Paula Bogle	Concerned Citizen	E-Mail (ML0525510092)
MM-112	John & Ann Wright	Concerned Citizen	E-Mail (ML0525510092)
MM-113	Peter Schumacher	Concerned Citizen	E-Mail (ML0525510092)
MM-114	Janet Larson	Concerned Citizen	E-Mail (ML0525510092)
MM-115	Brenda Bundy	Concerned Citizen	E-Mail (ML0525510092)
MM-116	R Palm	Concerned Citizen	E-Mail (ML0525510092)
MM-117	Derek Olfky	Concerned Citizen	E-Mail (ML0525510092)
MM-118	Dolores Tippett	Concerned Citizen	E-Mail (ML0525510092)
MM-119	Patricia McMonagle	Concerned Citizen	E-Mail (ML0525510092)
MM-120	Steve Bonzai	Concerned Citizen	E-Mail (ML0525510092)
MM-121	Gary Tenio	Concerned Citizen	E-Mail (ML0525510092)
MM-122	Christine Siever	Concerned Citizen	E-Mail (ML0525510092)
MM-124	Richard George	Concerned Citizen	E-Mail (ML052510092)
MM-125	Janet Hutto	Concerned Citizen	E-Mail (ML052510092)
MM-126	Lois Thompson	Concerned Citizen	E-Mail (ML052510092)
MM-127	A. Hembree	Concerned Citizen	E-Mail (ML052510092)

Table E-1. (contd)

Commenter ID	Commenter	Affiliation (if stated)	Comment Source and ADAMS Accession #
MM-128	David H. Jones	Concerned Citizen	E-Mail (ML052510092)
MM-129	Thomas Connor	Concerned Citizen	E-Mail (ML052510092)
MM-130	Debbie Giniewicz	Concerned Citizen	E-Mail (ML052510092)
MM-131	Thomas Shodron	Concerned Citizen	E-Mail (ML052510092)
MM-132	Minelle Paloff	Concerned Citizen	E-Mail (ML052510092)
MM-135	Sara McCay &Thomas Noone	Concerned Citizen	E-Mail (ML052510092)
MM-136	Timothy Johnston	Concerned Citizen	E-Mail (ML052510092)
MM-137	Elizabeth Mozer	Concerned Citizen	E-Mail (ML052510092)
MM-138	Tracy Weatherby	Concerned Citizen	E-Mail (ML052510092)
MM-139	Judy Alter	Concerned Citizen	E-Mail (ML052510092)
MM-140	John Paul Coakley	Concerned Citizen	E-Mail (ML052510092)
MM-141	Lyn Darnall	Concerned Citizen	E-Mail (ML052510092)
MM-142	L. Young	Concerned Citizen	E-Mail (ML052510092)
MM-143	Jane Affonso	Concerned Citizen	E-Mail (ML052510092)
MM-144	Joel Isaacson	Concerned Citizen	E-Mail (ML052510092)
MM-145	Darwin Aronoff	Concerned Citizen	E-Mail (ML052510092)
MM-146	Stan Sameshima	Concerned Citizen	E-Mail (ML052510092)
MM-147	John Davis	Concerned Citizen	E-Mail (ML052510092)
MM-148	Lisa Brenneisen	Concerned Citizen	E-Mail (ML052510092)
MM-149	Constance Kosuda	Concerned Citizen	E-Mail (ML052510092)
MM-150	William P. Ellsworth - DAV	Concerned Citizen	E-Mail (ML052510092)
MM-151	Kristen Gottuso	Concerned Citizen	E-Mail (ML052510092)
MM-152	Sherryl Genone	Concerned Citizen	E-Mail (ML052510092)
MM-153	Betty Gibson	Concerned Citizen	E-Mail (ML052510092)
MM-154	Diana Bookbinder	Concerned Citizen	E-Mail (ML052510092)

Table E-1. (contd)

Commenter ID	Commenter	Affiliation (if stated)	Comment Source and ADAMS Accession #
MM-155	D.A. Wagner	Concerned Citizen	E-Mail (ML052510092)
MM-156	Tammie Haugen	Concerned Citizen	E-Mail (ML052510092)
MM-157	Charlotte Thomas	Concerned Citizen	E-Mail (ML052510092)
MM-158	Don Smith	Concerned Citizen	E-Mail (ML052510092)
MM-159	Stefan Athanasiadis	Concerned Citizen	E-Mail (ML052510092)
MM-160	Kirk Atton	Concerned Citizen	E-Mail (ML052510092)
MM-161	Robert S. Lynch	Concerned Citizen	E-Mail (ML052510092)
MM-162	Bob Sutter	Concerned Citizen	E-Mail (ML052510092)
MM-164	Barbara Henderson	Concerned Citizen	E-Mail (ML052510092)
MM-165	Kathleen Sgamma	Concerned Citizen	E-Mail (ML052510092)
MM-166	Carl Abrahamson	Concerned Citizen	E-Mail (ML052510092)
MM-167	Christine Wilson	Concerned Citizen	E-Mail (ML052560477)
MM-168	Harry Baltzer	Concerned Citizen	E-Mail (ML052510092)
MM-169	Katherine Jenkins-Murphy	Concerned Citizen	E-Mail (ML052510092)
MM-170	Christine Roane	Concerned Citizen	E-Mail (ML052510092)
MM-171	Linda Howe	Concerned Citizen	E-Mail (ML052510092)
MM-172	Ava Thiesen	Concerned Citizen	E-Mail (ML052510092)
MM-173	Elizabeth Sauer	Concerned Citizen	E-Mail (ML052510092)
MM-174	Elizabeth Hammond-Pettis	Concerned Citizen	E-Mail (ML052510092)
MM-175	David A. Dorch	Concerned Citizen	E-Mail (ML052510092)
MM-176	Thomas English	Concerned Citizen	E-Mail (ML052510092)
MM-177	Dot Sulock	Concerned Citizen	E-Mail (ML052510092)
MM-178	Ryan Camp	Concerned Citizen	E-Mail (ML052510092)
MM-179	Sholey Argani	Concerned Citizen	E-Mail (ML052510092)
MM-180	Hoi Heldt	Concerned Citizen	E-Mail (ML052510092)

Table E-1. (contd)

Commenter ID	Commenter	Affiliation (if stated)	Comment Source and ADAMS Accession #
MM-181	John Riddell	Concerned Citizen	E-Mail (ML052510092)
MM-182	Dan Magee	Concerned Citizen	E-Mail (ML052510092)
MM-183	Ellen Pearce	Concerned Citizen	E-Mail (ML052510092)
MM-184	Arthur Holmgren	Concerned Citizen	E-Mail (ML052510092)
MM-185	Deborah Burns	Concerned Citizen	E-Mail (ML052510092)
MM-186	Kathleen Morris	Concerned Citizen	E-Mail (ML052510092)
MM-188	Charlie Hogue	Concerned Citizen	E-Mail (ML052510092)
MM-189	Kimberly Blum	Concerned Citizen	E-Mail (ML052510092)
MM-190	Sister Mary Fran Gebhard	Concerned Citizen	E-Mail (ML052510092)
MM-191	Richard Berghofer	Concerned Citizen	E-Mail (ML052510092)
MM-192	John Custer	Concerned Citizen	E-Mail (ML052510092)
MM-193	Chris Skoglund	Concerned Citizen	E-Mail (ML052510092)
MM-194	Ravi Grover	Concerned Citizen	E-Mail (ML052510092)
MM-195	Jesse Dye	Concerned Citizen	E-Mail (ML052510092)
MM-196	Sandra Cutter	Concerned Citizen	E-Mail (ML052510092)
MM-197	Richard Parmett	Concerned Citizen	E-Mail (ML052510092)
MM-198	Sheila Dixon	Concerned Citizen	E-Mail (ML052510092)
MM-199	Robin Kory	Concerned Citizen	E-Mail (ML052510092)
MM-200	Ginny and Bob Freeman	Concerned Citizen	E-Mail (ML052510092)
MM-201	Mary Celeste Reese	Concerned Citizen	E-Mail (ML052560477)
MM-202	Ron Peterson	Concerned Citizen	E-Mail (ML052560477)
MM-203	Mark Feldman	Concerned Citizen	E-Mail (ML052560477)
MM-204	Esther Davis	Concerned Citizen	E-Mail (ML052510092)
MM-205	Charles Connors	Concerned Citizen	E-Mail (ML052560477)
MM-206	Clyde R. Chamberlain	Concerned Citizen	E-Mail (ML052560477)

Table E-1. (contd)

Commenter ID	Commenter	Affiliation (if stated)	Comment Source and ADAMS Accession #
MM-207	Jessica Shupe	Concerned Citizen	E-Mail (ML052560477)
MM-209	Judy Allen	Concerned Citizen	E-Mail (ML052560477)
MM-210	Megan Ahearn	Concerned Citizen	E-Mail (ML052560477)
MM-211	Nick Mastro	Concerned Citizen	E-Mail (ML052560477)
MM-212	Jaime Rodriguez	Concerned Citizen	E-Mail (ML052560477)
MM-213	Mailie La Zarr	Concerned Citizen	E-Mail (ML052560477)
MM-214	Bruce Jenkins	Concerned Citizen	E-Mail (ML052560477)
MM-215	Linda Kirk	Concerned Citizen	E-Mail (ML052560477)
MM-216	Jason Slipp	Concerned Citizen	E-Mail (ML052560477)
MM-217	Michele Zalopany	Concerned Citizen	E-Mail (ML052560477)
MM-218	Harvey Schaktman	Concerned Citizen	E-Mail (ML052560477)
MM-219	Don Mutchler	Concerned Citizen	E-Mail (ML052560477)
MM-220	Erin James	Concerned Citizen	E-Mail (ML052560477)
MM-221	William T. Smith	Concerned Citizen	E-Mail (ML052560477)
MM-222	Jason Straub	Concerned Citizen	E-Mail (ML052560477)
MM-223	Linda Speel	Concerned Citizen	E-Mail (ML052560477)
MM-224	Joseph Dangelo	Concerned Citizen	E-Mail (ML052560477)
MM-225	Jane Childers	Concerned Citizen	E-Mail (ML052560477)
MM-226	Nici Edwards	Concerned Citizen	E-Mail (ML052560477)
MM-227	Sabrina Choi	Concerned Citizen	E-Mail (ML052560477)
MM-228	Edward Schaechtel	Concerned Citizen	E-Mail (ML052560477)
MM-229	Cliff Staebler	Concerned Citizen	E-Mail (ML052560477)
MM-230	Azel Beckner	Concerned Citizen	E-Mail (ML052560477)
MM-231	Jennifer Worrell	Concerned Citizen	E-Mail (ML052560477)
MM-232	Paul Stein	Concerned Citizen	E-Mail (ML052560477)

Table E-1. (contd)

Commenter ID	Commenter	Affiliation (if stated)	Comment Source and ADAMS Accession #
MM-233	Country Maron	Concerned Citizen	E-Mail (ML052560477)
MM-234	Mha Atma S Khalsa	Concerned Citizen	E-Mail (ML052560477)
MM-235	Kent Minault	Concerned Citizen	E-Mail (ML052560477)
MM-236	Vera Cousins	Concerned Citizen	E-Mail (ML052560477)
MM-237	Linda Ferris	Concerned Citizen	E-Mail (ML052560477)
MM-238	Sue Lundin	Concerned Citizen	E-Mail (ML052560477)
MM-240	Sarah Lanzman	Concerned Citizen	E-Mail (ML052560477)
MM-241	Catherine Marciniak	Concerned Citizen	E-Mail (ML052560477)
MM-242	Arthur Dronzkowski	Concerned Citizen	E-Mail (ML052560477)
MM-243	Aurora Hunter	Concerned Citizen	E-Mail (ML052560477)
MM-244	Cheryl Hines-Dronzkowski	Concerned Citizen	E-Mail (ML052560477)
MM-245	Nicholle Wedding	Concerned Citizen	E-Mail (ML052560477)
MM-246	Misha Fredericks	Concerned Citizen	E-Mail (ML052560477)
MM-247	Bruce Arkwright, Jr.	Concerned Citizen	E-Mail (ML052560477)
MM-248	John W Winningham	Concerned Citizen	E-Mail (ML052560477)
MM-249	Colette Wedding	Concerned Citizen	E-Mail (ML052560477)
MM-250	Eileen Chieco	Concerned Citizen	E-Mail (ML052560477)
MM-251	Pat Dressler	Concerned Citizen	E-Mail (ML052510092)
MM-252	Justin Bernstein	Concerned Citizen	E-Mail (ML052560477)
MM-253	Danielle Cantin	Concerned Citizen	E-Mail (ML052560477)
MM-254	S. H.	Concerned Citizen	E-Mail (ML052560477)
MM-255	John Lischalk	Concerned Citizen	E-Mail (ML052560477)
MM-256	Robert Critser	Concerned Citizen	E-Mail (ML052560477)
MM-257	Mike Ewall	Concerned Citizen	E-Mail (ML052560477)
MM-258	Paxus Calta	Concerned Citizen	E-Mail (ML052560477)

Table E-1. (contd)

Commenter ID	Commenter	Affiliation (if stated)	Comment Source and ADAMS Accession #
MM-259	Shelly Stern	Concerned Citizen	E-Mail (ML052560477)
MM-260	S.M. Dixon	Concerned Citizen	E-Mail (ML052560477)
MM-261	Rashid El Amin	Concerned Citizen	E-Mail (ML052560477)
MM-263	Sharon Kansas	Concerned Citizen	E-Mail (ML052560477)
MM-264	Kathy Galligan	Concerned Citizen	E-Mail (ML052560477)
MM-265	Renata Dobryn	Concerned Citizen	E-Mail (ML052560477)
MM-266	Mary Perner	Concerned Citizen	E-Mail (ML052560477)
MM-267	James Causey	Concerned Citizen	E-Mail (ML052560477)
MM-268	Marilyn Spivey	Concerned Citizen	E-Mail (ML052560477)
MM-269	Charlie Brenner	Concerned Citizen	E-Mail (ML052560477)
MM-271	Robert Harrison	Concerned Citizen	E-Mail (ML052560477)
MM-272	Patricia Aguirre	Concerned Citizen	E-Mail (ML052560477)
MM-273	Ellen Jamieson	Concerned Citizen	E-Mail (ML052560477)
MM-274	Stephen Jacobs	Concerned Citizen	E-Mail (ML052560477)
MM-275	Merry McLoryd	Concerned Citizen	E-Mail (ML052560477)
MM-276	Robert Wilson	Concerned Citizen	E-Mail (ML052560477)
MM-277	Martha Ferris	Concerned Citizen	E-Mail (ML052560477)
MM-278	Noreen Kenny	Concerned Citizen	E-Mail (ML052560477)
MM-279	Sylvia Goldberg	Concerned Citizen	E-Mail (ML052560477)
MM-280	Seamus Allman	Concerned Citizen	E-Mail (ML052560477)
MM-281	Richard Gilman	Concerned Citizen	E-Mail (ML052560477)
MM-282	Connie Schuett	Concerned Citizen	E-Mail (ML052560477)
MM-283	Sandra Lindberg	Concerned Citizen	E-Mail (ML052560477)
MM-285	Mary Lewis	Concerned Citizen	E-Mail (ML052560477)
MM-286	Angela McComb	Concerned Citizen	E-Mail (ML052560477)

Table E-1. (contd)

Commenter ID	Commenter	Affiliation (if stated)	Comment Source and ADAMS Accession #
MM-287	Kirk Butler	Concerned Citizen	E-Mail (ML052560477)
MM-288	Brian Lutenegger	Concerned Citizen	E-Mail (ML052560477)
MM-289	Judi Misale	Concerned Citizen	E-Mail (ML052560477)
MM-290	Gregory Nerode	Concerned Citizen	E-Mail (ML052560477)
MM-291	Sharon Kansas	Concerned Citizen	E-Mail (ML052560477)
MM-292	Christine Roane	Concerned Citizen	E-Mail (ML052560477)
MM-293	William N. Howald	Concerned Citizen	E-Mail (ML052560477)
MM-294	David Sagers	Concerned Citizen	E-Mail (ML052560477)
MM-295	Brigitte Leciejewski	Concerned Citizen	E-Mail (ML052560477)
MM-296	Linda Ferris	Concerned Citizen	E-Mail (ML052560477)
MM-297	Karen Mitchell	Concerned Citizen	E-Mail (ML052560477)
MM-298	Sharon Callahan	Concerned Citizen	E-Mail (ML052560477)
MM-299	Kenyon Karl	Concerned Citizen	E-Mail (ML052560477)
MM-300	Thomas Markham	Concerned Citizen	E-Mail (ML052560477)
MM-301	Robert Hardee	Concerned Citizen	E-Mail (ML052560477)
MM-302	Georgia M. Pawlowski	Concerned Citizen	E-Mail (ML052560477)
MM-303	Jacob Lyons	Concerned Citizen	E-Mail (ML052560477)
MM-304	Dean Foss	Concerned Citizen	E-Mail (ML052560477)
MM-305	Joe Wright	Concerned Citizen	E-Mail (ML052560477)
MM-306	Jacqueline Luck	Concerned Citizen	E-Mail (ML052560477)
MM-307	Katherine Jenkins-Murphy	Concerned Citizen	E-Mail (ML052560477)
MM-308	Betty Gibson	Concerned Citizen	E-Mail (ML052560477)
MM-309	Amy Harlib	Concerned Citizen	E-Mail (ML052560477)
MM-310	Jane Shelly	Concerned Citizen	E-Mail (ML052560477)
MM-311	D.Jackie Handel	Concerned Citizen	E-Mail (ML052640294)

Table E-1. (contd)

Commenter ID	Commenter	Affiliation (if stated)	Comment Source and ADAMS Accession #
MM-312	Sandra Batey	Concerned Citizen	E-Mail (ML052560477)
MM-313	Nici Edwards	Concerned Citizen	E-Mail (ML052560477)
MM-314	Christopher Toon	Concerned Citizen	E-Mail (ML052640291)
MM-315	JoAnn Witt	Concerned Citizen	E-Mail (ML052560477)
MM-316	Ruth Ann Dunn	Concerned Citizen	E-Mail (ML052560477)
MM-317	Julia Burnette	Concerned Citizen	E-Mail (ML052560477)

Comments and Responses

Table E-2 presents the categories in which the comments were grouped and the commenters having comments in that category.

The comments that are considered in the evaluation of the environmental impact in this EIS are summarized in the following pages. Parenthetical notations after each comment refer to the commenter's ID letters and the comment number. Comments can be tracked to the commenter and the source document through the ID letter and comment number listed in Table E-1.

Table E-2. Comments Grouped by Comment Category

Comment Category	Commenter ID
Aging Management	AC, AT
Air Quality	E
Alternatives and Alternative Sites	A, AB, AC, AF, AG, AJ, AM, AN, BB, BD, BF, BG, BH, BJ, BL, C, G, I, P, W, Y, MM
Concerns Related to the ESP process	AM, AN, AO, AS
Cost of Power	AC, I, M
Cultural Resources	AZ
Cumulative Impacts	AP, AZ

Table E-2. (contd)

Comment Category	Commenter ID
Ecology	AH, AM, AP, AZ
Editorial	AP, AZ
Emergency Preparedness	AN, AO, AU, AY, AZ, B, N, W, X, Y
Energy Generation Ownership	AD
Environmental Justice	AM, AN, AO, AR, AT, AV, AW, AZ, BB, BD, BF, BG, BH, BI, BJ, BK, BL, D, E, G, H, X, MM
Groundwater Quality	AZ
Human Health - Nonradiological Impacts	AM
Human Health – Radiological Impacts	AA, AM, AP, AR, AS, AT, AZ, N
Land Use	AR
Need for Power	AM, BF
NEPA Compliance	AM, AN, AP, AZ
Opposition to NRC's ESP Process	AE, AI, AK, AN, AQ, AR, AS, BL, G, H, I
Opposition to Nuclear Power	AK
Opposition to the Licensee or Licensee's Application	AA, AB, AC, AF, AG, AI, AJ, AK, AL, AM, AQ, AR, AV, AY, BA, BB, BC, BD, BE, BF, BG, BH, BI, BJ, BK, BL, BM, N, O, W, X, Y, Z, MM
Postulated Accidents	AF, AM, AN, AZ, BJ, X
Safeguards and Security	AC, AI, AK, AM, AN, BB, BC, BD, BG, BH, BI, BJ, BL, BM, I, R, W, MM
Safety Review for ESP	AN, AO
Socioeconomics	AM, AQ, AR, AS, AV, AW, AZ, H, BB, BD, BG, BH, BI, BJ, BL, BM, D, MM
Support for NRC's ESP Process	AX, C, K, Q, T
Support for the Licensee or Licensee's Application	AU, AW, AX, A, B, E, F, J, L, M, R, S, T, U, V
Surface Water Use and Quality	AF, AH, AM, AZ
Threatened or Endangered Species	AH, AP
Uranium Fuel Cycle and Waste Management	AA, AC, AF, AJ, AK, AM, AN, AP, AR, AZ, BB, BC, BD, BE, BF, BG, BH, BI, BJ, BK, BL, H, N, P, S, W, X, Y, MM

Subject: Aging Management

Comment: The Grand Gulf reactor first achieved criticality - and produced radioactive fission products - on August 18, 1982, and many mechanical parts of the reactor are aging. (AT-7)

Response: *The current application is for an early site permit for a postulated new reactor. It does not contain detailed design information and is not directly related to the existing reactor at the Grand Gulf site. Therefore, consideration of reactor aging is outside of the scope of this environmental impact statement. This comment did not result in a change to the environmental impact statement.*

Comment: Reactors in the U.S. are also deteriorating with age and inadequate oversight by the Nuclear Regulatory Commission provides further reason for concern. Just three years ago, for example, a nuclear reactor in Ohio came within one-fifth of an inch of stainless steel from a rupture that would have vented radioactive steam into the reactor's containment building and could have led to a meltdown. (AC-6)

Response: *The current application is for an early site permit for a postulated new reactor. It does not contain detailed design information and is not directly related to the existing reactor at the Grand Gulf site. Therefore, consideration of reactor aging is outside the scope of this environmental impact statement. This comment did not result in a change to the environmental impact statement.*

Comment: Since 1999, Grand Gulf has operated 96% of the time (capacity factor), up from 83%/6-in previous years, even though the reactor is aging. (AT-9)

Response: *The current application is for an early site permit for a postulated new reactor. It does not contain detailed design information and is not directly related to the existing reactor at the Grand Gulf site. Therefore, consideration of reactor capacity factors and aging is outside of the scope of this environmental impact statement. This comment did not result in a change to the environmental impact statement.*

Subject: Air Quality

Comment: Two quick points, one is air pollution that was mentioned in the report. It says that this is an attainment area, and maybe that's according to EPA standards. I would hope that NRC would review that because I saw the air today. And maybe they should consider the African American Environmentalist Association standards, and that is, if you can see the air, it's not good to breathe. I could see the air today, so you might want to consider using our standard. (E-2)

Response: *This comment provides no new information for additional analysis. This comment did not result in a change to the environmental impact statement.*

Subject: Alternatives and Alternative Sites

Comment: You also need to look at all the alternative energy sources. For example, in the examination of alternative energy, they discussed solar, and I talked about setting up a solar array at Grand Gulf. (G-5)

Response: *Alternative energy sources are discussed in Section 8.2 of the environmental impact statement. Solar power is discussed in Section 8.2.3.3 of the environmental impact statement. This comment did not result in a change to the environmental impact statement.*

Comment: Alternative Energy Sources: Regarding these NEPA requirements, of particular concern to Public Citizen is the deficient consideration of renewable energy sources in the draft EIS, which the staff considers to be unreasonable (§ 8.2.3). While the evaluation does consider renewable energy sources as an alternative, it does not give a fair and thorough review of the potential of clean, sustainable energy, and it relies partly on evaluations performed by SERI (see EIS, § 8.2.3). The evaluation of alternatives to the proposed action in the EIS fails to achieve the requirements of 40 CFR 1502.14, which compels agencies, inter alia, to "devote substantial treatment to each alternative considered in detail." While the draft EIS gives fair attention to alternative sites for a new reactor, it gives only scant attention to renewable energy alternatives. The draft EIS overstates the impacts of clean energy alternatives and understates the impacts of nuclear power, wrongly concluding renewable energy sources would not be superior to a new nuclear unit at the GGNS "from an environmental perspective" (EIS, § 8.2.5). In particular, the draft EIS improperly evaluates the energy potential of wind and solar as alternatives to new nuclear units at the GGNS by restricting the geographic area in which those sources are contemplated to the immediate region around the GGNS. But SERI intends to operate its new nuclear plant as a merchant facility, meaning that the electricity that it would produce would be sold into the competitive marketplace and often exported from the immediate region to wherever it could be purchased at the highest price (EIS, pg. 8-4). Therefore, it is illogical to restrict the analysis of energy alternatives to those which could be constructed at or near the GGNS. Electricity can be transported over great distances, and the evaluation of renewable energy alternatives should reflect this fact. (AM-7)

Response: *An environmental report is a document submitted to the Commission by an applicant to aid the Commission in complying with Section 102(2) of the National Environmental Policy Act of 1969 (10 CFR 51.14). In complying with the National Environmental Policy Act of 1969, the Commission develops an independent environmental analysis (10 CFR 51.70(b),*

51.90). U.S. Nuclear Regulatory Commission regulations implementing the National Environmental Policy Act of 1969 provide for the consideration of alternatives (10 CFR 51.71(d)). U.S. Nuclear Regulatory Commission regulations (10 CFR 51.10(a)) also provide that the Commission will take account of the regulations of the Council on Environmental Quality published November 29, 1978 (43 FR 55978-56007) voluntarily, subject to certain conditions. While the Council on Environmental Quality regulations are not binding on the U.S. Nuclear Regulatory Commission when the agency has not expressly adopted them, they are entitled to considerable deference. See Limerick Ecology Action, Inc. v. NRC, 869 F.2d 719, 725, 743 (3d Cir. 1989). The Council on Environmental Quality advises that when there are potentially a very large number of alternatives, only a reasonable number of examples, covering the full spectrum of alternatives, must be analyzed and compared in an environmental impact statement (46 FR 18027; March 23, 1981). It would not be practical for an environmental impact statement prepared in conjunction with an application for an early site permit to analyze all potential sites for wind and solar energy development in the applicant's region of interest.

As a result of its independent analysis, the staff concluded that the analysis of energy alternatives in Section 8.2 of the environmental impact statement does consider a reasonable set of alternatives. Section 8.2.5 of the environmental impact statement states that if significant changes in generation technology or environmental impacts associated with particular generation technologies should occur and an early site permit holder seeks a construction permit or combined license to build a new nuclear generating plant at an early site permit location, the staff would verify the analysis of energy alternatives conducted at the early site permit stage. Section 8.2.1 of the environmental impact statement states that the staff would consider energy alternatives not requiring new generating capacity if an early site permit holder seeks a construction permit or combined license to build a new nuclear generating plant at an early site permit location if new and significant information becomes available. This comment did not result in a change to the environmental impact statement.

Comment: The other concern I have is that all the alternatives were provided by Entergy, all the alternative sites. And I think if you're going to be looking at alternatives, not only alternative energy, but alternative sites, and you're going to be doing it in the best interest of the country and the people of Mississippi, then you need to look at all alternative sites, not just the ones that would most benefit Entergy. (G-4)

Response: *The Council on Environmental Quality advises that when there are potentially a very large number of alternatives, only a reasonable number of examples, covering the full spectrum of alternatives, must be analyzed and compared in an environmental impact statement (46 FR 18027; March 23, 1981). The staff determined that the proposed site and the three alternative sites analyzed in detail in Chapter 8 of the environmental impact statement*

were selected with reasonable criteria and constituted a reasonable number of sites for consideration and analysis. This comment did not result in a change to the environmental impact statement and conforms with the staff's review guidance (NRC 2000).

Comment: It's very important that we not only look at restarting building nuclear power plants, but look at other alternative fuels, and how we can best become self-sufficient. It's to the U.S.'s advantage to look at all alternatives and create a self-sufficiency for the U.S. to ensure that we're not dependent upon the oil and be stopped again like we were back in the early 70s. (C-2)

Response: *Energy alternatives are discussed in Section 8.2 of the environmental impact statement. This comment did not result in a change to the environmental impact statement.*

Comment: We are looking for alternate sources of fueling, and nuclear energy is one of the cleanest, cheapest forms of energy around. Now, I don't know, you know, if any of you have filled your cars or anything up lately. I filled my up today, it was like $38. You know, that's a lot of money. (A-2)

Comment: I urge you to deny the application for a nuclear site permit and to close down the current plant. There are other energy alternatives. (W-5)

Comment: Nuclear Power is Unnecessary: We can meet our future electricity needs and reduce global warming pollution without increasing our reliance on nuclear energy. (AC-3)

Response: *Energy alternatives are discussed in Section 8.2 of the environmental impact statement. These comments did not result in a change to the environmental impact statement.*

Comment: I would like to mention that it's not nuclear or solar or wind or hydro or geothermal or biomass, it's a combination of all of these non-emitting pollution free sources that we need to secure our energy future. (P-1)

Response: *Section 8.2.4 of the environmental impact statement discusses the use of a combination of energy sources as an alternative to the construction of new nuclear generating units at the Grand Gulf site. The staff concluded in Section 8.2.5 that none of the viable energy alternatives, including a combination of energy alternatives and conservation, are obviously superior to construction of a new base load nuclear power generation plant. Federal energy policy is the purview of the Congress and the President. As the Energy Policy Act of 2005 (P.L. 109-58) affirmed, energy policy makers believe that nuclear power is one of the viable means to provide electrical energy supply to meet public demands. The U.S. Nuclear Regulatory Commission is not the promoter of nuclear power. It is the safety regulator of nuclear power plants. The U.S. Nuclear Regulatory Commission established a licensing*

framework under the direction of and granted by the authority of the Congress to review requests for permits and licenses to use radioactive material. This comment did not result in a change to the environmental impact statement.

Comment: I don't think it's appropriate to let Entergy decide exactly what the goal of this project is going to be. (I-3)

Response: *System Energy Resources, Inc. initiated the review process when it submitted its early site permit application to the U.S. Nuclear Regulatory Commission. Once the application was submitted, the process to review the application was conducted according to U.S. Nuclear Regulatory Commission regulations and procedures. The U.S. Court of Appeals for the District of Columbia Circuit and the Commission have recognized that due to the nature of a Federal action such as U.S. Nuclear Regulatory Commission licensing, where the project is sponsored by a private applicant and not the Government, the licensing agency's role is limited. See Citizens Against Burlington, Inc. v. Busey, 938 F.2d 190, 197-99 (D.C. Cir. 1991), cert. denied, 502 U.S. 994 (1991); Hydro Res., Inc. (P.O. Box 15910, Rio Rancho, NM 87174), CLI-01-04, 53 NRC 31, 55 (2001). In reviewing a license application filed by a private applicant, an agency acts appropriately to "accord substantial weight to the preferences of the applicant and/or sponsor[,]" and "take into account the 'economic goals of the project's sponsor." See Busey, 938 F.2d at 197; Hydro, CLI-01-04, 53 NRC at 55 (internal citations omitted). As a consequence, an alternative is reasonable, such that it must be evaluated pursuant to Section 102(2)(E) of the National Environmental Policy Act of 1969, only if it will achieve the goals of the project applicant. See Busey, 938 F.2d at 197, 199; Hydro, CLI-01-4, 53 NRC at 55. This comment did not result in a change to the environmental impact statement.*

Comment: How about all that energy flowing past day and night right in front of the plant? Could we get some of that without damming the river? (Y-4)

Response: *The staff is not aware of any feasible base load-generating technologies to harness the power of Mississippi River water without damming the river or installing structures in the river that could represent an obstruction to river traffic. This comment did not result in a change to the environmental impact statement.*

Comment: Another example: (page 8-20) "neither type of solar electricity system would fit the land area footprint available at the Grand Gulf ESP site." For example, while SERI evaluated the solar option at Grand Gulf, it did not evaluate it at the alternative sites or other possible sites. Solar may not be an option at the GGNS site itself, but because it can be decentralized (a definite advantage in preventing regional blackouts), it should not be eliminated as a possibility. Again, the bias was towards SERI/Entergy and the selections SERI made. A more

thorough analysis of possible alternatives needs to be made and certainly the need for more power should be demonstrated. Mississippi certainly does not need more power and therefore its citizenry should not be subjected to the dangers of nuclear power. (AN-12)

Response: *Under U.S. Nuclear Regulatory Commission's regulations (10 CFR 52.18), an assessment of the benefits of the proposed action, such as the need for power, need not be evaluated in conjunction with the review of an early site permit application. The staff's evaluation of solar power as an alternative to new nuclear construction at the Grand Gulf site is in Section 8.2.3.3 of the environmental impact statement. The Council on Environmental Quality advises that, when there are potentially a very large number of alternatives, only a reasonable number of examples, covering the full spectrum of alternatives, must be analyzed and compared in an environmental impact statement (46 FR 18027; March 23, 1981). It would not be practical for an environmental impact statement prepared in conjunction with an application for an early site permit to analyze all potential sites for solar energy development in the applicant's region of interest.*

The U.S. Nuclear Regulatory Commission's mission is to regulate the nation's civilian use of by-product, source, and special nuclear materials to ensure adequate protection of public health and safety, to promote the common defense and security, and to protect the environment. Any Commission decision on the application for an early site permit by System Energy Resources, Inc. would be consistent with this mission. The U.S. Court of Appeals for the District of Columbia Circuit and the Commission have recognized that due to the nature of a Federal action such as U.S. Nuclear Regulatory Commission licensing, where the project is sponsored by a private applicant and not the Government, the licensing agency's role is limited. See Citizens Against Burlington, Inc. v. Busey, 938 F.2d 190, 197-99 (D.C. Cir. 1991), cert. denied, 502 U.S. 994 (1991); Hydro Res., Inc. (P.O. Box 15910, Rio Rancho, NM 87174), CLI-01-04, 53 NRC 31, 55 (2001). In reviewing a license application filed by a private applicant, an agency acts appropriately to "accord substantial weight to the preferences of the applicant and/or sponsor" and "takes into account the 'economic goals of the project's sponsor.'" See Busey, 938 F.2d at 197; Hydro, CLI-01-04, 53 NRC at 55 (internal citations omitted). As a consequence, an alternative is reasonable, such that it must be evaluated pursuant to Section 102(2)(E) of the National Environmental Policy Act of 1969, only if it will achieve the goals of the project applicant. See Busey, 938 F.2d at 197, 199; Hydro, CLI-01-4, 53 NRC at 55. This comment did not result in a change to the environmental impact statement.

Comment: Their presence will never encourage their owners, such as Entergy or Edison Electric, to put energy conservation and renewable energy technologies to greater use, as long as those owners continue to paint these so-called "clean" nuclear power plants as more environmentally friendly than their predecessors. It is time for the NRC and the Department of

Energy to finally bury this poisonous, dirty, environmentally unfriendly energy source, and work towards renewable energy sources and energy efficiency as truly environmentally sound energy sources. (AB-2)

Comment: Instead we can significantly reduce global warming pollution and save consumers money by increasing energy efficiency and shifting to clean renewable sources of energy. (AC-2)

Comment: So, to summarize, let's not build more nuclear power plants or expand existing plants. Let's get on the sustainable bandwagon, as European countries are - let's develop safe forms of energy, such as solar and wind. All the energy in the world ain't gonna help us if it's radioactive. (AF-5)

Comment: The solution to the US energy problem is to reduce consumption and to rely on renewable energy (such as wind and solar energy). The dangers of nuclear facilities (no matter how minimal) are simply unacceptable and unnecessary. The specific building of nuclear facilities in the South--where solar and wind resources are abundant--is particularly ridiculous. (AG-2)

Comment: Also of concern is the deficient consideration of renewable energy sources in the draft EIS. While the evaluation does consider renewable energy sources as an alternative, it (does) not give a fair and thorough review of the potential of clean, sustainable energy, and it relies partly on evaluations performed by SERI. The draft EIS overstates the impacts of clean energy alternatives and understates the impacts of nuclear power, wrongly concluding renewable energy sources would not be superior to a new nuclear unit at Grand Gulf "from an environmental perspective." Further, by considering only renewable energy deployment physically at the Grand Gulf site, it unfairly limits the scope of the review and the potential for renewable energy technologies to provide a meaningful contribution to the electric supply. Conservation and efficiency improvements are also unfairly dismissed. (BB-4, BG-5, BJ-6, BL-5, MM-5)

Comment: We are also concerned by the deficient consideration of renewable energy sources in the draft EIS. While the evaluation does consider renewable energy sources as an alternative, it (does) not give a fair and thorough review of the potential of clean, sustainable energy, and it relies partly on evaluations performed by SERI. The draft EIS overstates the impacts of clean energy alternatives and understates the impacts of nuclear power, wrongly concluding renewable energy sources would not be superior to a new nuclear unit at Grand Gulf "from an environmental perspective." By considering only renewable energy deployment physically at the Grand Gulf site, it unfairly limits the scope of the review and the potential for renewable energy technologies to provide a meaningful contribution to the electric supply. Conservation and efficiency improvements are also unfairly dismissed. (BD-5)

Comment: The DEIR irresponsibly dismisses getting energy instead from renewable sources & conservation. (BF-3)

Comment: Also of concern is the deficient consideration of renewable energy sources in the draft EIS. While the evaluation does consider renewable energy sources as an alternative, my understanding is that it does not present a fair and thorough review of the potential of clean, sustainable energy. Instead, it relies partly on evaluations performed by SERI. Furthermore, the draft EIS overstates the impacts of clean energy alternatives and understates the impacts of nuclear power, wrongly concluding renewable energy sources would not be superior to a new nuclear unit at Grand Gulf "from an environmental perspective." By considering only renewable energy deployment physically at the Grand Gulf site, the draft EIS unfairly limits the scope of the review and the potential for renewable energy technologies to provide a meaningful contribution to the electric supply. Conservation and efficiency improvements are dismissed in a manner that appears less than fair. (BH-5)

Response: *Various renewable energy alternatives are discussed in Section 8.2.3 of the environmental impact statement. The staff determined that none of the renewable technologies would be feasible alternatives to replace a new nuclear base load power plant. Energy alternatives not requiring new generating capacity would be further evaluated in the future if new and significant information becomes available and if System Energy Resources, Inc. were granted an early site permit and elects to seek a construction permit or combined license for a new nuclear plant at the early site permit site. These comments did not result in a change to the environmental impact statement.*

Comment: There are clean alternatives, there are cheaper alternatives, like wind power, for example. Probably not here in Mississippi, although options for biomass exist down here. But there are alternatives that are being dismissed out of hand that really provide honest options for meeting our energy needs. Conservation and efficiency can go extremely far in meeting our needs. (I-4)

Response: *The U.S. Nuclear Regulatory Commission does not establish public policy regarding electric power supply and demand alternatives and does not promote the use of nuclear power as a preferred energy alternative. In addition, the U.S. Nuclear Regulatory Commission does not regulate alternatives to producing electricity that do not involve nuclear power. The U.S. Nuclear Regulatory Commission does evaluate energy alternatives as part of its environmental review for an application for a construction permit or a combined license. Further, if an applicant elected to include it in its early site permit application as System Energy Resources, Inc. did, then the U.S. Nuclear Regulatory Commission would evaluate that information as part of the early site permit environmental review.*

Uncontrolled greenhouse emissions to the environment are attributed to the consumption of fossil fuels whether for industrial use, such as an energy-intensive manufacturing facility, or personal use, such as for the automobile. Nuclear power plants may not emit greenhouse gases in large quantities, however, that only applies to the operation of the facility for the production of electricity. Fossil fuels are often used as part of the infrastructure needed to operate a nuclear power facility, notably, for the manufacture of the fuel that is used in the facility. Greenhouse gas emissions from vehicle use to, from, and at the plant would be offset by vehicle use by personnel for any other type of power generation. It is an important factor that the amount of greenhouse gas emissions produced in the energy sector is not trivial; this is considered by energy policy decisionmakers elsewhere in the government.

Various renewable energy alternatives are discussed in Section 8.2.3 of the environmental impact statement. Wind power is discussed in Section 8.2.3.2 and biomass-derived fuels are discussed in Section 8.2.3.8 of the environmental impact statement. The staff determined that these technologies do not provide a feasible alternative to replace a new nuclear baseload power plant. Energy alternatives not requiring new generating capacity would be further evaluated in the future if new and significant information becomes available and System Energy Resources, Inc. were granted an early site permit and elected to seek a construction permit or combined license for a new nuclear plant at the early site permit site.

With respect to conservation and efficiency, in Sections 8.2.1 and 8.2.4, the staff discussed conservation and demand-side management programs as alternatives that would not require new generating capacity and included conservation and demand-side management programs as part of a potentially cost-effective energy alternative that would involve a combination of energy alternatives. This comment did not result in a change to the environmental impact statement.

Comment: Wind energy can replace the anticipated output for the new nuke at Grand Gulf without the environmental 10,000 years of waste. NRC has to the public's interest and wants to condemn the poorest delta region to the highest operating cost facility. What the commission must consider is total life cycle costs. (AJ-1)

Response: *Various renewable energy alternatives are discussed in Section 8.2.3 of the environmental impact statement. Wind power is discussed in Section 8.2.3.2 of the environmental impact statement. The staff determined that wind technology would not be a feasible alternative to replace a new nuclear base load power plant. In Section 6.1.1.6 of the environmental impact statement, the staff concluded that the radioactive waste impacts of constructing and operating new nuclear power plants would be small. This comment did not result in a change to the environmental impact statement.*

Subject: Concerns Related to the ESP Process

Comment: The entire ESP process is extremely flawed and biased towards the nuclear industry. Of particular concern is the vagueness of the parameters used in determining the staff's recommendation for the ESP. While the DEIS pages 1-7 state that the ESP process "allows for early resolution of many safety and environmental issues that may be identified for the ESP site," appendix J lists 16 pages of assumptions made by SERI in its report to the NRC. I don't believe that any definitive decision can be made when the data is based on so many assumptions and estimates. Further, the PPE does not require selection of a plant design, but only that the limits in which SERI select a design in the future be set. Again and again in the DEIS, the fact that no plant design has been selected hinders the staff's ability to make a determination. For example, page 2-23 states: "After a plant design has been selected, additional site exploration, laboratory testing, and geotechnical analyses will be performed"…; page 2-30 states that "As no specific design has been selected, water treatment and waste water designs are currently unknown." This has resulted in a DEIS that repeatedly states that SERI did not provide enough information or select a plant design and therefore further assessment will have to be done at the CP or COL stage. Just one example- "However, at the CP or COL stage, SERI would need to demonstrate that the Catahoula formation could support the additional groundwater withdrawals"(page 4-6) and that "Prior to issuance of a COL, the applicant would be required to implement a subsurface characterization and groundwater monitoring program…." (page 2-26). On page 3-6: "the staff identified when and how assumptions and bounding values limit its conclusions on the environmental impacts to a particular resource." If further assessment or information are continually needed then the ESP process is obviously a waste of NRC staff time and taxpayer dollars. Despite the fact that the NRC is in large part a fee based agency, government subsidies to the utility make this entire process a waste of taxpayer dollars. Page 10-7 states: "If granted, the ESP will not authorize any activities by SERI that would have an environmental impact." What is the point of requiring an environmental impact statement for an ESP that won't authorize activities with an environmental impact? Again, the process is flawed and needs to be changed. More decisions and information should be required of the applicant before the ESP process can go forward. In addition, the Draft Safety Evaluation Report (DSER 4/2005) (not included in the DEIS) states that "the staff is requesting additional information from the applicant regarding certain matters" which it refers to as "open items." The document states that "Completion of the staff's final safety evaluation report (FSER) according to the current schedule will depend on the applicant's timely submission of information sufficient to resolve each open item and allow the staff to review that information before issuance of the FSER." Again, more incomplete information has been provided by SERI. (AN-1)

Response: *As stated in the U.S. Nuclear Regulatory Commission's early site permit Review Standard RS-002 (NRC 2004a), the purpose of the early site permit regulations in Part 52 is, in part, to make it possible to resolve safety and environmental issues related to siting before an*

applicant needs to make large commitments of resources. Having obtained an early site permit, an applicant for a construction permit or combined license for a nuclear power plant or plants can then reference it in a construction permit or combined license application. In accordance with 10 CFR 52.39, site-related issues resolved at the early site permit stage will be treated as resolved at the construction permit or combined license stage unless a contention is admitted that a reactor does not fit within one or more of the site parameters in the early site permit, a petition alleges that the site is not in compliance with the early site permit, or a petition alleges that the terms and conditions of the early site permit should be modified. Issues not resolved at the early site permit stage will be evaluated at the construction permit or combined license stage in full. The U.S. Nuclear Regulatory Commission's understandings and expectations regarding the use of the plant parameter envelope approach for the preparation and review of early site permit applications are in Section 3.2 of the environmental impact statement and in a February 5, 2003 letter to the Nuclear Energy Institute (NRC 2003). The staff's application of System Energy Resources, Inc.'s plant parameter envelope approach in the environmental impact statement is consistent with these understandings and expectations. This comment did not result in a change to the environmental impact statement.

Comment: Yet, this draft EIS fails to consider or to fully acknowledge numerous environmental issues that could demonstrate that the Grand Gulf site is not suitable for an additional nuclear unit. The arbitrary separation of the ESP and COL processes compromises the ability of the U.S. Nuclear Regulatory Commission (NRC) to perform a thorough and adequate evaluation—at either stage or in total—of the potential environmental impacts from new reactor development. Under this regime—designed to "provide stability in the licensing process" (EIS, § 1.3)—far too many environmental impact considerations have been deferred to the COL stage of the licensing process. Time and time again throughout the draft EIS, the NRC staff reports its incapacity to conduct a realistic environmental evaluation because a specific reactor design has not yet been chosen by the applicant. Unfortunately, this disjointed method renders much of this environmental evaluation mere guesswork and conjecture. (AM-2)

Response: *As stated in NRC's ESP Review Standard RS-002 (NRC 2004), the purpose of the ESP regulations in 10 CFR Part 52 is, in part, to make it possible to resolve safety and environmental issues related to siting before an applicant needs to make large commitments of resources. Having obtained an ESP, an applicant for a construction permit (CP) or combined license (COL) for a nuclear power plant or plants can then reference it in the CP or COL application. In accordance with 10 CFR 52.39, site-related issues resolved at the ESP stage will be treated as resolved at the CP or COL stage unless a contention is admitted that a reactor does not fit within one or more of the site parameters in the ESP, a petition alleges that the site is not in compliance with the ESP, or a petition that the terms and conditions of the ESP should be modified. Issues not resolved at the ESP stage will be evaluated at the CP or COL stage in full. The public had an opportunity to comment on the 10 CFR Part 52 ESP regulations prior to their promulgation. This comment did not result in a change to the EIS.*

Comment: How much of the information in the ESP was provided by SERI? (AS-5)

Response: *In preparing the environmental impact statement, the staff used information supplied by System Energy Resources, Inc. in its early site permit application (10 CFR 52.17, 51.45, and 51.50). However, the staff conducted an independent review of the data and analyzed the impacts associated with the proposed action. This comment did not result in a change to the environmental impact statement.*

Comment: The operator of the Grand Gulf Nuclear Station (GGNS)—System Energy Resources, Inc. (SERI), a subsidiary of Entergy Corporation—did not include in its ESP application a "Site Redress Plan" and so would not be allowed to perform any site-preparation activities prior to issuance of a CP or COL (EIS, § 1.1.2). However, a second reactor, cooling tower, and ancillary structures that were partially constructed at the GGNS may be suitable for completion. While SERI has not firmly committed to constructing a new nuclear unit at the GGNS or even selected a specific reactor design (EIS, pg. 1-7), its parent, Entergy, is part of an industry consortium called NuStart Energy Development that plans to apply for a COL. If granted an ESP, SERI would have overcome a significant regulatory hurdle while numerous important issues, such as the need for power and the indefinite storage of additional waste onsite, have not been addressed. (AM-3)

Response: *System Energy Resources, Inc. is the applicant for the early site permit, but is not the operator of the Grand Gulf Nuclear Station. Need for power need not be addressed as part of the U.S. Nuclear Regulatory Commission's review of an early site permit application, but would be addressed in a subsequent environmental impact statement if an early site permit holder elected to apply for a construction permit or a combined license for a new nuclear power plant (10 CFR 52.18). The environmental impacts of radioactive waste are discussed in Section 6.1.1.6 of the environmental impact statement. This comment did not result in a change to the environmental impact statement.*

Comment: Section 8 of the DEIS discusses impacts of the alternatives to building a nuclear facility. Throughout this section it is stated that SERI made the decisions about site selection, alternatives, capacity, etc. Because of decisions SERI will make in the future, "energy alternatives not requiring new generating capacity are not evaluated further in this EIS" (DEIS 8-4). SERI has indicated that the new reactor will be the type that will allow the company to sell power on an open market. While I am not opposed to Entergy making a profit, I think it is inexcusable that the public will be endangered so that profits can be made. Also, the alternative site selection process conducted by Entergy Nuclear (page 8-31), was most likely not in the best interest of the surrounding area or the Country, but in Entergy's best interest. The NRC should reevaluate and revamp this process so that the public good is considered a high priority and so that process is not controlled by nor biased towards the utility. The party

with a vested interest in receiving the ESP should not be the primary party determining what is evaluated. The ESP process is biased and needs to be changed. While I know that the staff also performed independent reviews in some cases, there are numerous references to SERI's control of the process in the DEIS. (AN-11)

Response: *The U.S. Nuclear Regulatory Commission's mission is to regulate the nation's civilian use of by-product, source, and special nuclear materials to ensure adequate protection of public health and safety, to promote the common defense and security, and to protect the environment. Any Commission decision on the application for an early site permit by System Energy Resources, Inc. would be consistent with this mission. In preparing the environmental impact statement, the staff used information supplied by System Energy Resources, Inc. in its application but conducted an independent review and analysis. The staff concluded in Section 8.4.2.2 of the environmental impact statement that the overall site selection process for alternative sites was reasonable. This comment did not result in a change to the environmental impact statement.*

Comment: The Vagueness of the PPE: No specific plant design has been chosen for the new nuclear unit at the GGNS; instead, a plant parameter envelope (PPE)—a set of "bounding parameters"—has been specified (EIS, § 3.2). The PPE encompasses "one or two new nuclear units generating as much as 8600 megawatts thermal (MW(t)) or 3000 megawatts electric (MW(e)) output" (EIS, § 3.0). The scope of reactor types considered within the PPE—including five light water reactors (LWR) and two gas-cooled reactor types, not all of which have been approved by the NRC (EIS, § 3.2)—is far too broad, making it impossible to provide a reasonably precise judgment of the environmental impact of a new nuclear unit at the GGNS, especially considering that SERI is not even required to employ any one of these designs if it ultimately decides to build a new nuclear unit at the GGNS (EIS, pg. 3-4). The EPA, in commenting on the draft EIS for a similar new nuclear development, criticized the NRC for this imprecision, noting that "[t]here is inadequate design information available for some of the proposed units from which to make accurate environmental assessments of the impacts." The inaccuracy of this review system is belied by the NRC staff's admission that they neglected to review SERI's PPE values for correctness (EIS, pg. 3-5). Furthermore, SERI has considered a wet-dry hybrid design for its cooling system, but this model [is] not included in the PPE (EIS, § 3.2.2). It is improper for the NRC to assume that a set of bounding criteria can replace with any degree of precision the kind of evaluation that would be performed referencing a particular type of reactor. (AM-4)

Response: *In lieu of detailed design information, System Energy Resources, Inc. referenced a plant parameter envelope as a surrogate for a specific design. The plant parameter envelope provides bounding values of design parameters for a plant that might be constructed at the Grand Gulf early site permit site. The U.S. Nuclear Regulatory Commission staff evaluated the environmental impacts associated with those bounding values. A specific design is not needed*

because the plant parameter envelope values submitted are reasonable and sufficient to permit a meaningful environmental analysis. The U.S. Nuclear Regulatory Commission's understandings and expectations regarding the use of the plant parameter envelope approach for the preparation and review of early site permit applications are in Section 3.2 of the environmental impact statement and in a February 5, 2003 letter to the Nuclear Energy Institute (NRC 2003). The staff's application of System Energy Resources, Inc.'s plant parameter envelope approach in the environmental impact statement is consistent with these understandings and expectations. This comment did not result in a change to the environmental impact statement.

Comment: I want to reiterate Ruth Pullen's statement about significant information missing from the DEIS, which is therefore incomplete and should not have been submitted in its current condition. (AO-5)

Response: *This comment does not provide any specific information or recommendations for additional analysis concerning the significant missing information. The draft environmental impact statement was prepared based on the applicant's environmental report, which contained the information required by 10 CFR 52.17(a)(2), 51.45, and 51.50. The draft environmental impact statement was prepared in accordance with the provisions of 10 CFR 51.70, 51.71, and 52.18. This comment did not result in a change to the environmental impact statement.*

Subject: Cost of Power

Comment: As a few people have alluded to tonight, and Mr. Williams stated that, you know, that they're not going to build one till it's economically feasible for the customers. (M-1)

Response: *An early site permit is a Commission approval of a site or sites for one or more nuclear power facilities. The filing of an application for an early site permit is a process that is separate from the filing of an application for a construction permit and operating license or a combined license for such a facility. The early site permit application makes it possible to evaluate and resolve safety and environmental issues related to siting before the applicant makes large commitments of resources. If the early site permit is approved, the applicant can "bank" the site for up to 20 years for future reactor siting. The early site permit does not authorize construction or operation of a nuclear power plant. If an early site permit holder decides to pursue construction, it must obtain a construction permit or a combined license, the issuance of which would be a major Federal action requiring preparation of an environmental impact statement under 10 CFR 51.20 that, among other things, would address the benefits of the proposed action, such as the need for power and cost of power. This comment did not result in a change to the environmental impact statement.*

Comment: Nuclear Power is Too Expensive: The economics of nuclear power remain so unattractive that without additional federal subsidies, no new plants will be built. (AC-4)

Response: *The regulations under 10 CFR 52.18 specify that the environmental impact statement prepared for an early site permit need not include an assessment of the benefits (for example, need for power) of the proposed action. Cost of power is part of the assessment of the need for power. These issues would be reviewed at the combined license stage because they were not reviewed at the early site permit stage (10 CFR 52.89). The Atomic Energy Act, as amended, prohibits the U.S. Nuclear Regulatory Commission from promoting nuclear power in any manner including rebates and incentives. This comment did not result in a change to the environmental impact statement.*

Comment: I'd also like to remind you that cost has not really been addressed yet. You'll remember that the first reactor had a huge cost overrun. It was very expensive, so expensive that Claiborne County was forced to subsidize all the other – half the other counties in Mississippi to cover that up, and disguise the fact that people's electricity rates were going up so much. (I-5)

Response: *The regulations under 10 CFR 52.18 specify that the environmental impact statement prepared for an early site permit need not include an assessment of the benefits (for example, need for power) of the proposed action. Cost of power is part of the assessment of the need for power. These issues would be reviewed at the combined license stage because they have not been reviewed at the early site permit stage (10 CFR 52.89). Tax treatment of the postulated facility is a matter of Mississippi State and local law. Sections 2.8.2.3, 4.5.3.2, and 5.5.3.2 address the treatment of the existing Grand Gulf Nuclear Station and any future plants in relation to State and local tax receipts. This comment did not result in a change to the environmental impact statement.*

Subject: Cultural Resources

Comment: Page 2-78 discusses compliance with the National Historic Preservation Act (NHPA 1966). Although no responses to letters were received from the Advisory Council on Historic Preservation (ACHP), Mississippi Department of Archives and History, and three tribal governments, there was not any discussion on further plans for coordination. (AZ-18)

Response: *Sections 2.9.3, 4.6, and 5.6 of the environmental impact statement indicate that the U.S. Nuclear Regulatory Commission staff has interpreted its compliance with National Historic Preservation Act Section 106 with its environmental review conducted pursuant to the National Environmental Policy Act of 1969 (36 CFR 800.8). Although no comments were received during the early site permit review process, if an applicant references the early site permit in a future construction permit or combined license application, the U.S. Nuclear*

Regulatory Commission's review of such an application would be a separate undertaking for which the U.S. Nuclear Regulatory Commission would be required to take into account the effects on cultural resources. Further, as explained in Sections 4.6 and 5.6, in the event of an inadvertent discovery, site personnel would contact the State Historic Preservation Officer to determine further actions, which might involve additional consultations with the various parties. This comment did not result in a change to the environmental impact statement.

Subject: Cumulative Impacts

Comment: Page 7-9, Lines 32-38. This paragraph implies that "historical and cultural resources" could make a detectable contribution to the cumulative effect. However, Lines 13 – 19 on Page 7-9 states that the proposed units would not add to the cumulative impacts to historical and cultural resources beyond that identified in Sections 4.6 and 5.6, which were also considered SMALL. It appears that maybe "historical and cultural resources" should be deleted from Line 35. (AP-28)

Response: *Changes to lines 32-38 were made to clarify this issue. This comment resulted in a change to Section 7.6.*

Comment: Cumulative Impacts: The DEIS should incorporate more information on environmental and health-related cumulative effects. It should identify federal and non-federal commercial businesses and facilities which have environmental releases, and clearly define these releases to the air, water, and land. There is no discussion about the cumulative environmental impacts from chemical facilities, together with these existing and proposed additional nuclear power facilities. Existing regulated facilities within the project area should be discussed, and their potential impacts to communities within the surrounding areas if an accident occurs at the nuclear site. (AZ-26)

Response: *Cumulative impacts are discussed in Chapter 7 of the environmental impact statement. The staff's analysis of cumulative impacts took account of nearby commercial and industrial facilities. This comment did not result in a change to the environmental impact statement.*

Subject: Ecology

Comment: Page 4-9, Line 1-5. Construction Impacts on Wildlife. Specific locations of the power block, cooling towers, intake and discharge, pipelines, and borrow sites are "currently unknown" and "would be determined definitely before the CP or COL phase." SERI requests the staff consider revising the phrase "…before the CP …" to be consistent with page 4-10, line 25-25 ("…prior to or during…") (AP-10)

Response: *Section 4.4.1.1 has been revised to include the phrase "prior to or during the CP or COL phase."*

Comment: It is unclear whether any new transmission capacity would be required to serve a new nuclear unit at the GGNS. A transmission analysis conducted by the Federal Energy Regulatory Commission (FERC) would be deferred until a specific facility design is chosen (EIS, § 2.2.2; § 3.3), though there remains the possibility that new transmission lines will be required, which could result in the destruction of up to 1,056 acres of hardwood forest (EIS, pg. 4-10). But absent a more specific proposal by SERI, the actual environmental impact from this project cannot be realistically forecast, thus the EIS must be seen to be deficient in this regard. (AM-24)

Response: *The proposed action is the granting of an early site permit (ESP). This permit would not authorize construction or site preparation activities of any kind. If an ESP is granted and the ESP holder chooses to construct and operate a new nuclear facility at this site during the period of validity of the permit, an environmental impact statement would be required that would evaluate in depth all issues not considered or resolved in the impact assessment for the ESP, such as construction of new transmission capacity. These would be addressed at the construction permit or combined license stage as required by U.S. Nuclear Regulatory Commission regulations (10 CFR 51.71(b), 52.39(a)(2), 52.89). This comment did not result in a change to the environmental impact statement.*

Comment: Page 4-16, Line 40. Sentence beginning on this line and carrying over to Page 4-17 implies that SERI will be responsible for implementing plans for widening a transmission corridor. A more accurate statement would be "NRC expects that SERI will work with the appropriate State agencies and the transmission line owner to develop …" (AP-11)

Response: *The text here and at other places in the environmental impact statement (where the entity responsible for transmission line right-of-way maintenance is discussed) has been revised to clarify that Entergy Mississippi, Inc. (the transmission and distribution system owner and operator) has responsibility for vegetation maintenance in the transmission line rights-of way, and that it would be responsible for implementing any related plans developed by System Energy Resources, Inc. in coordination with the appropriate Federal and State agencies to minimize impacts to the Bayou Pierre and the crystal darter. This comment resulted in a change to Section 4.4.2.*

Comment: Page 5-27, Lines 21-23. Sentence implies that SERI will be responsible for implementing plans for maintenance of a transmission corridor. Sentence should state "The NRC expects that SERI will work with the appropriate Federal and State agencies and the transmission line owner/operator to develop …" (AP-15)

Response: *The text here and at other places in the environmental impact statement (where the entity responsible for transmission line right-of-way maintenance is discussed) has been revised to clarify that Entergy Mississippi, Inc. (the transmission and distribution system owner and operator) has responsibility for vegetation maintenance in the transmission line rights-of-way, and that it would be responsible for implementing any related plans developed by System Energy Resources, Inc. in coordination with the appropriate Federal and State agencies to minimize impacts to the Mississippi River and bayou darter. This comment resulted in a change to several sections of this environmental impact statement.*

Comment: Wetlands: The DEIS does not provide information on the acreage, delineation, and type of wetlands impacted by the construction and operation of the proposed facility, nor does it include mitigation plans for wetlands impacts. (AZ-25)

Response: *This environmental impact statement does not provide this kind of detail because the purpose of this environmental impact statement is to provide enough information to make a decision regarding the environmental acceptability of the Grand Gulf early site permit site for future construction of one or more new nuclear units. An early site permit, if granted, for the Grand Gulf early site permit site would not allow any construction or ground-disturbing activities. If an early site permit were granted and an applicant subsequently submitted a construction permit or combined license application, the application would provide information on delineated wetlands, among other things. However, Chapter 4 of this environmental impact statement has been revised to state that before receiving a construction permit or a combined license, an applicant would submit an application for a Clean Water Act Section 404 permit to the U.S. Army Corps of Engineers that would address wetland filling, vegetation clearing, hydrological alterations, and related matters. This permitting process would ensure that impacts of construction would be limited by requiring that the appropriate construction best management and mitigation practices be followed. This comment resulted in a change to Chapter 4 of this environmental impact statement.*

Comment: The proposed project could adversely impact wetlands and other waters associated with the Mississippi River. The Department will provide additional comments regarding wetland impacts during the U.S. Army Corps of Engineers permitting process. We recommend that the applicant coordinate early in the planning process with the State and Federal resource agencies. These agencies should be contacted for recommendations on measures needed to mitigate adverse impacts and compensate for unavoidable losses to fish and wildlife values. (AH-2)

Response: *The staff analyzed construction impacts to these resources in the environmental impact statement. This environmental impact statement has been revised at all necessary places in the text to state that before receiving a construction permit or combined license, an applicant would submit an application for a Clean Water Act Section 404 permit to the U.S.*

Army Corps of Engineers that would address wetland filling, vegetation clearing, hydrological alterations, and related matters. This permitting process would ensure that impacts of construction would be limited by requiring that the appropriate construction best management and mitigation practices be followed. The applicant and U.S. Nuclear Regulatory Commission staff have contacted State (e.g., Mississippi Department of Wildlife, Fisheries and Parks) and Federal (e.g., U.S. Fish and Wildlife Service) agencies as part of the current National Environmental Policy Act of 1969 process. The early site permit for Grand Gulf, if granted, would not provide for any construction or ground-disturbing activities that could affect fish and wildlife. If an early site permit is granted and an application is submitted for a construction permit or combined license, the applicant would provide information in the application regarding its contact with State and Federal agencies to solicit recommendations for reducing and mitigating impacts to fish and wildlife. This comment resulted in a change to several sections of this environmental impact statement.

Subject: Editorial

Comment: Page 2-11, Line 40. NRC states that Vicksburg MS is about 32 km (20 mi) north of the ESP site. On page xxiii (Executive Summary) and pages 1-5 and 2-63, NRC states that Vicksburg is 40 km (25 mi) from the ESP site. On these pages, NRC also states that Port Gibson in [is] 10 km (6 mi) from the ESP site, while in page 2-3, NRC states that Port Gibson is 8 km (5 mi) from the ESP site. Port Gibson is 6 miles southeast of the site, according to Section 2.1 of the ER. (AP-3)

Response: *Distance inconsistencies were corrected as suggested. This comment resulted in a change to Chapter 2.*

Comment: Page 5-85, Line 17. Scott, M.J. 2004. This accession number leads to NUREG 1817 (this document), not the Scott, 2004 reference. The Scott, 2004 reference was located by doing a word search on the title. The reference was included in a more general reference: Enclosed copies of Information at the PNNL gathered and referenced in the Grand Gulf Early Site Permit Environmental Impact Statement. Accession Number: ML050350147. (AP-27)

Response: *ADAMS was changed to connect the document indicated. This comment did not result in a change to the environmental impact statement.*

Comment: Page 8-8, Line 36, 4th paragraph. The last sentence of this paragraph states: "There are no mandatory Class I Federal areas in Mississippi." It does not say anything about Louisiana. The Grand Gulf ESP site is just across the Mississippi River from Louisiana, thus the presence of mandatory Class I Federal areas in Louisiana should be addressed. (AP-30)

Response: *Section 8.2.2 of the environmental impact statement has been revised in response to this comment. The Breton Wilderness is the only Class I area in Louisiana, but it is not within 160 km (100 mi) of the Grand Gulf site.*

Comment: Page 8-59, Line 11-12. Recommend changing "Massachusetts Department of Environmental Protection" to "Environmental Protection Agency" since the EPA issues the NPDES Permit and administers the NPDES Program. The state agency does not currently have authorization for the NPDES Program. (AP-34)

Response: *Section 8.5 of the environmental impact statement has been revised to indicate that thermal and chemical discharges would be regulated by the Massachusetts Department of Environmental Protection and the U.S. Environmental Protection Agency.*

Comment: Page 3-1, Line 25 refers to the "reactor building." Line 21 correctly references the "containment." (AP-5)

Response: *The suggested wording was used. This comment resulted in a change to Chapter 3.*

Comment: In addition, Appendix I apparently includes some editorial errors in that SSAR Table 1.4-1 is incorrectly reproduced in this appendix. This SSAR table, dealing with compliance to Regulatory Guides, is not relevant and should be deleted from this appendix. (AP-38)

Response: *Table 1.4-1 was deleted and other tables rearranged. This comment resulted in a change to Appendix I.*

Comment: Appendix I is referenced from numerous locations in the DEIS text, for example, Sections 1.1.3, 1.2, etc. Appendix I is understood from the discussion in these DEIS sections to contain parameter values used as surrogate for proposed facility for the purposes of evaluating environmental impact in the Application's Environmental Report. However, Appendix I incorrectly presents PPE values from the Application's SSAR (SSAR Tables 1.3-1 and 1.3-2). It is noted that the ER references SSAR 1.3 for general discussion of the PPE concept. It is also recognized that the listings of PPE values supporting safety analyses (SSAR Table 1.3-1, etc.) are similar but not the same as those used for evaluating environmental impacts. The correct (PPE) listings of parameters used for the ER's evaluation of environmental impacts, as discussed in ER Section 3.0, are provided in ER Tables 3.0-1 through 3.0-8. Therefore, Appendix I should present the ER Tables 3.0-1 through 3.0-8 (and Table 3.0-9, if the Staff intended to also include PPE definitions). (AP-37)

Response: *The complete plant parameter envelope from Section 3 of the System Energy Resources, Inc. environmental report was used in the environmental impact assessment and will replace the abbreviated plant parameter envelope table from the site safety analysis report that was included in Appendix I in the draft environmental impact statement. This comment resulted in a change to Appendix I.*

Comment: Page 5-48, Line 31. Addresses one unit, similar comment as comment 1; i.e., some of the evaluated plant types included multiple reactor units. (AP-17)

Comment: Page 5-50, Line 27. The DEIS states: "The purpose of SERI's requested action, issuance of the ESP, is for the NRC to determine whether the Grand Gulf ESP site is suitable for up to two new nuclear units by resolving certain safety and environmental issues before SERI incurs the substantial additional time and expense of designing and seeking approval to construct such units at the site." Page xxiii, Lines 40 through 42 – "This EIS addresses the potential environmental impacts resulting from construction and operation of up to two new nuclear units at the proposed and alternative sites." Page xxiv, Lines 10 through 12 – "the staff determined and evaluated the potential environmental impact of constructing and operating up to two new nuclear units at the Grand Gulf ESP site." Some of the plant types have more than two reactor units; i.e., IRIS, 6 Reactors, GT-MHR, 8 Reactors, PBMR, 16 Reactors, ACR-700, 4 Reactors. Clarification is needed in the EIS to define what the NRC means by two nuclear units. In a footnote in the SSAR PPE Table 1.3-1: "The values in brackets reflects the values corresponding to a plant that is twice the vendor's specified standard size plant, i.e., two ABWR units, two AP1000 units, six IRIS units, two sets of four GT-MHR modules, two sets of eight PBMR modules and two twin ACR-700 units..." Section 3.0 of the ER states: "…The evaluations of the potential environmental effects of the plant are based on bounding information from the Plant Parameters Envelope (PPE) presented in Table 3.0-1 through Table 3.0-8. A description of the development and intended use of the PPE is provided in Section 1.3 of the Site Safety Analysis Report, Part 2 of this Application for an Early Site Permit." Section 1.3 of the SSAR states: "The light-water-cooled technologies considered include the ABWR (Advanced Boiling Water Reactor), the ESBWR (Economic Simplified Boiling Water Reactor), the AP-1000 (Advanced Passive PWR), the IRIS (International Reactor Innovative and Secure), and the ACR-700 (Advanced CANDU Reactor). The ABWR is a single unit, 4300 MWt, 1500 MWe reactor. The ESBWR is a similar BWR, single unit, 4000 MWt, 1390 MWe. The AP-1000 pressurized-water reactor single unit specifications are 3400 MWt and 1117-1150 MWe. The IRIS is a three module pressurized-water reactor configuration with a total of 3000 MWt and 1005 MWe. And the ACR-700 is a twin unit, 3964 MWt, 1462 MWe, light-water-cooled reactor with a heavy-water moderator. There were two gas-cooled reactor technologies considered in the PPE development. These gas-cooled reactor technologies are the GT-MHR (Gas Turbine-Modular Helium Reactor), and the PBMR (Pebble Bed Modular Reactor). The GT-MHR is a four module, 2400 MWt, 1150 MWe gas-cooled reactor. The PBMR is an eight module, 3200 MWt, 1280 MWe gas-cooled reactor." Section 1.3.1.4 of the

SSAR says, in the second paragraph: "…For example, for single reactor units, the types considered represented capacities ranging from 160 MWe to 1500 MWe. In order to facilitate comparison between the different plant types in the PPE, the number of units/modules of a specific reactor type was chosen, based on vendors recommended combinations, to approximate 1000 MWe. This resulted in "single-unit plants" with capacities in the range of 1005 MWe to 1500 MWe." SERI recommends the staff consider the phrase "… one or more new nuclear units …" as being a more accurate description consistent with the ESP application; this would be consistent with the staff's language on page 7-10, line 38. (AP-21)

Response: *The U.S. Nuclear Regulatory Commission staff agrees that the terms are inconsistent in many places in the source documentation. As stated in the Site Safety Analysis Report provided by System Energy Resources, Inc., dose rate estimates were performed on a single-unit basis in some cases (e.g., liquid pathway doses) and on a full plant parameter envelope basis for others. This is reflected in the titles and footnotes of the text and various tables in Section 5.9. This comment did not result in a change to the environmental impact statement.*

Comment: Page xxiii, Lines 26 through 29, the DEIS states: "The purpose of SERI's requested action, issuance of the ESP, is for the NRC to determine whether the Grand Gulf ESP site is suitable for up to two new nuclear units by resolving certain safety and environmental issues before SERI incurs the substantial additional time and expense of designing and seeking approval to construct such units at the site." Page xxiii, Lines 40 through 42 – "This EIS addresses the potential environmental impacts resulting from construction and operation of up to two new nuclear units at the proposed and alternative sites." Page xxiv, Lines 10 through 12 – "the staff determined and evaluated the potential environmental impact of constructing and operating up to two new nuclear units at the Grand Gulf ESP site." Some of the plant types have more than two reactor units; i.e., IRIS, 6 Reactors, GT-MHR, 8 Reactors, PBMR, 16 Reactors, ACR-700, 4 Reactors. Clarification is needed in the EIS to define what the NRC means by two nuclear units. In a footnote in the SSAR PPE Table 1.3-1: "The values in brackets reflects the values corresponding to a plant that is twice the vendor's specified standard size plant, i.e., two ABWR units, two AP1000 units, six IRIS units, two sets of four GT-MHR modules, two sets of eight PBMR modules and two twin ACR-700 units..." Section 3.0 of the ER states: "…The evaluations of the potential environmental effects of the plant are based on bounding information from the Plant Parameters Envelope (PPE) presented in Table 3.0-1 through Table 3.0-8. A description of the development and intended use of the PPE is provided in Section 1.3 of the Site Safety Analysis Report, Part 2 of this Application for an Early Site Permit." Section 1.3 of the SSAR states: "The light-water-cooled technologies considered include the ABWR (Advanced Boiling Water Reactor), the ESBWR (Economic Simplified Boiling Water Reactor), the AP-1000 (Advanced Passive PWR), the IRIS (International Reactor Innovative and Secure), and the ACR-700 (Advanced CANDU Reactor). The ABWR is a single unit, 4300 MWt, 1500 MWe reactor. The

ESBWR is a similar BWR, single unit, 4000 MWt, 1390 MWe. The AP-1000 pressurized-water reactor single unit specifications are 3400 MWt and 1117-1150 MWe. The IRIS is a three module pressurized-water reactor configuration with a total of 3000 MWt and 1005 MWe. And the ACR-700 is a twin unit, 3964 MWt, 1462 MWe, light-water-cooled reactor with a heavy-water moderator. There were two gas-cooled reactor technologies considered in the PPE development. These gas-cooled reactor technologies are the GT-MHR (Gas Turbine-Modular Helium Reactor), and the PBMR (Pebble Bed Modular Reactor). The GT-MHR is a four module, 2400 MWt, 1150 MWe gas-cooled reactor. The PBMR is an eight module, 3200 MWt, 1280 MWe gas-cooled reactor." Section 1.3.1.4 of the SSAR says, in the second paragraph: "…For example, for single reactor units, the types considered represented capacities ranging from 160 MWe to 1500 MWe. In order to facilitate comparison between the different plant types in the PPE, the number of units/modules of a specific reactor type was chosen, based on vendors recommended combinations, to approximate 1000 MWe. This resulted in "single-unit plants" with capacities in the range of 1005 MWe to 1500 MWe." SERI recommends the staff consider the phrase "… one or more new nuclear units …" as being a more accurate description consistent with the ESP application; this would be consistent with the staff's language on page 7-10, line 38. (AP-1)

Comment: Page 3-5, Line 10 - Some of the plant types have more than two reactor units; i.e., IRIS, 6 Reactors, GTMHR, 8 Reactors, PBMR, 16 Reactors, ACR-700, 4 Reactors. See comment 1 above. (AP-6)

Comment: Page 5-42, Line 10. Some of the plant types have more than two reactor units; i.e., IRIS, 6 Reactors, GT-MHR, 8 Reactors, PBMR, 16 Reactors, ACR-700, 4 Reactors. See comment 1 above. (AP-16)

Comment: Page 5-49, Line 9. "The purpose of SERI's requested action, issuance of the ESP, is for the NRC to determine whether the Grand Gulf ESP site is suitable for up to two new nuclear units by resolving certain safety and environmental issues before SERI incurs the substantial additional time and expense of designing and seeking approval to construct such units at the site." Page xxiii, Lines 40 through 42 – "This EIS addresses the potential environmental impacts resulting from construction and operation of up to two new nuclear units at the proposed and alternative sites." Page xxiv, Lines 10 through 12 – "the staff determined and evaluated the potential environmental impact of constructing and operating up to two new nuclear units at the Grand Gulf ESP site." Some of the plant types have more than two reactor units; i.e., IRIS, 6 Reactors, GT-MHR, 8 Reactors, PBMR, 16 Reactors, ACR-700, 4 Reactors. Clarification is needed in the EIS to define what the NRC means by two nuclear units. In a footnote in the SSAR PPE Table 1.3-1: "The values in brackets reflects the values corresponding to a plant that is twice the vendor's specified standard size plant, i.e., two ABWR units, two AP1000 units, six IRIS units, two sets of four GT-MHR modules, two sets of eight PBMR modules and two twin ACR-700 units..." Section 3.0 of the ER states: "…The

evaluations of the potential environmental effects of the plant are based on bounding information from the Plant Parameters Envelope (PPE) presented in Table 3.0-1 through Table 3.0-8. A description of the development and intended use of the PPE is provided in Section 1.3 of the Site Safety Analysis Report, Part 2 of this Application for an Early Site Permit." Section 1.3 of the SSAR states: "The light-water-cooled technologies considered include the ABWR (Advanced Boiling Water Reactor), the ESBWR (Economic Simplified Boiling Water Reactor), the AP-1000 (Advanced Passive PWR), the IRIS (International Reactor Innovative and Secure), and the ACR-700 (Advanced CANDU Reactor). The ABWR is a single unit, 4300 MWt, 1500 MWe reactor. The ESBWR is a similar BWR, single unit, 4000 MWt, 1390 MWe. The AP-1000 pressurized-water reactor single unit specifications are 3400 MWt and 1117-1150 MWe. The IRIS is a three module pressurized-water reactor configuration with a total of 3000 MWt and 1005 MWe. And the ACR-700 is a twin unit, 3964 MWt, 1462 MWe, light-water-cooled reactor with a heavy-water moderator. There were two gas-cooled reactor technologies considered in the PPE development. These gas-cooled reactor technologies are the GT-MHR (Gas Turbine-Modular Helium Reactor), and the PBMR (Pebble Bed Modular Reactor). The GT-MHR is a four module, 2400 MWt, 1150 MWe gas-cooled reactor. The PBMR is an eight module, 3200 MWt, 1280 MWe gas-cooled reactor." Section 1.3.1.4 of the SSAR says, in the second paragraph: "…For example, for single reactor units, the types considered represented capacities ranging from 160 MWe to 1500 MWe. In order to facilitate comparison between the different plant types in the PPE, the number of units/modules of a specific reactor type was chosen, based on vendors recommended combinations, to approximate 1000 MWe. This resulted in "single-unit plants" with capacities in the range of 1005 MWe to 1500 MWe." SERI recommends the staff consider the phrase "… one or more new nuclear units …" as being a more accurate description consistent with the ESP application; this would be consistent with the staff's language on page 7-10, line 38. (AP-18)

Comment: Page 5-50, Line 39. the DEIS states: "The purpose of SERI's requested action, issuance of the ESP, is for the NRC to determine whether the Grand Gulf ESP site is suitable for up to two new nuclear units by resolving certain safety and environmental issues before SERI incurs the substantial additional time and expense of designing and seeking approval to construct such units at the site." Page xxiii, Lines 40 through 42 – "This EIS addresses the potential environmental impacts resulting from construction and operation of up to two new nuclear units at the proposed and alternative sites." Page xxiv, Lines 10 through 12 – "the staff determined and evaluated the potential environmental impact of constructing and operating up to two new nuclear units at the Grand Gulf ESP site." Some of the plant types have more than two reactor units; i.e., IRIS, 6 Reactors, GT-MHR, 8 Reactors, PBMR, 16 Reactors, ACR-700, 4 Reactors. Clarification is needed in the EIS to define what the NRC means by two nuclear units. In a footnote in the SSAR PPE Table 1.3-1: "The values in brackets reflects the values corresponding to a plant that is twice the vendor's specified standard size plant, i.e., two ABWR units, two AP1000 units, six IRIS units, two sets of four GT-MHR modules, two sets of eight PBMR modules and two twin ACR-700 units..." Section 3.0 of the ER states: "…The

evaluations of the potential environmental effects of the plant are based on bounding information from the Plant Parameters Envelope (PPE) presented in Table 3.0-1 through Table 3.0-8. A description of the development and intended use of the PPE is provided in Section 1.3 of the Site Safety Analysis Report, Part 2 of this Application for an Early Site Permit." Section 1.3 of the SSAR states: "The light-water-cooled technologies considered include the ABWR (Advanced Boiling Water Reactor), the ESBWR (Economic Simplified Boiling Water Reactor), the AP-1000 (Advanced Passive PWR), the IRIS (International Reactor Innovative and Secure), and the ACR-700 (Advanced CANDU Reactor). The ABWR is a single unit, 4300 MWt, 1500 MWe reactor. The ESBWR is a similar BWR, single unit, 4000 MWt, 1390 MWe. The AP-1000 pressurized-water reactor single unit specifications are 3400 MWt and 1117-1150 MWe. The IRIS is a three module pressurized-water reactor configuration with a total of 3000 MWt and 1005 MWe. And the ACR-700 is a twin unit, 3964 MWt, 1462 MWe, light-water-cooled reactor with a heavy-water moderator. There were two gas-cooled reactor technologies considered in the PPE development. These gas-cooled reactor technologies are the GT-MHR (Gas Turbine-Modular Helium Reactor), and the PBMR (Pebble Bed Modular Reactor). The GT-MHR is a four module, 2400 MWt, 1150 MWe gas-cooled reactor. The PBMR is an eight module, 3200 MWt, 1280 MWe gas-cooled reactor." Section 1.3.1.4 of the SSAR says, in the second paragraph: "…For example, for single reactor units, the types considered represented capacities ranging from 160 MWe to 1500 MWe. In order to facilitate comparison between the different plant types in the PPE, the number of units/modules of a specific reactor type was chosen, based on vendors recommended combinations, to approximate 1000 MWe. This resulted in "single-unit plants" with capacities in the range of 1005 MWe to 1500 MWe." SERI recommends the staff consider the phrase "… one or more new nuclear units …" as being a more accurate description consistent with the ESP application; this would be consistent with the staff's language on page 7-10, line 38. (AP-22)

Comment: Page 3-1, Lines 9 & 10 - the NRC says: "...constructing and operating up to two new nuclear units." Some of the plant types have more than two reactor units; i.e., IRIS, 6 Reactors, GT-MHR, 8 Reactors, PBMR, 16 Reactors, ACR-700, 4 Reactors. See Comment 1 above. (AP-4)

Comment: Page 5-55, Line 4, the DEIS states: "The purpose of SERI's requested action, issuance of the ESP, is for the NRC to determine whether the Grand Gulf ESP site is suitable for up to two new nuclear units by resolving certain safety and environmental issues before SERI incurs the substantial additional time and expense of designing and seeking approval to construct such units at the site." Page xxiii, Lines 40 through 42 – "This EIS addresses the potential environmental impacts resulting from construction and operation of up to two new nuclear units at the proposed and alternative sites." Page xxiv, Lines 10 through 12 – "the staff determined and evaluated the potential environmental impact of constructing and operating up to two new nuclear units at the Grand Gulf ESP site." Some of the plant types have more than two reactor units; i.e., IRIS, 6 Reactors, GT-MHR, 8 Reactors, PBMR, 16 Reactors, ACR-700,

4 Reactors. Clarification is needed in the EIS to define what the NRC means by two nuclear units. In a footnote in the SSAR PPE Table 1.3-1: "The values in brackets reflects the values corresponding to a plant that is twice the vendor's specified standard size plant, i.e., two ABWR units, two AP1000 units, six IRIS units, two sets of four GT-MHR modules, two sets of eight PBMR modules and two twin ACR-700 units..." Section 3.0 of the ER states: "…The evaluations of the potential environmental effects of the plant are based on bounding information from the Plant Parameters Envelope (PPE) presented in Table 3.0-1 through Table 3.0-8. A description of the development and intended use of the PPE is provided in Section 1.3 of the Site Safety Analysis Report, Part 2 of this Application for an Early Site Permit." Section 1.3 of the SSAR states: "The light-water-cooled technologies considered include the ABWR (Advanced Boiling Water Reactor), the ESBWR (Economic Simplified Boiling Water Reactor), the AP-1000 (Advanced Passive PWR), the IRIS (International Reactor Innovative and Secure), and the ACR-700 (Advanced CANDU Reactor). The ABWR is a single unit, 4300 MWt, 1500 MWe reactor. The ESBWR is a similar BWR, single unit, 4000 MWt, 1390 MWe. The AP-1000 pressurized-water reactor single unit specifications are 3400 MWt and 1117-1150 MWe. The IRIS is a three module pressurized-water reactor configuration with a total of 3000 MWt and 1005 MWe. And the ACR-700 is a twin unit, 3964 MWt, 1462 MWe, light-water-cooled reactor with a heavy-water moderator. There were two gas-cooled reactor technologies considered in the PPE development. These gas-cooled reactor technologies are the GT-MHR (Gas Turbine-Modular Helium Reactor), and the PBMR (Pebble Bed Modular Reactor). The GT-MHR is a four module, 2400 MWt, 1150 MWe gas-cooled reactor. The PBMR is an eight module, 3200 MWt, 1280 MWe gas-cooled reactor." Section 1.3.1.4 of the SSAR says, in the second paragraph: "…For example, for single reactor units, the types considered represented capacities ranging from 160 MWe to 1500 MWe. In order to facilitate comparison between the different plant types in the PPE, the number of units/modules of a specific reactor type was chosen, based on vendors recommended combinations, to approximate 1000 MWe. This resulted in "single-unit plants" with capacities in the range of 1005 MWe to 1500 MWe." SERI recommends the staff consider the phrase "… one or more new nuclear units …" as being a more accurate description consistent with the ESP application; this would be consistent with the staff's language on page 7-10, line 38. (AP-25)

Comment: DEIS Page 1-4 DEIS Line 39, the DEIS states: "The purpose of SERI's requested action, issuance of the ESP, is for the NRC to determine whether the Grand Gulf ESP site is suitable for up to two new nuclear units by resolving certain safety and environmental issues before SERI incurs the substantial additional time and expense of designing and seeking approval to construct such units at the site." Page xxiii, Lines 40 through 42 – "This EIS addresses the potential environmental impacts resulting from construction and operation of up to two new nuclear units at the proposed and alternative sites." Page xxiv, Lines 10 through 12 – "the staff determined and evaluated the potential environmental impact of constructing and operating up to two new nuclear units at the Grand Gulf ESP site." Some of the plant types have more than two reactor units; i.e., IRIS, 6 Reactors, GT-MHR, 8 Reactors, PBMR,

16 Reactors, ACR-700, 4 Reactors. Clarification is needed in the EIS to define what the NRC means by two nuclear units. In a footnote in the SSAR PPE Table 1.3-1: "The values in brackets reflects the values corresponding to a plant that is twice the vendor's specified standard size plant, i.e., two ABWR units, two AP1000 units, six IRIS units, two sets of four GT-MHR modules, two sets of eight PBMR modules and two twin ACR-700 units..." Section 3.0 of the ER states: "…The evaluations of the potential environmental effects of the plant are based on bounding information from the Plant Parameters Envelope (PPE) presented in Table 3.0-1 through Table 3.0-8. A description of the development and intended use of the PPE is provided in Section 1.3 of the Site Safety Analysis Report, Part 2 of this Application for an Early Site Permit." Section 1.3 of the SSAR states: "The light-water-cooled technologies considered include the ABWR (Advanced Boiling Water Reactor), the ESBWR (Economic Simplified Boiling Water Reactor), the AP-1000 (Advanced Passive PWR), the IRIS (International Reactor Innovative and Secure), and the ACR-700 (Advanced CANDU Reactor). The ABWR is a single unit, 4300 MWt, 1500 MWe reactor. The ESBWR is a similar BWR, single unit, 4000 MWt, 1390 MWe. The AP-1000 pressurized-water reactor single unit specifications are 3400 MWt and 1117-1150 MWe. The IRIS is a three module pressurized-water reactor configuration with a total of 3000 MWt and 1005 MWe. And the ACR-700 is a twin unit, 3964 MWt, 1462 MWe, light-water-cooled reactor with a heavy-water moderator. There were two gas-cooled reactor technologies considered in the PPE development. These gas-cooled reactor technologies are the GT-MHR (Gas Turbine-Modular Helium Reactor), and the PBMR (Pebble Bed Modular Reactor). The GT-MHR is a four module, 2400 MWt, 1150 MWe gas-cooled reactor. The PBMR is an eight module, 3200 MWt, 1280 MWe gas-cooled reactor." Section 1.3.1.4 of the SSAR says, in the second paragraph: "…For example, for single reactor units, the types considered represented capacities ranging from 160 MWe to 1500 MWe. In order to facilitate comparison between the different plant types in the PPE, the number of units/modules of a specific reactor type was chosen, based on vendors recommended combinations, to approximate 1000 MWe. This resulted in "single-unit plants" with capacities in the range of 1005 MWe to 1500 MWe." SERI recommends the staff consider the phrase "… one or more new nuclear units …" as being a more accurate description consistent with the ESP application; this would be consistent with the staff's language on page 7-10, line 38. (AP-2)

Comment: DEIS Page 3-6, Lines 7 & 8 - Some of the plant types have more than two reactor units; i.e., IRIS, 6 Reactors, GT-MHR, 8 Reactors, PBMR, 16 Reactors, ACR-700, 4 Reactors. See comment 1 above. (AP-7)

Comment: Page 3-6, Line 16 - Some of the plant types have more than two reactor units; i.e., IRIS, 6 Reactors, GTMHR, 8 Reactors, PBMR, 16 Reactors, ACR-700, 4 Reactors. See comment 1 above. (AP-8)

Response: *The U.S. Nuclear Regulatory Commission staff agrees that the terms are inconsistent in many places in the source documentation. Where appropriate, the environmental impact statement was changed to refer to "one or more new nuclear units" instead of "up to two new nuclear units." These comments resulted in a change to several sections of this environmental impact statement.*

Comment: The FEIS should incorporate a matrix that outlines potential environmental, economic and social risks, burdens and benefits, and their associated magnitude. (AZ-28)

Response: *The requested matrix of effects appears at the back of Chapters 4, 5, 9, and 10. This comment did not result in a change to the environmental impact statement.*

Comment: Page 8-39, Line 40. Recommend that "River Bend Units 1 and 2" be changed to "River Bend Station" since there is only one unit on-site. (AP-32)

Response: *The staff agrees with this comment and made the suggested change to Section 8.5.1.2.*

Comment: Page 8-45, Line 31. Recommend that "River Bend Units 1 and 2" be changed to "River Bend Station" since there is only one unit on-site. (AP-33)

Response: *The staff agrees with this comment and made the suggested change to Section 8.5.1.4.*

Comment: Page 8-10, Line 10-22. 1st paragraph. The information presented in this section, and primarily in this paragraph, could lead one to conclude that construction and operation of a coal fired power plant would lead to a HIGH impact on land use, rather than a moderate as stated in the DEIS. (AP-31)

Response: *The staff believes that the land-use impacts described in Section 8.2.2.1 can be characterized as having a MODERATE impact. This comment did not result in a change to the environmental impact statement.*

Comment: Page 7-10, Line 39. Cumulative Impacts. The "duration of the proposed action" is listed as "from 2030 to 2070." Since this section is summarizing impact conclusions for both construction and operation, the initiating time could/should precede 2030. It may be better to use the phrase "(construction period plus 40 years of operation)" rather than trying to encompass calendar years. (AP-29)

Response: *The suggested wording was used. This comment resulted in a change to Section 7.9.*

Subject: Emergency Preparedness

Comment: I want to mention an additional aspect of safety concerns, especially for NRC readers who may not have driven past the GGNS. Since my first drive past the plant years ago through June 28, 2005, there has been an "evacuation route" sign not far beyond the plant (farther out in the country, toward the Mississippi River) which points evacuees BACK PAST THE PLANT in order to escape a disaster. This time I learned that the sign points that way because the road beyond the plant floods in heavy rains and cannot be used for evacuation to the main highway when flooded. (AO-1)

Comment: Because GGNS tax revenues have been diverted by state law from Claiborne County to about 40 other counties, no money has been available to build a viable road and bridges to provide an arguably defensible escape route to the north instead of back past the plant. The tax diversion makes this an environmental justice issue as well. This site is not safe for one plant, never mind for two. (Two or three side roads are not marked as to whether they have an outlet to the main highway - a special danger to tourists unfamiliar with the area who might get caught at Grand Gulf Military Park, beyond the plant from Port Gibson.) (AO-2)

Comment: Of particular concern is the need to aggressively engage our citizens in emergency planning. The need for effective warning devices in our population centers, and the need for interoperable communications between local first responders. (AU-5)

Comment: Of particular concern is the need to aggressively engage our citizens in emergency planning. The need for effective warning devices in our population centers, and the need for interoperable communications between local first responders. (B-5)

Response: *Emergency preparedness is outside the scope of the environmental review, but is evaluated in the Grand Gulf early site permit safety evaluation report (NRC 2005). The safety evaluation report is available at U.S. Nuclear Regulatory Commission's website, www.nrc.gov. In accordance with 10 CFR 52.18, the Commission determines in consultation with the Federal Emergency Management Agency, whether the information submitted by an early site permit applicant indicates that there are physical characteristics that could pose any significant impediment to the development of emergency plans. The staff determined in the safety evaluation report for the Grand Gulf early site permit site that no such impediments are present.*

The emergency planning issues that were raised during the environmental review were forwarded to the appropriate U.S. Nuclear Regulatory Commission safety project manager for consideration and appropriate action. These comments did not result in a change to the environmental impact statement.

Comment: A thorough evaluation needs to be conducted and incorporated in the FEIS related to vulnerability zones; assessing the proximity of resident and local workers, (e.g., chemical facilities, etc.); and generate possible design alternatives for the proposed action. If such vulnerability zones overlap the population with unacceptable levels of concern, causing adverse health effects, primary and secondary prevention systems can be advocated. (AZ-14)

Response: *Emergency preparedness is outside the scope of the environmental review but is evaluated in the Grand Gulf early site permit safety evaluation report (NRC 2005). The safety evaluation report is available at the U.S. Nuclear Regulatory Commission's website, www.nrc.gov. In accordance with 10 CFR 52.18, the U.S. Nuclear Regulatory Commission's staff determined in the final safety evaluation report for the Grand Gulf early site permit site, in consultation with the Federal Emergency Management Agency, that there are no physical characteristics that could pose significant impediments to the development of emergency plans. The term "vulnerability zone" is not one used in the U.S. Nuclear Regulatory Commission's regulations and guidance. The U.S. Nuclear Regulatory Commission uses emergency planning zones as the planning basis for response to radiological emergencies (10 CFR 50.47). The U.S. Nuclear Regulatory Commission is not the cognizant agency for non-radiological hazards and emergencies. This comment did not result in a change to the environmental impact statement.*

Comment: Further, in the twenty years of operation of GG I the county has not had sufficient funds to build the infrastructure to protect its citizenry in the event of an accident at the plant. The Claiborne County Sheriff's Department, "with a staff of only nine deputies…has concerns about the adequacy of its staffing to cover simultaneously its emergency responsibilities at GGNS as well as offsite evacuation." Claiborne County officials are concerned that the hospital is not adequately equipped to handle an emergency at the plant and also "believe their communications and transportation capability to evacuate patients is not adequate" (page 2-74). These are serious environmental justice and safety issues that should be addressed before consideration of an ESP goes forward. (AN-7)

Response: *Although the local hospital in Port Gibson does not have the full range of services available (Section 2.8.2.6), emergency plans for the Grand Gulf Nuclear Station itself rely on capabilities in Warren and Hinds counties. The local public officials in Claiborne and Jefferson counties clearly would prefer to have more medical and emergency response capability in their own jurisdiction, as also is discussed in Section 2.8.2.6. Emergency preparedness is outside the scope of the environmental review, but is evaluated in the Grand Gulf early site permit safety evaluation report (NRC 2005). The safety evaluation report is available at the U.S. Nuclear Regulatory Commission's website, www.nrc.gov. The U.S. Nuclear Regulatory Commission evaluates emergency plans for nuclear power reactors to determine when there is reasonable assurance that adequate protective measures can and will be taken in the event of a radiological emergency. The Commission must determine, in consultation with the Federal*

Emergency Management Agency, whether there is no significant impediment to the development of emergency plans. The determination was made during the Grand Gulf early site permit safety review. The emergency planning issues that were raised during the environmental review were forwarded to the appropriate U.S. Nuclear Regulatory Commission safety project manager for consideration and appropriate action. This comment did not result in a change to the environmental impact statement.

Comment: And a second point I wanted to address, in terms of safety evaluation, I know Mr. Raj had talked about how he – that evaluation was based on information from state and local agencies. And I'm aware that there were two affidavits filed, one by the police chief at the time stating that, in the event of an emergency, that he felt inadequately prepared and supported to facilitate an emergency evacuation of the people of Claiborne County. And that the hospital administrator stated the same – something along the same lines, that should there be a nuclear accident and people need emergency medical attention for exposure to radiation, this hospital would be unprepared to address that. (N-2)

Response: *Emergency planning is addressed in Section 2.8.2.6, and the impacts of construction and operation on police, fire, and medical services are addressed in Sections 4.5.4.4 and 5.5.4.4, including the concerns expressed in the comment. This comment did not result in a change to the environmental impact statement.*

Comment: If a spill occurred what about the millions of people using the water of the Mississippi for drinking, transportation, farming, fisheries. Why is there no ferry from Port Gibson to St. Joseph for evacuation or emergency purposes? (Y-3)

Response: *Impacts from accidents are evaluated in Section 5.10 of the environmental impact statement and were found to be small. The radiological impacts to members of the public from the liquid effluent pathway during normal operations was found to be small in Section 5.9.2. It is extremely unlikely that contaminated liquids from a design basis or severe accident would reach the Mississippi River. In the Generic Environmental Impact Statement for License Renewal of Nuclear Plants (NRC 1996), the staff evaluated risks of a severe accident with basemat melt-through for current generation power plants and concluded that the risks associated with releases to groundwater are smaller than those for the air pathway, which was found to be small for advanced light water reactors. The reasoning behind this conclusion is set forth in Section 5.10.2.3 of the environmental impact statement. The staff expects that groundwater pathway risks associated with advanced reactors would be smaller than those for current generation reactors. Emergency preparedness is outside the scope of the environmental review, but is evaluated in the Grand Gulf early site permit safety evaluation report (NRC 2005). The safety evaluation report is available at the U.S. Nuclear Regulatory Commission's website, www.nrc.gov. In addition, in the safety evaluation report, the staff determined, in consultation with the Federal Emergency Management Agency, that there are no*

physical characteristics that could pose significant impediments to the development of emergency plans. This comment did not result in a change to the environmental impact statement.

Comment: We are concerned that Jefferson County has not been actively involved in participating in this radiological emergency planning activity. My purpose here today is to express our interest in being more actively involved in this process in the future. (AU-3, B-3)

Comment: The Jefferson County Board of Supervisors and the citizens of Jefferson County are concerned about the adequacy of emergency response planning in the vicinity of the nuclear reactor and want to assure that off-site radiological emergency planning is effective and can be fully implemented in a timely and coordinated manner during emergency events. Our review of the Stennis Institute white paper has illustrated, due to the complexity of these issues, the importance of preplanning for emergency events, raises our awareness of the importance of these issues to our community, and motivates us to become increasingly active in planning for the safety of our citizens. (AU-4, B-4)

Comment: Second, the current warning system for residents is woefully inadequate. My parents, for example can't even hear the sirens. They have no idea what the escape routes are, they don't usually listen to the radio or watch T.V., and would have great difficulty getting any information in a timely manner. (W-3)

Response: *The concerns identified by this comment have been passed to cognizant staff who are conducting the emergency planning portion of the safety review. Emergency preparedness is outside the scope of the environmental review, but is evaluated in the Grand Gulf early site permit safety evaluation report (NRC 2005). The safety evaluation report is available at the U.S. Nuclear Regulatory Commission's website, www.nrc.gov. In addition, in the safety evaluation report, the staff determined, in consultation with the Federal Emergency Management Agency, that there are no physical characteristics that could pose significant impediments to the development of emergency plans. These comments did not result in a change to the environmental impact statement.*

Comment: The local communities simply don't have anywhere near the needed resources to cope with any disaster that may occur. Claiborne county has been designated as a “health professional shortage area” by The Mississippi State Department of Health Office of Science (http://www.health.ms.gov/county/Claiborne.pdf) (X-3)

Response: *The environmental impact statement has been updated to include the designation of Claiborne County. This comment resulted in a change to Section 2.8.2.6.*

Comment: The information that is contained in the document suggests that the peculiar economic situation faced by the host community makes it unlikely that an emergency at the plant can be addressed in the necessary manner. (AY-2)

Response: *This comment contained no new information for additional analysis. This comment did not result in a change to the environmental impact statement.*

Subject: Energy Generation Ownership

Comment: I can't believe the United States would even consider letting China buy our gas companies or any properties that are of national concern. Why are we giving away our Country!!!!!! What about the security risks to us? We give and give taking away from the people of the United States and shouldn't we be thinking about how this is going to affect our nation? It seems to me that money has become the main issue when it comes [to] the United States and their decisions. Let's keep our country safe and take care of our needs before we consider one more way to give our nation away. Stop handing things over to foreigners; their agenda is [not] in our best interest. (AD-1)

Response: *The comment provides no new information for additional analysis. This comment did not result in a change to the environmental impact statement.*

Subject: Environmental Justice

Comment: The DEIS should contain racial and income demographic information in chart and narrative forms early in the report (Section 2.8, Socioeconomics). Although the information is illustrated in map form in Figure 2-12 and Figure 2-13, it would be beneficial for readers if it were presented in chart form with narrative explanations. For instance, the following demographics data should be included early in the report. According to the 2000 Census, African Americans are 12.3% of the population in the U.S., 36.3% of the population in Mississippi, 84.1% in Claiborne County and 80% in Port Gibson. (AW-8)

Comment: Also in the report, I think it would help in the front of the report if you would actually list the racial demographics so that your readers can see it more clearly. According to the 2000 census, African Americans are 12.3 percent of the population of the U.S., 36.3 percent of the population in Mississippi, 84.1 percent in Claiborne County, and 80 percent in Port Gibson. If that could be put in a chart form, I think it would help people in their analyses of the environmental – on the racial demographics of the report. (E-3)

Response: *A table has been added to Section 2.8.1 to provide the requested data. These comments resulted in a change to Section 2.8.1.*

Comment: The DEIS also does not address the impact on real estate values, particularly regarding residential property impacts to the environmental justice population, nor does the DEIS assess the impact on commercial real estate values in close proximity. Many of the residents within the immediate project area are low-income, and may not have much capacity to easily move away from their local community if they consider the additional nuclear power facilities unacceptable neighboring property. Research on existing real estate appreciation and depreciation since the original facility was constructed would be helpful, and projected appreciation/depreciation of real estate values would be important to include in the FEIS. (AZ-27)

Response: *Because of the uncertainties associated with residence choice of immigrating population, there is no reasonable basis on which to project future property values in the area surrounding the plant. Increases in population associated with facility construction and operation, even if fairly modest, would provide some support for local property values, for example. It also is possible to say that average mortgage loan amounts (and presumably, the associated market value of property) have generally increased in all local jurisdictions during the last 5 years, suggesting that the presence of the current Grand Gulf Nuclear Station is not a significant barrier to property values and sales. Property value changes have been added to the discussion in Sections 2.8.2.5, 4.5.4.3, 5.1.1, and 5.5.4.3.*

Comment: Environmental Justice: Based on the DEIS, the EJ evaluation was conducted based on guidance from the NRC Office of Nuclear Reactor Regulation Office. The document also states that conducting an EJ assessment is not a requirement for the NRC, but a voluntary undertaking. As part of the EJ assessment, the DEIS examines low-income and minority populations within a 50-mile (80 km) radius of the Grand Gulf Site, encompassing 16 counties in Mississippi and nine parishes in Louisiana. Both Mississippi and Louisiana have high minority and low-income populations within the potentially affected area. However, Claiborne, Jefferson, and Hinds counties have the heaviest concentration of exceptionally high minority populations, while Claiborne, Copiah, Jefferson County, Concorda Parish and Tensas Parish have the heaviest concentrations of low-income populations. The Grand Gulf Site is located in Claiborne County which has both the highest minority and low-income populations. The DEIS includes a GIS map of the counties and parishes with EJ considerations. While it is important to map all of the potential EJ areas in a 50-mile radius of the site, it would also be helpful to show in more detail the EJ areas that could face the most significant risk. For example, provision of GIS or aerial maps of EJ populations within close proximity to the Grand Gulf site (i.e., 0-5 miles) would be useful. The map(s) should indicate the distance of the closest residents to the current facility and the proposed expansion. Information regarding residential distribution and location is beneficial for community and regulatory assessment. (AZ-5)

Response: *Census mapping of minority and low-income populations at the census block group level shows that the entire area surrounding the Grand Gulf early site permit site out to*

8 km (5 mi) is within census block groups that are characterized as "minority" block groups. While it is not possible to guess whether the nearest residents are minority groups, the appearance of nearby housing stock suggests a mix of upper and lower-income occupants. Nothing significant would be gained by mapping the nearest housing stock along Grand Gulf road. This comment did not result in a change to the environmental impact statement.

Comment: Judging from the experience in Illinois, the institution of an unregulated merchant nuclear generating unit would better serve the profit motives of Entergy than the general welfare of the residents of Claiborne County, who would be burdened with the risks incumbent in hosting a nuclear power plant. Because Claiborne County is populated predominantly with minority and low-income people, these groups would be disproportionately impacted—probably adversely—by the addition of a new reactor at the GGNS. (AM-19)

Response: *It is not clear from this comment what experience in Illinois is being referenced. The Illinois experience with deregulation and taxes in Dewitt County is not directly germane. There, under deregulation, the management of an existing nuclear plant was able to negotiate a reduction in assessed property value because the basis for assessed value changed. In the case of the Grand Gulf site, no change in taxation of the existing plant is contemplated, so it will continue to generate revenue under existing provisions of the Mississippi State tax code. However, a new nuclear power plant, if it were treated as an ordinary industrial asset because of its merchant plant status, could yield considerable new tax revenue to local government. This likely would be true even if the assessed property value were negotiated downward or System Energy Resources, Inc. made payments to the local government in lieu of taxes. Potential impacts on minority and low-income persons are discussed in Sections 4.7 and 5.7. This comment did not result in a change to the environmental impact statement.*

Comment: EJ Benefits and Burdens: EJ evaluations should consider both the benefits and burdens and risks associated with the project, as it relates to EJ populations and the population at large. The DEIS discusses some of the potential risks and benefits of the project such as State Tax Revenue to the Claiborne County. Because of a Mississippi State Tax Code legislatively enacted in 1988, Claiborne County property tax revenue from the nuclear station was re-appropriated to more than 40 other Mississippi counties in Entergy's electricity distribution area. It is unclear how much of this revenue is paid per year to the State, relative to the amount that is then sent to Claibome County for general use. In addition, it appears that some local, municipal infrastructure and emergency services within Claibome County may not be adequately prepared for potential accidents, additional influx of workers, etc. (AZ-7)

Response: *The analysis in the environmental impact statement of taxes (Sections 2.8.2.3, 4.5.3.2, and 5.5.3.2) discusses the conditions under which the governments and populace of Claiborne County and Port Gibson may benefit from additional tax receipts as a result of a new nuclear power plant being constructed and operated at the Grand Gulf early site permit site.*

Section 2.8.2.3 states how the existing taxes are allocated, with Claiborne County receiving roughly a third of total property taxes collected by the state ($7.8 million out of a minimum of $20 million, $3 million of which is specifically for participation in the Grand Gulf Nuclear Station offsite emergency plan). However, the relative size of existing tax payments related to Grand Gulf Nuclear Station to local governments in Claiborne County versus other jurisdictions under the Mississippi Code provides limited assistance in determining what the future tax benefits would be from a future facility because the current law is very narrowly written. For example, it contains specific dollar amounts allocated to Port Gibson and Claiborne County for emergency management. It appears that the same allocation would also apply to a new facility, if it were generally treated in the same way for tax purposes. However, the postulated new facility is clearly intended in the applicant's environmental report as a merchant plant, so it is unclear if the provisions of the tax law would apply to a nuclear facility constructed for this purpose. The special nuclear plant tax provision applies only to nuclear power plants owned or operated by a utility rendering electric service in the State. But, as proposed by SERI, the facility instead would be treated as an ordinary industrial asset. Because of the uncertainties associated with residence choice of in-migrating population, there is no reasonable basis on which to project future property values in the area surrounding the plant. Increases in population associated with facility construction and operation, even if fairly modest, would provide some support for local property values, for example. It also is possible to say that average mortgage loan amounts (and presumably, the associated market value of property) have generally increased in all local jurisdictions during the last few years, suggesting that the presence of the current Grand Gulf Nuclear Station is not a significant barrier to property values and sales (see Section 5.1.1). Property value changes have been added to the discussion in Section 2.8.2.5, 4.5.4.3, and 5.5.4.3. The requested matrix of effects appears in the summary sections of Chapters 4, 5, 9, and 10.

Comment: Environmental Justice Issues Adversely Impact Claiborne County's Radiological Emergency and Security Response Capabilities. The DEIS states "It is not clear how the new nuclear facility would be treated for property tax purposes, so it is not clear whether Claiborne County would receive property taxes, sales, and use taxes and public monies commensurate with the cost of its additional emergency management and public service obligations. The net financial burden may fall on local residents and taxpayers, most of whom are minority and low-income persons. NIRS contends that the NRC finding that a predominantly African American community (84%) with a significant portion living at or below the poverty line (32%) could be disproportionately and adversely impacted by the siting of a new nuclear power station in context of a peculiar Mississippi State Tax Code which discriminates against the population of Claiborne County by distributing 70% of the property tax assessment of any nuclear power generating facility to 44 other Mississippi counties in Entergy's distribution system. This staff finding underscores the NIRS prior finding that Entergy's Environmental Report fails to evaluate the economic impacts on Claiborne County by imposing additional and undue financial burdens on the County for emergency preparedness affecting effective public notification, sheltering and

evacuation, local law enforcement response capabilities to both an radiological accident or intentional act of sabotage and/or attack and the consequential radiological emergency response by local and county medical authorities. This burden to the public health, safety and security would be exacerbated by an additional commercial nuclear power state under the state of Mississippi's discriminatory state tax code policy as acknowledged by the DEIS. Rather than discount this burden, NRC should reject the SERI application. The resulting economic burden is just as likely to translate into dysfunctional and inoperable emergency response and unavailable local law enforcement services or at best significantly inadequate support in increased security needs of the expansion of the Grand Gulf nuclear power station site. The SERI application should therefore be rejected. (AR-6)

Comment: Time want [won't] permit me to further go into a depth discussion of the Affected Environment; however, based upon the in lieu of the payment of county, municipal, and district ad valorem taxes, the first grand gulf nuclear power plant pays the State Tax Commission a sum based on the assessed value of the nuclear generating plant, and are thereby distributed. This distribution of in lieu payment is Racist, and in fact Discriminates against the predominately Black Claiborne County. (AV-3)

Comment: Given the severity of the state of Mississippi misconduct, it would be unreasonable in the extreme for the United States Nuclear Regulatory Commission to overlook the obvious, and neglect to take appropriate measure to prevent further actual discrimination against the predominately Black Claiborne County in connection with the second Grand Gulf Nuclear Power Plant. (AV-4)

Response: *The analysis in the environmental impact statement of taxes (Sections 2.8.2.3, 4.5.3.2, and 5.5.3.2) discusses the conditions under which the governments and populace of Claiborne County and Port Gibson would benefit from additional tax receipts as a result of a new nuclear power plant being constructed and operated at the Grand Gulf early site permit site. Additional analysis has been conducted by the NRC staff since the draft EIS was issued which concludes that Claiborne County would receive at least $7.8 million in annual in-lieu-of-tax payments if a new facility were treated the same as the existing GGNS for tax purposes, and possibly much more if it were treated as an ordinary industrial asset. Section 5.7.3 discusses the potential adverse impact if (a) the local government were to receive only minimal revenue from a new plant and (b) there were a large increase in local population related to facility construction and operation. The U.S. Nuclear Regulatory Commission has no authority to control distribution of tax revenues from construction and operation of a commercial nuclear power facility. These comments did not result in a change to the environmental impact statement.*

Comment: Anyone that has this environmental impact statement, look on page 10.7 in Table 10.2 and see what it says about environmental justice issues. It essentially puts it off on the state and just wipes it off the slate, and that's a disgrace. I don't think there's any excuse for that. (G-8)

Response: *The comment has no specific recommendations for additional analysis. Detailed analysis supporting the summary conclusions in Chapter 10 is contained in Chapters 2, 4, 5, and 8. This comment did not result in a change to the environmental impact statement.*

Comment: According to this environmental impact statement, the first Grand Gulf nuclear power plant did nothing, absolutely nothing, to change and affect the minority and low income population, poverty, housing, medical and unemployment rate with the county, Claiborne County, where the first Grand Gulf nuclear power plant is located. (D-2)

Comment: This distribution of in-lieu payment is racist and, in fact, discriminates against the predominantly black Claiborne County. Now given the severity—given the severity of the state of Mississippi misconduct, it would be unreasonable in the extreme for the United States Nuclear Regulatory Commission to overlook the obvious and neglect to take appropriate measures to prevent further actual discrimination against the predominantly black Claiborne County in connection with the second Grand Gulf nuclear power plant. (D-3)

Comment: Environmental justice (EJ) is another issue of importance. Claiborne County is a low income area with the majority of the population being African-American. While the county has the highest risk from the dangers of the plant, the state tax structure is such that Claiborne County does not receive the majority of the taxes from the plant (pages 2-68 and 2-69). While table 10-2 (page 10-7) states that "adverse socioeconomic impacts could be disproportionate on local minority/low income community," it also states that mitigation of this effect is not applicable because the problem is dependent on actions of the State. Rather than waiting to grant the ESP until this important issue is settled, the staff essentially "writes it off." This is inexcusable. (AN-6)

Comment: Now I remember back when I was a boy, there were, you know, laundromats all around Philadelphia and Meridian where signs were up that said, Whites Only. And, you know, frankly, I don't see any difference between those signs in Philadelphia, and the fact that Claiborne County is peculiarly singled out and it's 84 percent African American population to subsidize the electricity from the Grand Gulf Nuclear Power Station. (H-2)

Comment: Charges of environmental racism will be injected into these proceedings. We believe the charge is inaccurate and unfair. Entergy owns and operates nuclear plants in many locations that are not in minority communities. Moreover, the mayor of Port Gibson, the county supervisor and the Entergy vice president at Grand Gulf (George A. Williams), and

Congressman Bennie Thompson are all African-American and support a new plant. The elected representatives of the area populations clearly have the best interests of their constituents in mind. They are not racists. City aldermen and the County Board of Supervisors also support a new plant. Although we do not have exact numbers, anecdotal evidence suggests that many African American residents in Port Gibson and Claiborne County want the project.

The African American Environmentalist Association supports the new unit or units and we are an African American-led environmental organization. We would not support the ESP if we believed it was a racist proposal. Our long history of fighting environmental injustice qualifies us to conclude that the project is not racist. The project will benefit African American communities in Port Gibson, Claiborne County, the state of Mississippi and African American communities downwind of the facility in the Eastern part of the United States. (AW-3)

Response: *The focus of an environmental justice review under the Commission's Policy Statement on the Treatment of Environmental Justice Matters in U.S. Nuclear Regulatory Commission Regulatory and Licensing Actions (69 FR 52040) is on identifying and weighing disproportionately significant and adverse environmental impacts on minority and low-income populations that may be different from the impacts on the general population. It is not a broad ranging or even limited review of allegations of racial discrimination. These comments provide no new information and did not result in a change to the environmental impact statement.*

Comment: The ROI is the geographical area considered in searching for candidate ESP sites. (AAEA [African American Environmental Association] concurs with the NRC staff findings that the impacts of a new unit or units at the River Bend site on minority and low-income populations would be SMALL. No adverse or disproportionately high impacts were identified. The city of Port Gibson and the residents of Claiborne County should be aggressively petitioning SERI to build the plant in their jurisdiction. There is no ironclad guarantee that the Grand Gulf location will be the site of the new plant. Stakeholders should be aware that the competitive climate for new nuclear facilities is increasing. (AW-7)

Response: *The comment provides no new information for additional analysis. This comment did not result in a change to the environmental impact statement.*

Comment: Claiborne County has higher than average poverty levels. The additional reactor would certainly provide more jobs to this impoverished area, but at a great cost. The money made could easily vanish to high medical bills later in life as the result of possible radiation exposure. (X-2)

Response: *The health consequences of normal operations and accidents are discussed in Sections 5.8, 5.9, and 5.10. Although these impacts are shown in terms of exposure and*

deaths due to cancer in the population rather than morbidity due to exposure, the effects shown are very small and likely mean that incidence of illness due to possible radiation exposure also would be very small. This comment did not result in a change to the environmental impact statement.

Comment: "Environmental Justice:" A new reactor could unfairly burden minorities and low-income populations, which have a disproportionately high representation in Claiborne County. According to the 2000 United States Census, Claiborne County is 84.1 percent African American, compared to 12.3 percent nationally; and 32.4 percent of individuals live below the poverty level, compared to 9.2 percent nationally. The National Association for the Advancement of Colored People (NAACP) has asked SERI to withdraw its ESP application over environmental justice concerns, and the Claiborne County Chapter of the NAACP has passed a resolution opposing the project. The local chapter of the NAACP was also a party to a petition to the NRC (along with Public Citizen, the Nuclear Information and Resource Service, and the Mississippi Chapter of the Sierra Club) to intervene in the licensing proceeding for the Grand Gulf ESP, proffering a contention that SERI's application did not adequately consider disproportionate adverse impacts on minority and low-income communities—the essence of the "environmental justice" issue—that might result from the project. Under the NRC's expedited licensing process and revised environmental justice policy, the petition was rejected. The draft EIS acknowledges the high concentration of minority and low-income persons around the GGNS (§ 2.10) and considers the possibility that a new reactor may not provide an economic benefit to the community (§ 5.7.3), but ultimately concludes that operation of a new reactor would produce only "minimal negative and disproportionate health impacts on minority and low-income members of the public" (pg. 5-41). Such a conclusion does not consider the increased risk of adverse health impacts from a nuclear accident at the GGNS that would be endured by the nearby residents were an additional reactor constructed. (AM-16)

Comment: A new reactor could unfairly burden minorities and low-income populations, which have a disproportionately high representation in Claiborne County. The draft EIS acknowledges the high concentration of minority and low-income persons around Grand Gulf and considers the possibility that a new reactor may not provide an economic benefit to the community, but ultimately concludes that operation of a new reactor would produce only "minimal negative and disproportionate health impacts on minority and low income members of the public." Such a conclusion does not consider the increased risk of adverse health impacts from a nuclear accident at Grand Gulf that would be endured by the nearby residents were an additional reactor constructed. (BB-3, BD-3, BG-3, BJ-4, BK-2, BL-3, MM-3)

Comment: The plant will be 1 mile from the Mississippi & there is insufficient discussion of security for the plant & the river. Since the attacks in London security should be even more of a concern. There are many minorities & poor people in the area & they can't afford to pick up the tab for security. (BF-4)

Comment: A new reactor could unfairly burden minorities and low-income populations, which have a disproportionately high representation in Claiborne County. The draft EIS acknowledges the high concentration of minority and low-income persons around Grand Gulf and considers the possibility that a new reactor may not provide an economic benefit to the community. Somehow the draft EIS concludes that operation of a new reactor would produce only "minimal negative and disproportionate health impacts on minority and low-income members of the public." Such a conclusion does not consider the increased risk of adverse health impacts from a nuclear accident at Grand Gulf that would be endured by the nearby residents were an additional reactor constructed. (BH-3)

Comment: As always, here is environmental racism, with the EIS acknowledgment of a high concentration of minority and low-income persons around Grand Gulf. The "minimal negative and disproportionate health impacts on minority and low-income members of the public" is too much, besides which the danger of a nuclear accident isn't even addressed. (BI-2)

Response: *The impacts of accidents on offsite populations are discussed in Section 5.10. The probability-weighted impacts of postulated accidents would be SMALL for any of the potential advanced light water reactor technologies for offsite populations if constructed and operated at the Grand Gulf early site permit site. Section 5.10 concludes that the potential dose rates are still much lower than with current generation reactors and well within risk levels specified by Commission regulations and safety goals. This comment did not result in a change to the environmental impact statement.*

Comment: EJ & Public Involvement: Based on the DEIS, it is unclear to what extent the public is involved in the proposed project, particularly the EJ populations that reside in close proximity to the site, in addition to the populations that are within the area of potential effect. The DEIS does not discuss the relationship between local EJ populations and the existing nuclear reactor. For example, the document does not give information regarding: types of efforts made to incorporate the EJ populations throughout the decision-making process; evaluating whether the EJ populations that currently reside both in close proximity and within the sphere of potential effect have a good relationship with the existing facility; whether the existing facility has been a good neighbor; whether there [have] been any problems with [the] current facility which have generated public concern; whether residents in close proximity are employed by the nuclear facility; and whether local residents are supportive of the proposed expansion? If the residents have concerns, how are they being addressed? For example, the DEIS does not mention the legal challenge filed by a coalition of citizens groups objecting to the project, nor does the document mention any efforts to communicate with potentially impacted EJ communities to address their concerns. This information should be incorporated into the FEIS. (AZ-8)

Response: *The U.S. Nuclear Regulatory Commission scoping meetings are announced in the Federal Register, on the U.S. Nuclear Regulatory Commission website, in local and regional*

newspapers, with posters on public bulletin boards near the meeting location, and on local radio and television stations at least 1 week before the public meeting. The U.S. Nuclear Regulatory Commission requests the assistance of tribal, church, and community leaders to disseminate the information to potentially affected groups. Participants in the scoping process are provided an opportunity to submit oral comments at the scoping meeting and written comments through a project e-mail address or by regular mail. Specifically, in the case of the Grand Gulf early site permit, announcements of public meetings were made in the Jackson (Mississippi) Clarion-Ledger and Port Gibson (Mississippi) Reveille. Press releases announcing the meetings were forwarded to the Arkansas Democrat, the Columbus (Mississippi) Telegram, Jackson (Mississippi) Clarion-Ledger, Port Gibson (Mississippi) Reveille, and Vicksburg (Mississippi) Post newspapers, and to WJTV (Jackson) and WVUE-TV (New Orleans). In addition to scoping meetings, at the request of U.S. Nuclear Regulatory Commission staff, the local county governments invited a number of local government and social services officials to additional meetings that were held with staff in Port Gibson, Fayetteville, and Vicksburg. At these meetings, the relationships between the existing Grand Gulf Nuclear Station facility and the community were specifically discussed, as were conditions of the local hospital, emergency management plans and execution, staffing and equipment of emergency management agencies, tax effort, and tax distributions. The organizations contacted are listed in Appendix B of the environmental impact statement, and the attendees and substance of the meetings appear in the trip report available on the Internet (www.nrc.gov/reading-rm/adams.html) at Accession No. ML050350147. The impacts on public services are discussed in Section 5.5.4. Additional language has been included in Section 5.7 to describe the outreach process.

Comment: The population living in the Grand Gulf region has long experienced elevated rates of poverty, unemployment, and lack of education. Moreover, it is a medically underserved area, placing it at increased health risk. (AT-6)

Response: *The U.S. Nuclear Regulatory Commission staff agrees with the commenter that the Grand Gulf region is an area with a high percentage of minority and low-income population. In addition, education attainment levels are low and unemployment rates are high relative to other parts of the state and the nation in Claiborne and Jefferson counties. The 2000 U.S. Census also indicates that average education levels of the adult population are lower in Claiborne County than in the state of Mississippi or the nation as a whole. A Mississippi Department of Public Health study in 2002 indicates that residents of Claiborne County obtain a significant proportion of hospital services in Vicksburg rather than locally (Berry, Spurlock, and Schmidt 2002), possibly indicating a limited level of service, a factor also commented on in Section 2.8.2.6 of the environmental impact statement. However, while in general these can be factors in increased health risk, mortality rates for Claiborne County residents and particularly for non-white residents are somewhat below corresponding rates in Mississippi as a whole and to some extent for the United States as a whole (see Section 2.10). The only significantly*

higher major cause of death in Claiborne County is accidents, not usually thought of as a pre-existing health risk. This comment did not result in a change to the environmental impact statement.

Comment: I am also concerned that the DEIS does not seem to have considered the fact that our environment includes all the people and things around us. The people of Entergy have not seen fit to employ African Americans or Claiborne County residents in representative numbers at GGNS. The people of Entergy have not seen fit to provide the training (itself or working with neighboring Alcorn State University) that would qualify additional African Americans or Claiborne County residents for technical or professional jobs at the plant. So even if GGNS were a safe place to work, given the waste and accident or terrorism issues, the human part of the GGNS environment is counterproductive to the welfare of the majority of the residents of the area and therefore to all. (AO-4)

Response: *Pursuant to 10 CFR 51.71 and 51.90, the environmental impact statement includes an analysis of the socioeconomic impacts of facility construction and operation, including availability of workers within the region. Moreover, in its Policy Statement on the Treatment of Environmental Justice Matters in NRC Regulatory and Licensing Actions (69 FR 52040), the Commission stated that "NRC believes that an analysis of disproportionately high and adverse impacts needs to be done as part of the agency's NEPA obligations to accurately identify and disclose all significant environmental impacts associated with a proposed action." In addition,*

> *as part of NEPA's mandate, agencies are required to look at the socioeconomic impacts that have a nexus to the physical environment (see 40 CFR 1508.8 and 1508.14). An environmental-justice-related socioeconomic impact analysis is pertinent when there is a nexus to the human or physical environment or if an evaluation is necessary for an accurate cost-benefits analysis (see One Thousand Friends of Iowa v. Mineta, 250 F. Supp. 2d 1064, 1072 (S.D. Iowa 2002)).*

However, the Commission concluded in the Private Fuel Storage proceeding that failure to receive a benefit is not an adverse and disproportionate environmental impact:

> *In our view, the executive order [concerning environmental justice], and NEPA generally, do not call for an investigation into disparate economic benefits as a matter of environmental justice. Even though money (or social services) from the PFS lease payments might make it easier for some to tolerate noise, cultural insult, and unsightliness near the facility, the payments don't 'mitigate' environmental harms in the sense of eliminating or minimizing them. We see*

> *nothing in the executive order or in NEPA to suggest that a failure to receive an economic benefit should be considered tantamount to a disproportionate environmental impact.*

The provision of training local workers for jobs at the postulated facility is a desirable action if an applicant for a construction permit or a combined license should decide to undertake it and may reduce the number of workers that would be needed from outside the region of interest, but this is not required to mitigate an adverse environmental or socioeconomic impact.

The staff evaluated environmental impacts from construction (see Section 4.0), operation (Section 5.0), the uranium fuel cycle (Section 6.1), transportation of unirradiated fuel, spent fuel, and waste (Section 6.2), and decommissioning (Section 6.3). Regarding disposal of spent fuel, the U.S. Nuclear Regulatory Commission's Waste Confidence Rule, found in 10 CFR 51.23, states:

> *the Commission has made a generic determination that, if necessary, spent fuel generated in any reactor can be stored safely and without significant environmental impacts for at least 30 years beyond the licensed life for operation (which may include the term of a revised or renewed license) of that reactor at its spent fuel storage basin or at either onsite or offsite independent spent fuel storage installations. Further, the Commission believes there is reasonable assurance that at least one mined geologic repository will be available within the first quarter of the twenty-first century, and sufficient repository capacity will be available within 30 years beyond the licensed life for operation of any reactor to dispose of the commercial high-level waste and spent fuel originating in such reactor and generated up to that time.*

In its Statement of Considerations for the 1990 update of the Waste Confidence Rule (55 FR 38472), the Commission addressed the impacts of the disposal of spent fuel discharged from the current fleet of reactors (operating under existing and renewed licenses) and from a new generation of operating reactors. Therefore, the current rule covers new reactors and applies to the staff's review of an early site permit or combined license application. The rule was last reviewed by the Commission in 1999, when it reaffirmed the findings in the rule (64 FR 68005, dated December 6, 1999). Furthermore, the Atomic Safety and Licensing Board presiding over the Grand Gulf early site permit proceeding has affirmed that the Waste Confidence Rule and its subsequent amendments clearly include waste produced by a new generation of reactors (SERI 2004).

Finally, regarding security and terrorism, the Commission's position is that malevolent acts, including terrorism, are remote and speculative and, thus, beyond the scope of a National Environmental Policy Act of 1969 review (Private Fuel Storage, L.L.C. 2002). Comments related to security, safety, and emergency preparedness are out of scope with respect to the

environmental analysis. However, these topics are addressed in the staff's safety evaluation report. This comment did not result in a change to the environmental impact statement.

Comment: EJ Assessment: Page 5-40, 5.7.1, states that "The staff found no unusual resource dependencies or practices, such as subsistence agriculture, hunting, or fishing, through which the populations could be disproportionately affected." This statement needs clarification. Does it mean that there is no subsistence resource dependence at all, or that the resource dependency is not unusual? Given that there are significant EJ populations in an area rich in fishing and hunting resources, one would assume that subsistence practices do exist. Low-income populations with economic limitations are likely to conduct some subsistence practices to feed their families. Consequently, the FEIS should incorporate information and analysis that support the findings in the document. Please clarify the type of analysis that was performed to reach these findings. Were independent organizations, (e.g., a university experienced with this specialized capability of researching subsistence), utilized in this analysis, and were there public meetings held with subsistence living as a topic of discussion with potentially impacted EJ populations? This type of information should be incorporated into the document. Please summarize the basis for the information in these statements. (AZ-6)

Response: *The statement does not mean there are no resource dependencies, but rather that the staff did not discover any unusual resource dependencies during its scoping process, in its interviews with local officials, or in its search of the literature on this matter. The staff has reviewed a study that, while not specific to the Mississippi River near the Grand Gulf early site permit site, does describe a pattern of subsistence fishing among minority and low-income individuals in the general region that may also be relevant to the Mississippi River near the early site permit site. In addition, the staff has reviewed additional documentation on the general pre-existing health status of the minority population in the Claiborne County area. These data are now provided in Section 2.10 of the environmental impact statement, but did not result in any findings of disproportionate impacts on minority and low-income populations (Section 5.7.1). The local geographic intermixing of minority populations, low-income populations, white populations, and higher-income populations near the Grand Gulf early site permit site appears to be such that there would be no location-dependent disproportionate environmental impacts on minority and low-income populations. This comment resulted in a change to Sections 2.10 and 5.7.1.*

Subject: Groundwater Quality

Comment: Hydrological Monitoring, (pg 2-24), states that "many of the construction impacts of an ESP facility at the site are likely to be similar to the impacts that occurred during construction of the existing plant." The final EIS should include specific details of the expected "similar impacts" that were experienced and monitored due to the groundwater drawdowns caused by dewatering wells during the construction of the existing GGNS facility. (AZ-21)

Response: *Changes in drainage patterns from alterations to the site grade, increased potential erosion rates associated with exposed soils during site grading and excavation, and groundwater drawdown associated with dewatering and groundwater withdrawal are the primary impacts considered by the staff. No construction activities would be authorized under the proposed Grand Gulf early site permit. If an ESP is granted, a construction permit or combined license applicant would be required to follow current best management practices consistent with the terms of the National Pollutant Discharge Elimination System storm water construction permit that would be required prior to initiating any construction activities. Section 2.6.1.3 has been revised to include further mention of construction impacts and mention of the observed drawdowns at the site.*

Comment: Sole Source Aquifer: The GGNS uses wells in the Catahoula formation, part of the Southern Hills Aquifer, which has been designated by EPA as a sole-source aquifer, as a source of water. The DEIS states that the field investigation was unable to reliably assess the impact of a significant increase in the groundwater withdrawal at the site (page 4-6). The final EIS should clarify the water source, i.e., Mississippi River or Catahoula formation, that will be used for withdrawals such as drinking water, construction, operation, etc. (AZ-20)

Comment: Adequate hydraulic conductivity information from the Catahoula formation should be collected to properly determine or estimate the groundwater drawdowns associated with withdrawals from the formation, and this information should be included with the FEIS. In addition, a subsurface characterization along with a groundwater monitoring program, consistent with the detailed site design, should be submitted prior to issuance of the COL. (AZ-22)

Comment: An assessment of the impacts associated with significant increases in groundwater withdrawal at the site should be included based on a reliable number of borings, adequate hydraulic conductivity measurements, and pump test in the Catahoula formation. (AZ-23)

Comment: The Final EIS should include updated groundwater and surface water withdrawal use data, (agricultural, drinking water, mining, hydroelectric, thermoelectric, industrial, commercial, etc), in Claibome County. The data should be used to determine if the estimated need for this project would exceed or adversely impact the estimated needs of the community, in quality or quantity. (AZ-24)

Response: *Issuance of an early site permit for the Grand Gulf site would not authorize System Energy Resources, Inc. to perform any construction activities. Prior to initiating any construction activities for a new plant at the Grand Gulf site, an applicant referencing an ESP for the Grand Gulf ESP site would be required to obtain a construction permit or combined license from the U.S. Nuclear Regulatory Commission, except as provided in 10 CFR 50.10(e). At the construction permit or combined license stage, if the applicant were to choose to use*

water from the Catahoula formation, the applicant would be required to provide adequate information to allow the U.S. Nuclear Regulatory Commission to fully evaluate the impacts of groundwater withdrawals on the Catahoula formation. Prior to the issuance of a construction permit or combined license, the staff expects that an applicant would consult with the MDEQ regarding the impacts to Catahoula, which the U.S. Environmental Protection Agency has designated as a sole-source aquifer. If the construction permit or combined license applicant elects to pursue an alternate water source, the applicant would be required to provide adequate information to assess the impacts to any alternative water system that might be affected. These comments resulted in changes to Sections 4.3.2 and 5.3.2 of this environmental impact statement.

Subject: Human Health - Nonradiological Impacts

Comment: Despite a finding by the National Institute of Environmental Health Sciences (NIEHS) that "extremely low frequency-electromagnetic field (ELF-EMF) exposure cannot be recognized as entirely safe" and may pose a leukemia hazard, the staff does not consider this to be a significant environmental impact to the public (EIS, § 5.8.4). Would a stronger electromagnetic field produced by increased voltage capacity on the transmission lines from the GGNS amplify this hazard? Further, SERI is allowed to wait until the COL licensing stage to determine whether transmission lines from the site meet the requirements of the National Electric Safety Code (NESC) regarding electrostatic effects from operation. Why is this issue not being addressed at this stage in the licensing process? (AM-25)

Response: *The proposed action is granting of an early site permit. This permit would not authorize construction or site preparation activities of any kind. If an early site permit is issued and the holder chooses to construct and operate a new nuclear facility at this site during the period of validity of the permit, an environmental impact statement would be required that would evaluate in depth all issues not considered or resolved in the impact assessment for the early site permit. The U.S. Nuclear Regulatory Commission staff would also evaluate any new and significant information pertaining to impacts analyzed in this environmental impact statement at the time it conducts an environmental review of an application for a construction permit or combined license referencing the proposed Grand Gulf early site permit. Issues not completely addressed in this environmental impact statement include construction and operation of new transmission capacity, which would be addressed at the construction permit or combined license stage as required by U.S. Nuclear Regulatory Commission regulations (10 CFR 51.70(b)). This comment did not result in a change to the environmental impact statement.*

Subject: Human Health – Radiological Impacts

Comment: The Commission has unduly trivialized and dismissed the increased risks to public health from radiation induced cancers and other radiation induced diseases from increased

ionizing radiation emitted in the routine operational releases of liquid effluents and radioactive gases and particulates from new reactors at Grand Gulf. The DEIS ignores and is dated by the recent findings of the Biological Effects of Ionizing Radiation VII (BEIR VII) and National Academy of Sciences study. The DEIS states "Although radiation may cause cancers at high doses and high dose rates, currently there are no data that unequivocally establish the occurrence of cancer following exposure to low doses and dose rates, below about 100 mSv (10,000 mrem). However, radiation protection experts conservatively assume that any amount of radiation may pose some risk of causing cancer or a severe hereditary effect and that the risk is higher for higher radiation exposures. Therefore, a linear, no-threshold dose response relationship is used to describe the relationship between radiation dose and detriments such as cancer induction. Simply stated, any increase in dose, no matter how small, results in an incremental increase in health risk. This theory is accepted by the NRC as a conservative model for estimating health risks from radiation exposure, recognizing that the model probably overestimates those risks. Based on this model, the staff estimated the risk to the public from radiation exposure using the nominal probability coefficient for total detriment (730 fatal cancers, nonfatal cancers, and severe hereditary effects per 10,000 person-Sv [1,000,000 person-rem]) from International Commission on Radiation Protection (ICRP) Publication 60 (ICRP 1990). This coefficient was multiplied by the estimated collective whole body population dose of 0.0543 person-Sv/yr (5.43 person-rem/yr) to calculate that the population living within 80 km (50 mi) of the Grand Gulf ESP site would incur a total of approximately 0.004 fatal cancers, nonfatal cancers, and severe hereditary effects annually. The risks from the cumulative radiation exposure from GGNS and the proposed ESP units would be only slightly higher. This risk is very small." (AR-7)

Response: *The draft environmental impact statement was published prior to the BEIR VII report being released; therefore, the staff did not ignore or trivialize the findings from the BEIR VII report. In fact, the BEIR VII report further supports the findings in the draft environmental impact statement. The environmental impact statement was revised to update the findings from BEIR V to BEIR VII. This comment resulted in a change to several sections of this environmental impact statement.*

Comment: Page 5-49, Line 26. The values in Table 5-6 are from Revision 0 of the SERI dose calculation vs. Rev. 3 (which incorporated X/Q values based on 2002-2003 met data). In most cases, the listed doses are conservative; however, the site boundary dose increased by ~90% instead of 14% as stated in the section directly above Table 5-6. The doses for all other locations decreased as stated in the text above Table 5-6. There also are some rounding errors in Table 5-6. (AP-20)

Comment: Page 5-55, Line 10. The results given in Table 5-9 do not agree with [the] latest SERI submittal; however, the dose rates listed for gaseous effluents are conservative relative to the latest results. The dose rates due to liquid effluents agree with [the] latest SERI submittal.

The total dose/Unit for Heron should be 1.95 instead of 1.96. Some of the total doses listed for Two Units do not reflect multiplying the single unit values by two (possible rounding or consideration of significant figures not shown). (AP-26)

Response: *The environmental impact statement was revised to incorporate the most current version of the System Energy Resources, Inc. environmental report. These comments resulted in a change to several sections of this environmental impact statement.*

Comment: In a paragraph about the "linear, no threshold" (LNT) model for estimating radiological impacts on human health, the NRC claims that "there are no data that unequivocally establish the occurrence of cancer following exposure to low doses and dose rates, below about 100 mSv" (EIS, pg. 5-52; repeated on pg. 6-32 and 6-36). Yet, as the U.S. Environmental Protection Agency (EPA) noted in comments in reference to an identical paragraph the draft EIS for an ESP at Exelon's Clinton Power Station in Illinois, the information presented here is "misleading at best." The EPA cites studies supporting the LNT model by the National Academy of Sciences, the National Council on Radiation Protection and Measurement, and the International Commission on Radiological Protection. More recently, a new report by the National Research Council, the research body of the National Academies, reaffirmed the validity of the LNT model, not just as a tool for conservatively estimating the impacts of radiation, but as an accurate measure of the risks of radiation to human health. The government-sponsored panel of experts has concluded that even very low levels of ionizing radiation can cause DNA damage that may eventually lead to the development of cancer. "The scientific research base shows that there is no threshold of exposure below which low levels of ionizing radiation can be demonstrated to be harmless or beneficial," said Richard R. Monson, a professor of epidemiology at Harvard and the chair of the committee that produced the study. In light of the concurring body of research in support of the LNT model, the language in the EIS that appears to challenge the validity of the LNT model should be removed. (AM-8)

Response: *As stated in the environmental impact statement, the staff accepts the linear, no-threshold dose-response model. In its recent report (entitled "Health Risks from Exposure to Low Levels of Ionizing Radiation: BEIR VII – Phase 2) (National Research Council 2006), the BEIR VII Committee concluded that the current scientific evidence is consistent with the hypothesis that there is a linear, no-threshold dose-response relationship between exposure to ionizing radiation and the development of cancer in humans. Having accepted this model, the staff does feel that this model is conservative when applied to workers and members of the public who are exposed to radiation from nuclear power plants. This is based on the fact that numerous epidemiological studies have not shown increased incidences of cancer at low doses. Some of these studies included: (1) the 1990 National Cancer Institute study (NCI 1990) of cancer mortality rates around 52 nuclear power plants, (2) the University of Pittsburgh study that found no link between radiation released during the 1979 accident at the Three-Mile Island nuclear power station and cancer deaths among residents, and (3) the 2001*

study performed by the Connecticut Academy of Sciences and Engineering that found no meaningful associations from exposures to radionuclides around the Haddam Neck nuclear power plant in Connecticut to the cancers studied. In addition, a position statement entitled "Radiation Risk in Perspective" by the Health Physics Society (revised August 2004) made the following points regarding radiological health effects: (1) Radiological health effects (primarily cancer) have been demonstrated in humans through epidemiological studies only at doses exceeding 5-10 rem delivered at high dose rates. Below this dose, estimation of adverse effect remains speculative. (2) Epidemiological studies have not demonstrated adverse health effects in individuals exposed to small doses (less than 10 rem delivered in a period of many years). This comment did not result in a change to the environmental impact statement.

Comment: Anyone who is for this type of energy better read some history behind these plants and how many 10's of 1000's were/are sickened by the releases of these plants, and the nuclear waste that is already overflowing each reactor site. To even consider even building one, takes a person who has no heart and no soul as this waste is going to sicken and kill us for time eternal. (AA-2)

Comment: I would have liked to have seen a survey on the increased cancer cases since operation of GGNS began. A comparison to counties that are not in close proximity of a nuclear power plant to Claiborne County. If this information was included in the ESP, I did not see it. (AS-6)

Comment: Does the continued operation of the reactor represent a threat to public health? (AT-3)

Comment: In the first two years after Grand Gulf went critical, the fetal and infant death rates soared (compared to the two years before startup), while declining in the rest of the region and nation. Both whites and blacks were affected. (AT-11)

Comment: Effects of Continued Operation. While immediate health effects of radiation exposure are most likely to be observed in fetuses and infants, adults are also affected. Often there is a latency period of as much as several decades between initial exposure and disease onset. Because Mississippi and Louisiana had no incidence registries for cancer and other diseases before Grand Gulf I began operating, mortality data are used. For each of the five local counties, the death rate for all causes combined from 1981-82 (before startup) and 1989-98 (7-16 years after startup) rose, versus declines in the region and nation. (AT-12)

Response: *Some of the comments are not within scope of this environmental impact statement in that they address the existing reactor rather than the proposed action.*

Health effects from exposure to radiation are dose-dependent, ranging from no effect at all to death. Above certain doses, radiation can be responsible for inducing diseases such as leukemia, breast cancer, and lung cancer. Very high (hundreds of times higher than a rem), short-term doses of radiation have been known to cause prompt (or early, also called "acute") effects, such as vomiting and diarrhea, skin burns, cataracts, and even death. When radiation interacts within the cells of our bodies, several events can occur. First, the damaged cells can repair themselves and permanent damage does not result. Second, the cells may die, much like large numbers of cells do every day in our bodies, and dead cells may be replaced through normal biological processes. Third, the cells may either incorrectly repair themselves (resulting in a change in the cells' genetic structure), they can mutate and subsequently be repaired without any effect, or they can sometimes form precancerous cells that may become cancerous.

Radiation is only one of many agents with the potential for causing cancer, and cancer caused by radiation cannot be distinguished from cancer attributable to any other cause, such as chemical carcinogens. The chances of getting cancer from a low dose of radiation is not known precisely because the few effects that may occur cannot be distinguished from normally occurring cancers. The normal chance of dying from cancer is about one in five.

The actual amount of radiation any member of the public receives from activities at nuclear power facilities is so small that scientists have been unable to make empirically based estimates of radiation risk with any precision. There are many difficulties involved in designing research studies that can accurately measure the projected small increases in cancer cases that might be caused by low exposures to radiation when compared to the rate of cancer resulting from all other causes. In the absence of a clear answer, the U.S. Nuclear Regulatory Commission conservatively assumes that any amount of radiation may pose some risk for causing cancer or having some hereditary effect and that the risk is higher for higher radiation exposures. This is called a linear, no-threshold dose-response model and is used to describe the relationship between radiation dose and the occurrence of cancer.

This model suggests that any increase in dose above background levels, no matter how small, results in an incremental increase in risk above existing levels of risk. Although the U.S. Nuclear Regulatory Commission has accepted this hypothesis as a "conservative" (i.e., cautious) model for determining radiation standards, the U.S. Nuclear Regulatory Commission , like other authoritative bodies, recognizes that this model will probably over-estimate radiation risk. The associations between radiation exposure and the development of cancer are mostly based on studies of populations exposed to relatively high levels of ionizing radiation (for instance, the Japanese atomic bomb survivors and the recipients of selected diagnostic or therapeutic medical procedures).

Although radiation can cause cancers at high doses and high dose rates, currently there are no data to establish unequivocally the occurrence of cancer following exposures to doses below

about 10 rem. The average annual dose to a member of the public from a nuclear power facility is in the range of less than 1/1000th rem (1 millirem) per year. This is compared to the 10 rem (10,000 millirem) discussed previously. At doses above 10 rem, a relationship between radiation and cancer can be observed. There are no data to establish unequivocally the occurrence of cancer following exposures to doses below 10 rem. Although there is a statistical chance that radiation levels that small (i.e., less than 10 rem) could result in a cancer, it has not been possible to calculate with any certainty the probability of cancer induction from a dose this small. Because many agents cause cancer, it is often not possible to say conclusively whether the cancer was radiation-induced cancer.

Authors of various reports have stated or implied that there are cause-and-effect relationships in the statistical associations between cancer rates and reactor operations. While it is true that cancer rates vary among locations, it is very difficult to ascribe the cause of a cluster of cancers to some local environmental exposure, such as radiation from a nuclear power facility. Statistical association alone does not prove causation, and well-established scientific methods must be used to determine causation. For example, a person could say, "In the winter I wear boots, and in the winter I get colds." While there is a strong statistical association between wearing boots and getting colds, it would be inappropriate to say that wearing boots causes colds.

The scientific community adheres to several principles of good science that need to be employed before a cause-and-effect claim can be made. These principles include whether the study can be replicated, whether it has considered all the data or was selective (e.g., in the population or in the years studied), whether it evaluated all possible explanations for the observations, whether the data were valid and reliable, and whether the conclusions were subjected to independent peer review, evaluation, and confirmation.

A number of studies that conformed to these principles have been performed to examine the health effects around nuclear power facilities.

- *In 1990, at the request of Congress, the National Cancer Institute conducted a study (NCI 1990) of cancer mortality rates around 52 nuclear power plants and 10 other nuclear facilities. The study covered the period from 1950 to 1984 and evaluated the change in mortality rates before and during facility operations. The study concluded there was no evidence that nuclear facilities may be linked causally with excess deaths from leukemia or from other cancers in populations living nearby.*

- *Investigators from the University of Pittsburgh found no link between radiation released during the 1979 accident at the Three-Mile Island nuclear station and cancer deaths among nearby residents. Their study followed more than 32,000 people who lived within 8 km (5 mi) of the facility at the time of the accident.*

- *In January 2001, the Connecticut Academy of Sciences and Engineering issued a report on a study around the Haddam Neck nuclear power plant in Connecticut and concluded that exposures to radionuclides were so low as to be negligible and found no meaningful associations to the cancers studied.*

- *In 2001, the American Cancer Society concluded that, although reports about cancer clusters in some communities have raised public concern, studies show that clusters do not occur more often near nuclear plants than they do by chance elsewhere in the population. Likewise, there is no evidence linking the isotope strontium-90 with increases in breast cancer, prostate cancer, or childhood cancer rates.*

- *In 2001, the Florida Bureau of Environmental Epidemiology reviewed claims that there are striking increases in cancer rates in southeastern Florida counties caused by increased radiation exposures from nuclear power plants. However, using the same data to reconstruct the calculations on which the claims were based, Florida officials did not identify unusually high rates of cancers in these counties compared with the rest of the state of Florida and the nation.*

- *In 2000, the Illinois Public Health Department compared childhood cancer statistics for counties with nuclear power plants to similar counties without nuclear plants and found no statistically significant difference.*

In summary, there are no studies to date that are accepted by the nation's leading scientific authorities that indicate a causative relationship between radiation dose from nuclear power facilities and cancer in the general public. The amount of radioactive material released from nuclear power facilities is well measured, well monitored, and known to be very small. These comments did not result in a change to the environmental impact statement.

Comment: NIRS contends that new information provided by independent analysis in BEIR VII contradicts this NRC staff assertion: On June 29, 2005, the National Academies of Science released an over 700-page report on the risks from ionizing radiation. The BEIR VII or seventh Biological Effects of Ionizing Radiation report on "Health Risks from Exposure to Low Levels of Ionizing Radiation" reconfirms previous knowledge that there is no safe level of exposure to

radiation—that even very low doses can cause cancer. Risks from low dose radiation are equal or greater than previously thought. The committee reviewed some additional ways that radiation causes damage to cells. Among the report's conclusions are: There is no safe level or threshold of ionizing radiation exposure. Even exposure to background radiation causes some cancers. Additional exposures cause additional risks. Radiation causes other health effects such as heart disease and stroke, and further study is needed to predict the doses that result in these non-cancer health effects. It is possible that children born to parents that have been exposed to radiation could be affected by those exposures. The "bystander effect" is an additional, newly recognized method by which radiation injures cells that were not directly hit but are in the vicinity of those that were. "Genomic instability" can be caused by exposure to low doses of radiation and according to the report "might contribute significantly to radiation cancer risk." These new mechanisms for radiation damage were not included in the risk estimates reported by the BEIR VII report, but were recommended for further study. The Linear-No-Threshold model (LNT) for predicting health effects from radiation (dose-response) is retained, meaning that every exposure causes some risk and that risks are generally proportional to dose. The Dose and Dose-Rate Effectiveness Factor or DDREF which had been suggested in the 1990 BEIR V report to be applied at low doses, has been reduced from 2 to 1.5. That means the projected number of health effects at low doses are greater than previously thought. Radiation exposures, even at low doses are riskier than previously thought with increased risk to the public and nuclear workers. The BEIR VII risk numbers indicate that about 1 in 100 members of the public would get cancer if exposed to 100 millirads (1milliGray) per year for a 70-year lifetime. This is essentially the U.S. Nuclear Regulatory Commission's allowable radiation dose for members of the public. In addition, 1 in about 5 workers would get cancer if exposed to the legally allowable occupational doses over their 50 years in the workforce. These risks are much higher than permitted for other carcinogens. Specifically, the U.S. Nuclear Regulatory Commission allows members of the public to get 100 millirems or mr (1 milliSievert or mSv) per year of radiation in addition to background. The BEIR VII report (page 500, Table 12-9) estimates that this level will result in approximately 1 (1.142) cancer in every 100 people exposed at 100 mr/yr which includes 1 fatal cancer in every 175 people so exposed (5.7 in 1000). This rate of cancer induction is significantly greater than projected by the DEIS. BEIR VII purports that the risk of getting cancer from radiation is increased by about a third from current government risk figures. BEIR VII estimates that 11.42 people will get cancer if 10,000 are each exposed to a rem (1,000 millirems or 10 mSv). The U.S. Environmental Protection Agency Federal Guidance Report 13 estimates that 8.46 people will get cancer if 10,000 are each exposed to a rem. NIRS interprets this as further evidence that unnecessary radiation exposures to the public and nuclear workers should be avoided. (AR-8)

Response: *The National Academy of Sciences published the BEIR VII report. Although there have been some releases that have stated it, the BEIR VII Summary report (National Research Council 2006) makes no such assertion that there is no safe level of exposure to radiation. The conclusions of the report are specific to estimating cancer risk. It does not address "safe or not*

safe." In the Executive Summary there is a quote: "In general the magnitude of estimated risks for total cancer mortality of leukemia has not changed greatly from estimates provided in past reports such as BEIR V and recent UNSCEAR and ICRP reports." The National Academies' "Report in Brief," June 2005, states, "In general, BEIR VII supports previously reported risk estimates for cancer and leukemia, the availability of new and more extensive data have strengthened confidence in these estimates." There is no statement about "no safe level or threshold." However, there is this statement: "BEIR VII Committee said that the higher the dose, the greater the risk; the lower the dose, the lower the likelihood of harm to human health." Regarding Mr. Gunter's statement, "Radiation causes other health effects such as heart disease and stroke, and further study is needed to predict the doses that result in these non-cancer health effects," the Summary further elaborates: "The Committee maintains that other health effects, such as heart disease and stroke, occur at high radiation doses but that additional data must be gathered before an assessment of any possible dose response can be made of connections between low doses of radiation and non-cancer health effects." Although the LNT is still considered valid, the conclusion from the Committee is:

> *The BEIR VII Committee concludes that the current scientific evidence is consistent with the hypothesis that there is a linear dose-response relationship between exposure to ionizing radiation and the development of radiation-induced solid cancers in humans. The Committee further judges that it is unlikely that a threshold exists for the induction of cancers BUT NOTES THAT THE OCCURRENCE OF RADIATION-INDUCED CANCERS AT LOW DOSES WILL BE SMALL." [Emphasis added].*

The environmental impact statement was revised to update the findings from BEIR V to BEIR VII. This comment resulted in a change to several sections of this environmental impact statement.

Comment: Has introducing the reactor affected local public health? (AT-1)

Comment: Like any other nuclear reactor, Grand Gulf routinely emits fission products into the local environment. This radioactivity enters the air and food chain, and is taken up into human bodies through breathing and the diet. Several important facts that affect radioactive emissions and exposures to local residents should be considered. Grand Gulf lies far from any other nuclear reactor; thus, any documentation of potential radiation-related harm to public health is likely due to Grand Gulf, and not other reactors. (AT-4)

Comment: Public Health Impacts: On page 5-40, there is no reference to pre-existing studies on radiological and other contaminant findings in local fish and game. These studies probably

exist for the Grand Gulf facilities, and should be incorporated into the FEIS. For example, Oak Ridge, TN and the Savannah River DOE facilities research findings on this subject matter, (and have restrictions placed on hunting deer, etc.). (AZ-11)

Response: *Section 2.5 describes the ongoing radiological environmental monitoring program (REMP) that has been conducted at Grand Gulf since 1978. Section 5.9 addresses exposure pathways from gaseous and liquid effluents. The staff believes that current regulations regarding environmental monitoring around nuclear power plants are adequate to protect the local public health. These regulations require each commercial reactor site to have a radiological environmental monitoring program. The purpose of the radiological environmental monitoring program is to sample, measure, analyze, and monitor the radiological impact of reactor operations on the following pathways – direct radiation, atmospheric, aquatic, and terrestrial. Results of the radiological environmental monitoring program are summarized each year in the Annual Environmental Radiological Operating Report. Effluent releases are summarized annually in an annual radioactive effluent release report. In addition, each site must monitor gaseous and liquid effluent in real time. Effluent monitors will alarm if routine release levels are exceeded. These comments did not result in a change to the environmental impact statement.*

Comment: Page 5-49, Line 13-16. The DEIS states "Other parameters used as input to the GASPAR II program (including milk, meat, and vegetable production rates, meteorological data, population data, and consumption factors) are found in Tables 5.4-3 through 5.4-5 of the SERI environmental report (SERI 2003c)." Should reference Tables 5.4-3 through 5.4-7. (AP-19)

Response: *Section 5.9.2.2 of the environmental impact statement was changed to state that GASPAR II program inputs were found in Tables 5.4-3 through 5.4-7.*

Comment: What is skyshine from nitrogen 16? (AS-7)

Response: *In boiling water reactors, such as the currently operating Grand Gulf Reactor, nitrogen-16 is produced in the reactor and travels to the turbine with the stream. Nitrogen-16 emits 13 gammas with energy ranging from about 800 keV to 9 MeV. The two most common gammas are about 6.13 MeV at 67 percent and 7.12 MeV at 4.9 percent. When nitrogen-16 decays outside the containment building, some of the gamma radiation is reflected back to the ground by the atmosphere. This reflected radiation is referred to as skyshine. This comment did not result in a change to the environmental impact statement.*

Comment: The area near Grand Gulf is largely rural, and has incurred very little industrial pollution before the reactor's startup. (AT-5)

Comment: Another – people keep talking about what a clean source of energy nuclear energy is. And keep talking about the air and how if you can see the air, it's not good to breathe. But one thing that we also know is that you don't see radiation. It's – and it's the most lethal thing in the world to be exposed to. (N–3)

Response: *These comments do not provide new information for additional analysis. These comments did not result in a change to the environmental impact statement.*

Comment: Unfortunately, the April 2005 EIS makes only cursory remarks about these important issues, or completely ignores them. Moreover, no data are presented in the EIS about emission levels, environmental levels of radiation, and in-body radiation in the local area; and no data on changes in local health status are included. Without analyzing such information, any decision to approve or disapprove Entergy Nuclear's Early Site Permit application would be incomplete. (AT-10)

Comment: RPHP recommends that the Nuclear Regulatory Commission take the following steps. First, these data should be reviewed and understood. Second, more current data should be reviewed. Third, these trends should be compared with any information on environmental emissions and environmental levels of radioactivity near Grand Gulf. And fourth, the NRC should initiate a study of in-body radioactivity near Grand Gulf; RPHP is currently conducting the only such study near U.S. reactors, in which it measures Strontium-90 concentrations in baby teeth). We urge that these steps be taken before any decision on the application is reached. Only by doing so will a truly complete environmental impact assessment be made. (AT-13)

Response: *The comment is not within the scope of this environmental impact statement, in that it addresses the existing reactor rather than the proposed action. Section 5.9 addresses exposure pathways from gaseous and liquid pathways. The staff believes that current regulations regarding environmental monitoring around nuclear power plants are adequate to protect the local public health. These regulations require each commercial reactor site to have a radiological environmental monitoring program. The purpose of the radiological environmental monitoring program is to sample, measure, analyze, and monitor the radiological impact of reactor operations on the following pathways – direct radiation, atmospheric, aquatic, and terrestrial. Results of the radiological environmental monitoring program are summarized each year in the Annual Environmental Radiological Operating Report. Effluent releases are summarized annually in an annual radioactive effluent release report. In addition, each site must monitor gaseous and liquid effluent in real time. Effluent monitors will alarm if routine release levels are exceeded.*

With regard to in-body radiation, the U.S. Nuclear Regulatory Commission does not require or support the need for such measurements for several reasons. First, radioactive materials may

come from a variety of sources; therefore, determining that a certain radioactive material is in an individual does not necessarily mean that material came from any certain nuclear facility. Interpretation of measurements of radioactive materials in people is difficult unless one knows what each individual was exposed to, when the exposure occurred, and by what routes they occurred (ingestion, inhalation, etc.). Second, travel must be accounted for, since even a couple of days in a high-fallout area could swamp any effect of local exposures if inhalation were suspected to be a primary route. Finally, migration must be accounted for to interpret measurements, because people may have lived somewhere else for the better part of their lives. Also, substances in the human body are dynamic, not static. This includes radioactive and non-radioactive substances. The dynamic processes include intake of material; uptake to systemic circulation from the gastrointestinal tract, respiratory tract, or skin; translocation throughout the body system; retention over time; and elimination via excretion and radioactive decay. These comments did not result in a change to the environmental impact statement.

Comment: Grand Gulf is a boiling water reactor. Historically, over 80% of emissions of iodine-131 and particulates have been released from boiling water reactors, even though they make up only about one third of U.S. reactors. (AT-8)

Response: *The comment is not within the scope of this environmental impact statement, in that it addresses the existing reactor rather than the proposed action. The comment does not provide new information and will not be evaluated further. This comment did not result in a change to the environmental impact statement.*

Comment: Has the aging of the reactor affected local public health? (AT-2)

Response: *The comment is not within the scope of this environmental impact statement, in that it addresses the existing reactor rather than the proposed action. The current application is for an early site permit for one or more postulated new reactors. It does not contain detailed design information and is not directly related to the existing reactor at the Grand Gulf site. Therefore, consideration of reactor aging is outside of the scope of this environmental impact statement. However, the current reactor has been and is operating within the U.S. Nuclear Regulatory Commission's regulations that are designed to protect the health and safety of workers, the public, and the environment. This comment did not result in a change to the environmental impact statement.*

Comment: Page 4-46, Line 1. The DEIS states that the maximum total body dose due to gaseous releases from GGNS Unit 1 are 0.13 mrem/qtr (0.0013 mSv/qtr) whereas the ESP ER (Section 4.5.4) states that the dose from gaseous releases is 1.32E-01 mrem/yr. (AP-13)

Response: *The environmental impact statement was changed to state that the Annual Radiological Effluent Release Report states that the maximum total body dose rate from airborne releases was 0.13 mrem/yr.*

Comment: Page 5-51, Line 30. The population dose listed in this section (5.43 person-rem/yr) does not agree with initial submittal results; however, as stated in this section, the revised population doses using 2002-2003 meteorological data and population distributions from the environmental report resulted in lower population doses. Therefore, the general conclusion given in this section is valid. (AP-24)

Comment: Page 5-51. Table 5-7 uses values from Revision 0 of the SERI dose calculation instead of Revision 2. Some of the listed values are higher and others are lower than the current results. (AP-23)

Response: *The environmental impact statement was revised to incorporate the most current version of the System Energy Resources, Inc. Environmental Report. These comments resulted in a change to several sections of this environmental impact statement.*

Subject: Land Use

Comment: For example, SERI states “Road improvement and construction projects... planned... will help ameliorate traffic problems associated with the proposed facility.” The DEIS fails to recognize that this assumption is baseless considering that current road infrastructure (bridges and pavement) around Grand Gulf nuclear power station, including designated Emergency Evacuation Routes such as the Bald Hill Road which [is] south of the site, have [has] fallen into disrepair from Mississippi River flooding and remained impassible for as much as three to four consecutive years. (AR-2)

Response: *Bald Hill Road was washed out at Bayou Pierre, but has now been realigned and made passable. Additionally, the current plan is to remove the remaining blacktop (which is heavily potholed) and turn the road in the realigned section into gradable gravel, so that it is usable for emergency evacuation. In addition, the project for the extension of Highway 18 (known locally as the “Port Connector” project) has progressed substantially since the environmental report was written. The environmental impact statement for this project is now finished and early right-of-way acquisition has started. The 2005 federal highway bill contained a $10 million earmark for this project, which would provide improved direct access to the Grand Gulf site from the south and from Port Gibson along a path to the west of and parallel to Oil Mill Road. Construction is scheduled to start in 2006 and be completed in early to mid-2007. Section 2.8.2.2. has been revised to reflect this update.*

Subject: Need for Power

Comment: According to NRC regulations at 10 CFR 52.17(a)(2), the need for power does not have to be addressed in the ESP process. But an evaluation of the need for power and who benefits is crucial to determining whether the ESP application should be considered at all. In fact, the first question that should be asked is whether residents of Mississippi will receive any of the benefit of a new nuclear unit. SERI intends to operate its new facility as a "merchant nuclear plant, providing electrical energy to the competitive marketplace," an assertion unchallenged by the NRC (EIS, pg. 8-4). Unlike power generation under a regulated framework, merchant producers of electricity sell their power on the open market "to any buyer willing to pay the price asked by the facility owner" (EIS, pg. 8-4). This means that SERI is indifferent to the beneficiaries or recipients of its power generation, because its only concern is making profits from the sale of electricity. The final EIS should include an analysis of the exportation of electricity generated by the new nuclear unit at the GGNS to other states where electricity prices are higher and revenues will be greater for SERI. (AM-21)

Comment: The draft Environmental Impact Statement (DEIR) doesn't make it clear that the extra electric energy is needed. (BF-2)

Response: *According to U.S. Nuclear Regulatory Commission regulations at 10 CFR 52.18, the need for power does not have to be addressed in the early site permit process because no decision involving the need for power is being made. The filing of an application for an early site permit is a process that is separate from the filing of an application for a construction permit or a combined license for such a facility. The early site permit application makes it possible to evaluate and resolve some safety and environmental issues related to siting before the applicant makes large commitments of resources. If the early site permit is approved, the applicant can "bank" the site for up to 20 years for future reactor siting. The early site permit does not authorize construction or operation of a nuclear power plant. At the point when the early site permit holder believes that it wants to proceed with construction, it must obtain a construction permit or a combined license, which will be a major Federal action that requires a separate environmental impact statement that, among other things, addresses the need for power and cost of power. This comment did not result in a change to the environmental impact statement.*

Subject: NEPA Compliance

Comment: Page 10-7, Line 20-23. Commitment of Resources. "Because the proposed action therefore does not involve commitment of resources, a complete assessment of irreversible and irretrievable commitments of resources would be performed at the CP or COL stage if SERI is granted an ESP and later applies for a CP or COL." See also Ln. 30-31 ("The actual estimate

of construction materials would be performed at the CP or COL stage when the reactor design is selected.") The staff appears to ignore SERI's ER Table 10.1-1 which addresses this issue. SERI urges the staff to conduct an evaluation based on ER data. (AP-35)

Response: *Because construction would not be authorized by an early site permit at the Grand Gulf early site permit site, resource commitments can only be discussed in a general framework. This level of analysis was performed in this environmental impact statement and impacts were found to be small. However, a final assessment of the costs and benefits and of any irreversible and irretrievable commitments of resources would be required at the construction permit or combined license stage. This comment did not result in a change to the environmental impact statement.*

Comment: Purpose & Need: The DEIS does not include an assessment of the energy needs for the addition of one or two nuclear power units at the Grand Gulf facility. NRC's streamlining permitting process would require an energy needs analysis which would include energy alternatives assessment in a second EIS, in accordance with 10 CFR Part 50. EPA has concerns with this approach since it does not address the justification for the power plant addition in the early stage of project development, as well as skews the subsequent energy alterative analysis toward nuclear power under the second EIS, since the NRC would have approved the suitability under the ESP. (AZ-1)

Response: *U.S. Nuclear Regulatory Commission regulations (10 CFR 52.18) regarding preparation of environmental impact statements for early site permit applications state that the impact statements need not include an assessment of the benefits of the proposed action, including need for power. Analysis of benefits arising from construction and operation of a new nuclear power facility, including need for power, would be required should an ESP holder pursue construction through a construction permit or a combined license application, in accordance with 10 CFR 52.39 and 52.89. As stated in the environmental impact statement and in 10 CFR 52 Subpart A, the issuance of an early site permit does not authorize construction of a new nuclear unit, which is a separate licensing action requiring its own environmental analysis. In the case of the Grand Gulf early site permit, no construction or site preparation of any kind would be allowed under this permit. This comment did not result in a change to the environmental impact statement.*

Comment: If NEPA does not require a review of terrorism in the EIS, then NEPA should be modified or some other requirements need to be created. Certainly the devastating effects of a meltdown or severe accident involving nuclear waste should not be ignored in the EIS process. (AN-5)

Response: *Requests to modify the National Environmental Policy Act of 1969 or to enact new legislation should be directed to members of the U.S. Congress. Information on U.S. Nuclear*

Regulatory Commission's response to terrorist threats can be found at the following Internet site: http://www.nrc.gov/what-we-do/safeguards.html. The environmental impacts of nuclear fuel-cycle issues are discussed in Chapter 6 of the environmental impact statement. This comment did not result in a change to the environmental impact statement.

Comment: Page 10-8, Line 16-21. Relationship Between Short-Term Uses and Long-Term Productivity. The staff appears to ignore SERI's ER Section 10.3 which addresses this issue: "In accordance with 10 CFR 52.18, an EIS for an ESP does not need to include an assessment of the benefits of the proposed action. Therefore, an assessment of the evaluation of the relationship between local short-term uses of the environment and the maintenance and enhancement of long-term productivity for the construction and operation of a new nuclear unit would be performed at the CP or COL stage should SERI be granted an ESP and later seek a CP or COL." SERI urges the staff to conduct an evaluation based on ER data. (AP-36)

Response: *Section 102(2)(C)(iv) of the National Environmental Policy Act of 1969 requires that an environmental impact statement address the relationship between local short-term uses of man's environment and the maintenance and enhancement of long-term productivity. This subject is addressed in Section 10.3 of the environmental impact statement. Section 10.3 of System Energy Resources, Inc.'s environmental report discusses the benefits of construction and operation of a new facility at the early site permit site. As stated in Section 10.3 of the environmental impact statement, the U.S. Nuclear Regulatory Commission would address the benefits of the proposed action and long-term productivity in an environmental impact statement prepared by the staff at the construction permit or combined license stage should System Energy Resources, Inc. be granted an early site permit and later seek a construction permit or combined license. This comment did not result in a change to the environmental impact statement.*

Comment: The draft EIS fails to adequately execute the requirements of the National Environmental Policy Act (NEPA) by not adequately providing a "detailed statement" of (1) alternatives to the proposed action, (2) unavoidable environmental impacts, (3) irretrievable commitments of resources, and (4) the relationship between short-term uses of the environment and long-term productivity [42 U.S.C. § 4332(C)]. Instead of a thorough evaluation, these issues receive only brief, perfunctory attention in Chapter 10 of the draft EIS, and the NRC staff is almost glib in dismissing energy conservation as a reasonable alternative to the proposed action (EIS, pg. 8-5). (AM-6)

Response: *The environmental impact statement includes a detailed discussion of alternatives in Chapter 8. Chapter 10 of the environmental impact statement discusses unavoidable adverse impacts, irreversible and irretrievable commitments of resources, and the relationship between short-term uses and long-term productivity of the human environment. This comment did not result in a change to the environmental impact statement.*

Comment: Future planning: The 20-year horizon under the proposed ESP does not take into consideration unforseen population growth and/or additional stressors on air or water resources. Typically, an action which has not occurred within five years of an EIS requires a re-evaluation to determine whether significant changes have occurred, and whether a supplemental EIS is required prior to the action proceeding. (AZ-4)

Response: *The proposed action is granting of an early site permit. This permit would not authorize construction or site preparation activities of any kind. If an early site permit is issued and the holder chooses to submit an application to construct and operate a new nuclear facility at this site during the period of validity of the permit, an environmental impact statement would be prepared by the U.S. Nuclear Regulatory Commission that would evaluate in depth all issues not considered or not resolved in the impact assessment for the early site permit. This would include all new and significant information for issues addressed in the impact assessment for the early site permit that have arisen between the time of the issuance of the early site permit and the application for a license for construction/operation. This comment did not result in a change to the environmental impact statement.*

Subject: Opposition to NRC's ESP Process

Comment: I also see a problem – well, let me say that in this document, there are 14 pages of assumptions in the information provided by SERI. And that's a lot of assumptions. It would be nice to have some hard data. (G-3)

Response: *Assumptions used by the applicant and the U.S. Nuclear Regulatory Commission staff are included as part of the environmental impact statement to document the bases for the analyses and the aspects of the applicant's plant parameter envelope that pertain to the conclusions drawn regarding impact. The U.S. Nuclear Regulatory Commission's process for early site permit applications is set forth in 10 CFR Part 52 Subpart A. Requirements for the applicant's environmental report are specified in 10 CFR 51.45 and 10 CFR 52.17. As stated in 10 CFR 51.41 and 52.18, U.S. Nuclear Regulatory Commission staff is required to conduct an independent assessment of the information and conclusions provided in the environmental report. Reasonable assumptions are commonly made and documented in such analyses. This comment did not result in a change to the environmental impact statement.*

Comment: Allow Claiborne County citizens to voice comments directly after the NRC presentation. We should not have been subjected to the ramblings (even though some of the comments were good) of watchdog groups, minority issue groups, and SERI employees. Most of those people were paid to be there. I understand that this meeting was for the public. But the people of Claiborne County should have been given the opportunity to speak first because this decision affects us the most. (AS-2)

Response: *Following the staff's presentation, the order of speakers at U.S. Nuclear Regulatory Commission public meetings is generally the following: the applicant, elected officials, and members of the public (both out-of-town and local) in the order they sign up to speak. This comment did not result in a change to the environmental impact statement.*

Comment: And I would like to echo Paul's request that there be more opportunities like this one, not just here in Port Gibson, although this is obviously an important place to do it, but this is not the only place that this reactor is going to have an effect. (I-1)

Response: *The U.S. Nuclear Regulatory Commission has limited resources to conduct public meetings that are not mandated by statutory requirements. However, because the staff recognizes the importance of public outreach and direct involvement in the conduct of its environmental reviews, public meetings are generally held at the site, at U.S. Nuclear Regulatory Commission headquarters, or sometimes both. Commenters also have the option of submitting comments by mail or e-mail. This comment did not result in any change to the environmental impact statement.*

Comment: The various NRC speakers and their advanced educational degrees were quite impressive, but, a little intimidating to the average Joe. I'm not illiterate, but would feel much more relaxed voicing concerns to people like us. I believe that a less formal meeting, without cameras and microphones, would have provided a better atmosphere. I feel the people of Claiborne County would benefit greatly from such a meeting. (AS-4)

Response: *U.S. Nuclear Regulatory Commission staff and U.S. Nuclear Regulatory Commission contractor personnel were made available to discuss, on an informal basis, issues and concerns related to the Grand Gulf early site permit application immediately prior to and after the public scoping meeting and the public meeting on the draft environmental impact statement. U.S. Nuclear Regulatory Commission public meetings are necessarily somewhat formal to ensure that speakers are heard and their comments are properly recorded. This comment did not result in a change to the environmental impact statement.*

Comment: I have to go now due to more pressing matters (breakfast). I do hope that the NRC continues to work for the health and safety of the public as my Claiborne County family of 4 is most definitely the affected public in this matter. (AS-9)

Response: *The U.S. Nuclear Regulatory Commission takes seriously its mission to protect the public health and safety and the environment from the effects of radiation from nuclear reactors, materials, and waste facilities. This comment did not result in a change to the environmental impact statement.*

Comment: Applicant SERI Environmental Assessment is incomplete as identified by NUREG-1817 and therefore the permit application is unacceptable and should be rejected. Appendix J of the DEIS identifies an extensive list of assumptions made by applicant SERI in its environmental assessment report to the NRC. Applicant SERI has indicated that it will further address these assumptions in a Combined Operation License application. (AR-1)

Response: *System Energy Resources, Inc.'s early site permit application was amended several times to incorporate new information. Such amendments are allowed under the U.S. Nuclear Regulatory Commission's procedures. The final environmental impact statement reflects System Energy Resources, Inc.'s early site permit application as amended. Appendix J of the environmental impact statement lists System Energy Resources, Inc. commitments and assumptions that the staff relied upon during preparation of the environmental impact statement. This comment did not result in a change to the environmental impact statement.*

Comment: I also want to point out that the Nuclear Regulatory Commission is supposed to be unbiased, yet it states in this document at one point that this ESP – excuse me – this EIS was done based on NRC regulations and the Atomic Energy Act. And the Atomic Energy Act was written in the early 1950s to promote nuclear power. Now that is a real conflict of interest in my opinion. You're supposed to be regulating, you're supposed to be looking out for the public safety and you should not be using a document that was written to promote nuclear power. It was written in the 50s after World War II to promote the peaceful atom. So that needs to change. (G-7)

Response: *While the Atomic Energy Act of 1954 previously defined a role for the Atomic Energy Commission in formulating national energy policy, the Act, as amended in 1974 by the Energy Reorganization Act, formed the U.S. Nuclear Regulatory Commission from the Atomic Energy Commission's regulatory division to regulate the nuclear power industry. The Energy Reorganization Act segregated the Atomic Energy Commission's national policy role in the Energy Research and Development Administration, which later became the U.S. Department of Energy. The U.S. Nuclear Regulatory Commission has no role in promoting nuclear power. Rather, the Congress and the President establish the energy policy of the United States, and the U.S. Department of Energy implements that policy at the direction of the President.*

The U.S. Nuclear Regulatory Commission's process for early site permit applications is set forth in 10 CFR Part 52 Subpart A. Requirements for the applicant's environmental report are specified in 10 CFR 51.45, 51.50, and 52.17. U.S. Nuclear Regulatory Commission staff are required to conduct an independent assessment of the information and conclusions provided in the environmental report as specified by 10 CFR 51.41 and 52.18. This comment did not result in a change to the environmental impact statement.

Comment: And the first thing I noticed was that SERI provided a lot of the information for this document, and that the Nuclear Regulatory Commission, at some points, did an independent review, and at other points just accepted information provided by the utility that has a vested interest in getting this early site permit. And I see a real problem with that. (G-2)

Response: *The U.S. Nuclear Regulatory Commission's process for early site permit applications is set forth in 10 CFR Part 52 Subpart A. Requirements for the applicant's environmental report are specified in 10 CFR 51.45, 51.50, and 52.17. As stated in 10 CFR 51.41 and 52.18, U.S. Nuclear Regulatory Commission staff are required to conduct an independent assessment of the information and conclusions provided in the environmental report. In preparing the environmental impact statement, the staff used information supplied by System Energy Resources, Inc. in its application but conducted an independent review and analysis. System Energy Resources, Inc. submitted its early site permit application under oath and affirmation that the application was true and correct. This comment did not result in a change to the environmental impact statement.*

Comment: The information contained in the Entergy's Draft Environmental Impact Statement (EIS), is incomplete and insufficient. In addition Entergy doesn't explain what it will do with all the nuclear waste in the long term, nor is the company required to address security issues. I understand that your rules do not require that but surely that's important information and your agency SHOULD require it and Entergy should provide that information. (AE-1)

Comment: While I do not want to put NRC employees out of work, I believe their skills could be better put to use evaluating alternative energy and dealing with the existing nuclear structures in our country. In conclusion, I encourage both Federal and State legislators and the Commissioners of the NRC to re-evaluate the entire ESP/EIS process and make the changes necessary to protect the public to the fullest. I also encourage them to promote the use of decentralized energy facilities and the use of alternative energy, and to do whatever is necessary to prevent the further accumulation of nuclear waste from energy production. (AN-13)

Response: *The U.S. Nuclear Regulatory Commission's process for early site permit applications is set forth in 10 CFR Part 52 Subpart A. Requirements for the applicant's environmental report are specified in 10 CFR 51.45, 51.50, and 52.17. U.S. Nuclear Regulatory Commission staff are required to conduct an independent assessment of the information and conclusions provided in the environmental report as specified by 10 CFR 51.41 and 52.18. Modification of the early site permit process cannot be accomplished as part of the environmental review, but can be proposed through the rulemaking procedures as described on the U.S. Nuclear Regulatory Commission's website (http://www.nrc.gov). These comments did not result in a change to the environmental impact statement.*

Comment: And what I feel about this document is that it's geared toward using the process for Entergy to build another nuclear reactor, and I don't think that that's in the best interest of Mississippi, or the country. (G-1)

Comment: I also feel that this is a lot of expense, a lot of taxpayer dollars, a lot of time spent, and really not a lot of information provided, and not a lot of real concrete decisions made, because all through this document they talk about not enough information was provided to make a decision. Not enough information was provided by SERI, by Entergy, there's constant references to that through here. And constant references to later assessments at the construction permitting process or the combined license. And I think for the resources, for the time of the staff, the financial resources that were put in here – as a taxpayer, I think you're wasting my money. (G-6)

Comment: And, you know, there are a number of issues that we could go into, but because of time and the fact that the public is only given one night to address an environmental impact statement that's been under construction for, you know, over a year, I, first of all, think that's a travesty that we're being bum's rushed out of this process, and it is of great concern, and I think reflects the kind of promotion that I have great concern for. (H-1)

Comment: But I would like you to think about, as Ruth pointed out, how many times you've heard tonight that this is an issue that's going to be postponed and addressed later, either at the COL, the construction and operating license stage, or maybe it's one of those issues that never has to be addressed at all, because there is no good answer for it. (I-2)

Response: *The U.S. Nuclear Regulatory Commission's process for early site permit applications is set forth in 10 CFR Part 52 Subpart A. Requirements for the applicant's environmental report are specified in 10 CFR 51.45, 51.50, and 52.17. U.S. Nuclear Regulatory Commission staff are required to conduct an independent assessment of the information and conclusions provided in the environmental report as specified by 10 CFR 51.41 and 52.18. Unresolved issues will be addressed at the construction or combined license stage. These comments did not result in a change to the environmental impact statement.*

Comment: NIRS contends that it is inappropriate and unacceptable to base the environmental assessment of the ESP EIS with so many open item assumptions. NIRS contends that it is therefore unacceptable for NRC to blindly approve the ESP application with the intent to carry these assumptions forward into the Combined Operation License application at some future and unidentified date. Such action makes the process of doing a comprehensive environmental assessment pointless. (AR-4)

Response: *The purpose of an early site permit is explained in Section 1.1 of the environmental impact statement. The staff's use of the plant parameter envelope in conducting its*

environmental review is explained in Section 3.2 of the environmental impact statement. If System Energy Resources, Inc. were to receive an early site permit from the U.S. Nuclear Regulatory Commission and decided to seek a construction permit or combined license, it would need to submit a specific design to the U.S. Nuclear Regulatory Commission as part of its application and the staff would analyze any issues not considered or resolved in another environmental impact statement. An early site permit does not authorize construction of a new nuclear power plant. This comment did not result in a change to the environmental impact statement.

Comment: The meeting location, basically was the pits. It was hot, crowded and the slide presentation was basically useless because few people could see it. Also, the lighting was so poor that the hard copy slides were impossible to read. I don't know if it is allowable for a government agency to utilize churches, but that would have been the obvious choice of meeting places. Any of the churches on Church Street would have gladly opened their doors to such a cause. The only requirement would have probably been a benediction by the pastor at the beginning and end of the meeting. I personally think that would have been a great thing to have. (AS-3)

Response: *The staff seeks to choose the most suitable meeting location near the site of the proposed action possible to accommodate the public. This choice is sometimes difficult because it is not known in advance how many people will attend a meeting and what the weather conditions will be. This comment did not result in a change to the environmental impact statement.*

Comment: This siting's permitting and licensing process has been handled with as little public input and comment as the Nuclear Regulatory Commission has been able to get away with. Your hearing in Mississippi was set up at a time and place when most prospective intervenors and concerned citizens would be unable to make the hearing, or would have to take time away from work and family to come in and testify. Many concerned residents of Louisiana, Mississippi, and surrounding areas had to stay in Mississippi at least overnight on July 5th, in order to attend the hearing and testify, and return home the next day. Louisiana and Mississippi residents already have three nuclear power plants between them: River Bend, Waterford III, and Grand Gulf. Your agency's attempting to streamline the permitting and licensing process for this next nuclear power plant by curtailing public comment, by those who will be the most affected by this plant's operation, is unacceptable, and your decision to concentrate your permitting and licensing process in Washington, D.C., puts any meaningful input into these decisions effectively out of reach for those who are unable to come to Washington, D.C., due to their family or work responsibilities. (AI-2)

Response: *The staff sets meeting dates and times so as to be convenient for the public as well as the staff. The staff held two public meetings in Port Gibson, a public scoping meeting*

on January 21, 2004 and a public meeting on the draft environmental impact statement on June 28, 2005. Members of the public who cannot attend a public meeting have the opportunity to submit comments by mail or e-mail. Such written comments received the same attention from the staff as oral comments presented at a public meeting. The comment period for scoping was 60 days, while the period for comment on the draft environmental impact statement was 75 days. Modification of the early site permit process cannot be accomplished as part of the environmental review, but can be proposed through the rulemaking procedures as described on the U.S. Nuclear Regulatory Commission's website (www.nrc.gov). This comment did not result in a change to the environmental impact statement.

Comment: I found the June 28, 2005 public meeting to be very well organized but to some extent scripted and orchestrated. The facilitators were courteous, professional and knowledgeable. This process is obviously complicated and difficult for private citizens to follow and understand. I suggest that technocrats be reminded that everyone does not have nuclear energy backgrounds and training, therefore, when speaking, they should use plain and simple language as well as analogies and examples and the least amount of technical talk as possible. (AQ-1)

Response: *The staff will consider this comment for conducting future public meetings. This comment did not result in a change to the environmental impact statement.*

Comment: Please have meetings start at 6 p.m. if at all possible. Especially if they are going to run so long. Most people from the country are in bed at 9 p.m. (AS-1)

Response: *The staff will consider this comment in setting future meeting times. It is difficult for the staff to know in advance how long a meeting will last. This comment did not result in a change to the environmental impact statement.*

Comment: So what does the Grand Gulf EIS say about the environmental impacts of these and certain other related matters? Very little of substance, I am afraid. Much of the analysis in the DEIS is based upon the nebulous assumptions that constitute the Plant Parameter Envelope rather than on specific design information. Additionally, many potential environmental impacts are not analyzed at all or the needed analysis is being postponed into the future or passed off to other Federal agencies such as the Federal Energy Regulatory Agency. This situation is clearly contrary to Section 102. (C) (iv) of the National Environmental Policy Act that requires all agencies of the Federal Government to describe in their Environmental Impact Statements "The relationship between local short-term uses of man's environment and the maintenance and enhancement of long-term productivity." Issuance of an Early Site Permit, based upon a set of nebulous assumptions and incomplete environmental analysis and for a situation where there is no clear long-term plan to deal effectively with radioactive waste disposal issues or issues involving potential terrorist acts and where there is no definitive plan

on record or financial resources available to deal with a major disaster at the Grand Gulf site once new reactors are built is totally unreasonable and contrary to the public interest. The people of Mississippi and Louisiana and the Nation as a whole deserve more than this from their government. (AK-4)

Response: *The staff's use of the plant parameter envelope in conducting its environmental review is explained in Section 3.2 of the environmental impact statement. Additionally, the U.S. Nuclear Regulatory Commission's understandings and expectations regarding the use of the plant parameter envelope approach for the preparation and review of early site permit applications are discussed in a February 5, 2003, letter to the Nuclear Energy Institute. If System Energy Resources, Inc. were to receive an early site permit and decided to seek a construction permit or combined license, it would need to submit a specific design to the U.S. Nuclear Regulatory Commission as part of its application. The relationship between short-term uses and long-term productivity of the human environment is discussed in Section 10.3 of the environmental impact statement. Environmental impacts of radioactive waste disposal issues are discussed in Section 6.1.1.6 of the environmental impact statement. Information on security at nuclear power plants can be found on the U.S. Nuclear Regulatory Commission's Internet website at: http://www.nrc.gov/what-we-do/safeguards.html. An early site permit does not authorize construction of a new nuclear power plant. Modification of the early site permit process cannot be accomplished as part of the environmental review, but can be proposed through the rulemaking procedures as described on the U.S. Nuclear Regulatory Commission's website (http://www.nrc.gov). This comment did not result in a change to the environmental impact statement.*

Comment: Furthermore, for the ESP process to work, the DEIS would need to show a 20 year forecast for all conditions as a baseline condition atop which the proposed project would need to be an overlay. (BL-2)

Response: *The comment provides no new information. This comment did not result in a change to the environmental impact statement.*

Subject: Opposition to Nuclear Power

Comment: In reality, I am commenting due to the continued failure of our Federal Government, and, in particular, the Bush Administration, to promote the general welfare of its citizens. (AK-1)

Response: *U.S. Nuclear Regulatory Commission's regulations implementing safe use of nuclear energy have been issued as 10 CFR Parts 1 to 199. This comment did not result in a change to the environmental impact statement.*

Subject: Opposition to the Licensee or Licensee's Application

Comment: The very last thing we need on this earth is another nuclear power plant. (AA-1)

Response: *The comment provides no new information for additional analysis. This comment did not result in a change to the environmental impact statement.*

Comment: I oppose the next Grand Gulf nuclear power plant in Port Gibson, Mississippi. No matter how "safe" these nuclear power plants are, how well-built they are, or how supposedly important they are in the efforts to reduce global warming and greenhouse gases, they have two aspects that no amount of pro-nuclear power advocacy can ever diminish: they will always be sited in low-income, minority communities, and they always produce radioactive waste with a 10,000-year half-life. (AB-1)

Comment: I flatly reject the argument that increased investment in nuclear capacity is an acceptable or necessary solution. (AC-1)

Comment: Using Nuclear Power to Address Climate Change Would Exacerbate the Problems: Major studies, such as those by MIT, agree that using nuclear power to have any significant effect on climate change would require building at least 1,000 new reactors worldwide. This would exacerbate all of the problems of the technology: more terrorist targets, more cost (potentially trillions of dollars), less safety, need for a new Yucca Mountain-sized waste site every 4 or 5 years, more proliferation of nuclear materials and technologies, dozens of new uranium enrichment plants, and even then, a severe shortage of uranium even within this century--while displacing the resources needed to ensure a real solution to the climate change issue. (AC-8)

Comment: Conclusion: I believe that the financial and safety risks associated with nuclear power are so grave that nuclear power should not be a part of any solution to address global warming. There is no need to jeopardize our health, safety and economy with increased nuclear power when we have cleaner, cheaper solutions to reduce global warming pollution. (AC-9)

Comment: I'd like to be on record as requesting that this expansion request be denied. (AF-1)

Comment: I am adamantly opposed to any development or expansion of nuclear facilities Anywhere--but in Mississippi, Louisiana, Alabama, Texas, and Florida especially. (AG-1)

Comment: I am a Louisiana native, and oppose the proposed siting of the next Grand Gulf nuclear power plant in Port Gibson, Mississippi. (AI-1)

Comment: Louisiana is equally committed to Grand Gulf determinations through Entergy's System Agreement scheme. Entergy has spread its environmental costs into La. Therefore, Louisianans have a public duty to chose [choose] the most environmental begin [benign] energy products, but the wrong comparisons by this Commission will forever condemn these poor captive ratepayers to an eternal excessive yoke. (AJ-3)

Comment: The Bush Administration just does not understand this simple message. However, the Nuclear Regulatory Commission staff has a golden opportunity to help the current administration understand by recommending against issuance of an Early Site Permit for the Grand Gulf Site based upon the fact that the Draft EIS was prepared using inadequate information provided in large part by SERI. If and when the federal government and the utility industry act in a proactive and meaningful way to deal with the problems of long-term storage of nuclear wastes and potential terrorist incidents at nuclear plants and when a full analysis of all the potential impacts of new reactors at Grand Gulf is completed and the utility industry demonstrates it is willing to pay the full, unsubsidized cost for new reactors in accordance with free market principles, then issuance of an Early Site Permit should be reconsidered. (AK-5)

Comment: NRC must address and resolve the 300% demand for reactive power for Grand Gulf before considering any additional environmental requirements. 1) Identify problem sources 2) state-proposed remedy 3) Public acceptance of the proposed solution for this explosive issue. (AL-1)

Comment: Public Citizen views the draft EIS for the Grand Gulf ESP as deficient, and we disagree with the NRC staff's recommendation that the ESP should be granted. (AM-1, BA-1)

Comment: A decade ago, our governing authorities considered the gaming industry as the means to economic revival and renewal in this county. They suggested that a casino might be our goose that lays the golden egg. I silently voted "no" to the gaming industry because I considered gaming an "undesirable" industry. Today, I say no to nuclear industry because everything that glitters is not gold. (AQ-3)

Comment: NIRS requests that the SERI application be rejected. (AR-9)

Comment: This environmental impact statement (EIS), that has been prepared in response to an application submitted to the United States Nuclear Regulatory Commission (NRC) by System Energy Resources, Inc. (SERI) for an early site permit (ESP), is with {Emphasis Added} "Appalling," "Shocking" and very "Disturbing." (AV-1)

Comment: I am writing to oppose Entergy's application for an Early Site Permit at the Grand Gulf Nuclear Plant in Claiborne County, Mississippi. The information contained in the Draft Environmental Impact Statement is incomplete and insufficient so as to form a basis for acceptance of the application further. (AY-1)

Comment: So obviously the state of Mississippi is not in need of that extra power, and there's some reason that this spot is selected, because those other places that will be selling the power – they would be selling the power to probably don't want a nuclear – a second nuclear plant in their backyard. So it's clear that here we are desperate for jobs and it seems a high risk to take for the jobs that it would generate. (N-4)

Comment: Now the only time you'll see me get upset is when I see something happening in Claiborne County that looks like Grand Gulf Nuclear Power Number 1. I hope you all understand that. (O-1)

Comment: I am writing to express my strong opposition to the proposed nuclear power plant at Grand Gulf. (W-1)

Comment: I strongly oppose the building of a second reactor at the Grand Gulf Nuclear Plant in Claiborne County, Mississippi. (X-1)

Comment: As a Mississippian, I oppose the construction of additional nuclear reactors in Mississippi. (X-6)

Comment: I was distressed to hear about possible expansion of the nuclear power plant at Grand Gulf MS. This is a mistake. (Y-1)

Comment: I am very much against building more nuclear power plants until we figure out what to do with the waste!!!!!! (Z-1)

Comment: I am writing to OPPOSE Entergy's application for an Early Site Permit (ESP) at the Grand Gulf nuclear plant in Claiborne County, Mississippi. (BB-1, BC-1, BE-1, BF-1 BG-1, BJ-1, BK-1, BL-1, BM-1, MM-1)

Comment: In conclusion, too many questions remain to conclude that more nuclear power at Grand Gulf offers a benefit to Port Gibson, the state of Mississippi, or this country. (BB-7, BC-4, BD-8, BG-9, BJ-9, BL-8, MM-8)

Comment: Wife Virginia and I am writing to OPPOSE Entergy's application for an Early Site Permit (ESP) at the Grand Gulf nuclear plant in Claiborne County, Mississippi. (BD-1)

Comment: I hope you will take my ideas into consideration and decide not to build the Grand Gulf Nuclear plant. (BF-6)

Comment: Nuclear energy is already history: just look at the economics and the waste problems, and of course, the weapons spinoff: totally medieval in the present world. Solar/wind/hydrogen is already taking over. Get on board! (BG-8)

Comment: I oppose Entergy's application for an Early Site Permit (ESP) at the Grand Gulf nuclear plant in Claiborne County, Mississippi. (BH-1, BI-1)

Comment: In conclusion, it appears to me that too many questions remain to conclude that more nuclear power at Grand Gulf offers a benefit to Port Gibson, the state of Mississippi, or this country. (BH-8)

Comment: Too many questions remain to conclude that more nuclear power at Grand Gulf offers a benefit to Port Gibson, the state of Mississippi, or this country. (BK-4)

Comment: I marched against Hanford in Washington state in the 70's because I had read and investigated what they were doing there and knew that the land around this facility would be worthless for generations to come. While they were denying releasing gases in the area we found out in the 90's that they were doing that and now the land around Hanford is worthless. I just don't trust that when humans are in control that accidents won't happen. Nuclear accidents are a horror that I don't ever want to see in America. (BJ-3)

Response: *The preceding comments provide no new information for additional analysis. These comments did not result in a change to the environmental impact statement.*

Subject: Postulated Accidents

Comment: The DEIS should have covered the results of catastrophic and less severe accidents both at the plant and during transport. Instead, staff discussed the probability of accidents, found it low, and went no further. Better policy would be to look at accident scenarios and decide if the results are worth the risk, particularly when there are alternatives to nuclear facilities. The accident/risk scenarios are also issues at the reactor itself. I don't know of any other source of electricity so dangerous that it requires evacuation routes and special training of emergency and medical personnel. Increasing the number of reactors increases the risk of an accident or meltdown at the site. (AN-3)

Comment: The DEIS also does not address the following issues: a description of what kinds of accidents are potentially possible; the computer models used to ascertain potential release scenarios; the environmental health effects of an aftermath; the detailed capacity of the local,

state and federal communities to react to such accidents (e.g., Local Emergency Planning Councils, fire departments, federal agencies) in explicit terms; and what track record the facility currently has as to accident prevention (e.g., results of chemical safety audits, emergency exercises, etc.). (AZ-13)

Response: *Design basis accidents are events that are considered credible and sufficiently likely that the reactor is designed to minimize impacts of the accident through defense in depth. Descriptions of the design basis accidents that are considered are found in U.S. Nuclear Regulatory Commission standard review plans NUREG-0800 (NRC 1987) and RS-002 (NRC 2004a). The names of the accidents are reasonably descriptive of the initiating event. Assumptions related to the release pathways and analytical procedures are found in the standard review plans and regulatory guides. Design basis and severe accidents are discussed in detail in Chapter 5 of the environmental impact statement. Because severe events are so unlikely, they can only be discussed meaningfully in terms of risk; i.e., the product of probability times consequences. NUREG-1150 describes the methods used to identify and determine the probability of severe accidents of interest. The MACCS2 code is used to determine the consequences of severe accidents. Several types of risks associated with severe accidents are evaluated in Tables 5-13 and 5-14 in Chapter 5 of the environmental impact statement. The addition of new reactors would increase the risks associated with an accident at the Grand Gulf site but not by much. For example, the data in Table 5-15 of the environmental impact statement indicate that the population dose risk within a 50-mi radius from a severe accident would increase by about 0.0002 Sv/yr if two AP1000 reactors were operated at the Grand Gulf site. The severe accident population dose risk estimated for the existing reactor is about 0.5002 Sv/yr. Adding the population dose risk for two postulated new reactors to the risk for the current reactor gives a total risk of about 0.5002 Sv/yr, which considering uncertainty is the same as the risk for the existing unit. The safety performance of the operator of the existing unit is not relevant to the issue under consideration; i.e., whether the site is acceptable for additional nuclear plants. Issues related to emergency planning are addressed in the safety evaluation report (NRC 2005). These comments did not result in a change to the environmental impact statement.*

Comment: So far, none of us have figured out how to live with the Mississippi River contaminated with radiation. Also, do you remember the movie, “The China Syndrome?” That almost happened at Three Mile Island (no, I’m not too young to remember that, as most pro-nuclear folks are hoping) and we can’t guarantee it won’t happen again. None of these plants can be made foolproof because of HUMAN ERROR. (AF-4)

Response: *The U.S. Nuclear Regulatory Commission staff assumes that this comment relates to accident-related releases. It is extremely unlikely that contaminated liquids from a design basis or severe accident would reach the Mississippi River. In the Generic Environmental Impact Statement for License Renewal of Nuclear Plants (NRC 1996) the staff evaluated risks*

of a severe accident with basemat melt-through for current generation power plants and concluded that the risks associated with releases to groundwater are smaller than those for the air pathway, which were determined to be small. The reasoning behind this conclusion is set forth in Section 5.10.2.3 of the environmental impact statement. The groundwater pathway risks associated with advanced reactors would be smaller than those for current generation reactors. This comment did not result in a change to the environmental impact statement.

Comment: Also, the extensive industrial corridor between Baton Rouge and New Orleans depends on river water for processing. These industries would have to be shut down. Contamination of vital wetlands that provide nurseries for larval and other developmental stages of fish, for shrimp, oysters, etc., could devastate the seafood industry. Certainly the tourist industries in Florida, Mississippi, Louisiana, and Texas would be affected. This involves potentially billions/trillions of dollars and innumerable lives lost or changed because of an accident at this plant. These effects should be considered in any DEIS. Effects north of the facility should also be considered. (AN-10)

Response: *Although Louisiana parish economic development profiles list numerous manufacturers along the Mississippi River between Baton Rouge and New Orleans, most appear to be involved in such activities as industrial chemicals, metals, and shipping. Given the dilute level of radionuclides that are postulated downstream even in the case of a severe accident (Section 5.10.2.2), there appears to be no reason why industrial corridor manufacturers would have to be shut down. It is extremely unlikely that contaminated liquids from a design basis or severe accident would reach the Mississippi River. In the Generic Environmental Impact Statement for License Renewal of Nuclear Plants (NRC 1996) the staff evaluated risks of a severe accident with basemat melt-through for current generation power plants and concluded that the risks associated with releases to groundwater are smaller than those for the air pathway, which were determined to be small. The reasoning behind this conclusion is set forth in Section 5.10.2.3 of the environmental impact statement. The groundwater pathway risks associated with advanced reactors would be smaller than those for current generation reactors. This comment did not result in a change to the environmental impact statement.*

Comment: An accident or act of sabotage at this facility and its stored nuclear waste could contaminate the Mississippi River and the Gulf of Mexico. This would be disastrous to the communities downstream that depend on the river for drinking water. (AN-9)

Comment: With Grand Gulf so near the Mississippi River, a disaster could spell doom for coastal residents, tourism, and livelihoods. (X-5)

Response: *Health effects of severe accident scenarios are addressed in Section 5.10 and demonstrate that the expected impacts are small. The Grand Gulf early site permit safety*

evaluation report (NRC 2005) also addresses safety issues. Impacts on tourism and coastal communities due to potential actions of either regulatory authorities closing down facilities or consumer avoidance of products or locations due to concerns about contamination have not been included in the analysis. Such impacts are highly speculative because the potential contaminating event is considered a very remote possibility and both the mechanisms of contamination and the mechanisms of regulatory and consumer reaction are only partially understood. These comments did not result in a change to the environmental impact statement.

Comment: The DEIS does not address the vicinity in radius miles that would be affected by a worst case accident scenario and a credible case accident scenario, either in the sections on Affected Environment or on Operation Impacts. It selects what appears to be arbitrary 10 km and 80 km boundaries for its discussion related to persons that would be affected by the siting of one or more additional nuclear power facilities. (AZ-12)

Response: *The 10-km (6-mi) and 80-km (50-mi) radii used to evaluate impacts of routine operations and accidents are specified in U.S. Nuclear Regulatory Commission guidance. The distances are based on evaluation of impacts of many reactors at many sites. Design basis accidents are events that are considered credible and sufficiently likely that the reactor is designed to minimize impacts of the accident through defense in depth. Severe accidents are extremely unlikely, worst-case events. The impacts of normal operations, design basis, and severe accidents are described in detail in Chapter 5 of the environmental impact statement. This comment did not result in a change to the environmental impact statement.*

Comment: From the radiological perspective, scenario(s) should be added to Section 5.10, Environmental Impacts of Postulated Accidents, Table 5.11, Design Basis Accident Doses for an Advanced Boiling Water Reactor and Table 5.12, Design Basis Accident for a Surrogate AP1000 Reactor, that addresses the impact of an attack on a spent fuel storage cask using artillery shells at Grand Gulf and the resulting implications of a dose to plant personnel and the public. The total effective dose equivalent at the exclusion area boundary, and in the low population zone, should be calculated. (AZ-3)

Response: *The U.S. Nuclear Regulatory Commission is devoting substantial time and attention to terrorism-related matters, including coordination with the U.S. Department of Homeland Security. As part of its mission to protect public health and safety and common defense and security pursuant to the Atomic Energy Act, the U.S. Nuclear Regulatory Commission staff is conducting vulnerability assessments for the domestic use of radioactive material. In the time since the horrific events of September 2001, the U.S. Nuclear Regulatory Commission has identified the need for license holders to implement compensatory measures and has issued several orders to license holders imposing enhanced security requirements. Finally, the U.S. Nuclear Regulatory Commission has taken actions to ensure that applicants*

and license holders maintain vigilance and a high degree of security awareness. Consequently, the U.S. Nuclear Regulatory Commission will continue to consider measures to prevent and mitigate the consequences of acts of terrorism in fulfilling its safety mission. Major U.S. Nuclear Regulatory Commission actions include the following:

- *Ordering plant owners to sharply increase physical security programs to defend against a more challenging adversarial threat*
- *Requiring more restrictive site access controls for all personnel*
- *Enhancing communication and liaison with the Intelligence Community*
- *Improving communication among military surveillance, U.S. Nuclear Regulatory Commission, and its licensees to prepare power plant operators and to effect safe shutdown should it be necessary*
- *Ordering plant owners to improve their capability to respond to events involving explosions or fires*
- *Enhancing readiness of security organizations by strengthening training and qualifications programs for plant security forces*
- *Requiring vehicle checks at greater stand-off distances*
- *Enhancing force-on-force exercises to provide a more realistic test of plant capabilities to defend against an adversary force*
- *Improving liaison with Federal, State, and local agencies responsible for protection of the national critical infrastructure through integrated response training*
- *Working with national experts to predict the realistic consequences of terrorist attacks on nuclear facilities, including one from larger commercial aircraft.*

For the facilities analyzed, the results confirm that the likelihood of both damaging the reactor core and releasing radioactive material that could affect public health and safety is low. The subjects of this comment has been determined to be outside the scope of the environmental impact statement. This comment did not result in a change to the environmental impact statement.

Comment: Accident Scenarios: In its analysis of the potential consequences of "design basis" accidents, SERI used the characteristics of two reactor designs—the Advanced Boiling Water

Reactor (ABWR) and the Advanced Pressurized Water Reactor (AP1000)—assuming the impacts of such accidents would bound those of other possible reactor designs, a premise accepted by the NRC in its evaluation (EIS, § 5.10.1). For its analysis of "severe" accidents, SERI evaluates the consequences for the current generation reactors—not of the kind that it would build at the GGNS (EIS, pg. 5-63). How can the NRC reasonably judge accident consequences when several of the potential reactor designs proffered by SERI have never been deployed? (AM-5)

Response: *The reactors postulated by System Energy Resources, Inc. and the U.S. Nuclear Regulatory Commission staff in their design basis and severe accident analyses are advanced reactors that have been studied extensively. The designs of the other advanced reactors postulated in the System Energy Resources, Inc. application (SERI 2005), while not as thoroughly reviewed, are sufficiently well-developed to be able to identify new safety features that would reduce both the likelihood and severity of accidents. As a result, there is sufficient information that the staff believes the potential impacts of accidents for the postulated light water reactors would likely bound the impacts for the other reactors. However, should a construction permit or combined license application be submitted referencing one of the other reactors, the staff would require that application include accident analyses for the specific reactor mentioned in the application. This comment did not result in a change to the environmental impact statement.*

Subject: Safeguards and Security

Comment: Nuclear Energy is Too Dangerous: Nuclear energy has never been safe, but post 9-11 nuclear power plants and radioactive waste storage facilities have become terrorist targets as well. (AC-5)

Comment: Then, there is the problem of potential acts of terrorism at nuclear facilities. Neither the government nor the private utility industry has taken sufficient action to insure that a large scale terrorist attack against a nuclear plant can be thwarted, or that if such an attack occurred, it could be dealt with in a manner that would prevent release of nuclear material outside the boundaries of the plant. This omission constitutes a grave failure to provide for the common defense of our citizenry. (AK-3)

Comment: Nuclear power plants have known vulnerabilities to terrorist attack and sabotage. According to the 9/11 Commission Report, the infamous terrorist organization al Qaeda specifically discussed targeting U.S. nuclear plants. Fuel storage pools, dry storage facilities, and reactor control rooms are not designed to withstand the type [of] attack that occurred on September 11, 2001. The U.S. Government Accountability Office (GAO) concluded in recent testimony before the U.S. Senate that cargo and general aviation airfields are more vulnerable to security breaches than commercial airports. Ignoring the threat because it is "highly

speculative" does not make the threat go away, and indicates one shortfall of using an exclusively risk-based approach—especially considering the GGNS's location on the Mississippi River, which could make it an attractive strategic target. The draft EIS describes the Mississippi River as a "critical inland shipping route from the Gulf Coast to the interior of the South and Midwest" (pg. 2-4). One possible security measure to protect the reactor from assault by aircraft is to place a reactor below ground level. Therefore, an analysis in the draft EIS of the suitability of the site to place the reactor containment below-grade level should be done, which would require an in-depth analysis of geological and hydrological conditions at the site. (AM-20)

Comment: The 9/11 Commission has stated that attacks on nuclear power plants were discussed by Al Quaida. Therefore, a major flaw in the DEIS was the lack of consideration of a terrorist attack, both on the reactor itself and the waste storage area. I realize that the NRC Commissioners have ruled that terrorist attacks cannot be considered in a DEIS, but feel that this is the extreme of irresponsibility on the Commissioners' part. Also, the Commissioners only considered an aerial attach [attack] and nothing by land in their ruling. Yet "The Grand Gulf site"… is accessible by both river and road (page 2-1) and the ESP site is less than two miles from the Mississippi River (Figure 2-2, page 2-21). A June 20, 2005 article in Time magazine raised frightening and believable issues concerning the ease with which a terrestrial attack by terrorists could be carried out- resulting in what the NRC Commissioners would term a "worst case" scenario. (AN-4)

Comment: Security is essentially left out completely. (I-6)

Comment: I'd like to point out that nuclear power stations in general are the most secure commercial facilities in the United States. Since September of 2001, the Nuclear Regulatory Commission has issued stringent new security regulations, and the nuclear industry has spent over a billion dollars, that's with a B, on compliance with these new regulations. (R-1)

Comment: These nuclear power plants are no "cleaner" now, than they were decades ago. They still emit radiation, and the proposed waste disposal ideas leave highly radioactive fuel rods buried either underground or in giant pools, both of which are usually unguarded. These plants are easy targets for terrorists or thieves who can walk in through an unlocked gate, take the nuclear waste or fuel rods they need, and leave, without being either stopped or questioned by guards. (AI-3)

Comment: This nuclear power plant should not be permitted, sited, or licensed, unless and until the NRC can effectively address the security concerns posed by these plants, the problems with nuclear power's radioactive waste, and the agency's dismissive attitude towards those people whose lives will be the most adversely affected by this plant, and who have little political clout in keeping one of these plants out of their communities. (AI-4)

Comment: Third, and most disturbing is the real threat of terrorism. From an environmental standpoint, the location is extremely difficult to protect from terrorist threats. There is a tremendous amount of unregulated traffic down the Mississippi River which is not able to be monitored in any way. An air attack would also be difficult to detect or intercept in a timely fashion. (Not to mention that I have even heard a first hand account of someone driving into the current plant to ask for information on touring the plant, who was not even stopped at the gate or asked for identification!) (W-4)

Comment: Nuclear power plants have known vulnerabilities to terrorist attack and sabotage. According to the 9/11 Commission Report, al Qaeda specifically discussed targeting U.S. nuclear plants. Fuel storage pools, dry storage facilities, and reactor control rooms are not designed to withstand the type (of) attack that occurred on September 11, 2001. Ignoring the threat because it is "highly speculative" does not make the threat go away, and indicates one shortfall of using an exclusively risk-based approach - especially considering Grand Gulf's location on the Mississippi River, which could make it an attractive strategic target. An analysis in the draft EIS of the suitability of the site to place the reactor containment below-grade level should be done, which would require an in-depth analysis of geological and hydrological conditions at the site. (BB-6, BC-3, BD-7, BG-7, BH-7, BI-5, BJ-8, BL-7, MM-7)

Comment: I also am seriously concerned about additional security risks. (BM-3)

Response: *The U.S. Nuclear Regulatory Commission is devoting substantial time and attention to terrorism-related matters, including coordination with the U.S. Department of Homeland Security. As part of its mission to protect public health and safety and common defense and security pursuant to the Atomic Energy Act, the U.S. Nuclear Regulatory Commission staff is conducting vulnerability assessments for the domestic use of radioactive material. In the time since the horrific events of September 2001, the U.S. Nuclear Regulatory Commission has identified the need for license holders to implement compensatory measures and has issued several orders to license holders imposing enhanced security requirements. The U.S. Nuclear Regulatory Commission has taken actions to ensure that applicants and license holders maintain vigilance and a high degree of security awareness. Consequently, the U.S. Nuclear Regulatory Commission will continue to consider measures to prevent and mitigate the consequences of acts of terrorism in fulfilling its safety mission. Major U.S. Nuclear Regulatory Commission actions include the following:*

- *Ordering plant owners to sharply increase physical security programs to defend against a more challenging adversarial threat*
- *Requiring more restrictive site access controls for all personnel*
- *Enhancing communication and liaison with the Intelligence Community*

- *Improving communication among military surveillance, U.S. Nuclear Regulatory Commission, and its licensees to prepare power plants and to effect safe shutdown should it be necessary*

- *Ordering plant owners to improve their capability to respond to events involving explosions or fires*

- *Enhancing readiness of security organizations by strengthening training and qualifications programs for plant security forces*

- *Requiring vehicle checks at greater stand-off distances*

- *Enhancing force-on-force exercises to provide a more realistic test of plant capabilities to defend against an adversary force Improving liaison with Federal, State, and local agencies responsible for protection of the national critical infrastructure through integrated response training*

- *Working with national experts to predict the realistic consequences of terrorist attacks on nuclear facilities, including one from larger commercial aircraft.*

For the review of the Grand Gulf early site permit facility, the U.S. Nuclear Regulatory Commission staff addressed in the safety evaluation report (NRC 2005) whether the site characteristics are such that adequate security plans and measures can and will be developed (10 CFR 100.21). For the facilities analyzed, the results confirm that the likelihood of both damaging the reactor core and releasing radioactive material that could affect public health and safety is low.

With respect to the impacts of terrorism, the Commission has determined that malevolent acts, including terrorism, are remote and speculative and thus beyond the scope of a National Environmental Policy Act of 1969 review (Private Fuel Storage, L.L.C. 2002). The subjects of these comments have been determined to be out of the scope of the environmental impact statement. These comments did not result in a change to this environmental impact statement.

Subject: Safety Review for ESP

Comment: The effects on the populace of Claiborne County are not the only effects that should be considered. The Grand Gulf site is located near the Mississippi River (the ESP site is less than two miles (Figure 2-2, page 2-21) from the river) in an area prone to damage from hurricanes, tornadoes and flooding. It is also an area of the River that would allow easy access for terrorists, particularly from a boat or barge. (AN-8)

Response: *Nuclear power plants are extremely robust structures designed to survive hurricane and tornado strikes. Safety procedures at a nuclear facility also include the possibility of hurricanes, tornadoes, and floods. The Unusual Event declaration (the lowest of four safety-related declarations) is routine in the event of a hurricane, and the plant's procedures typically require that the plant be shut down should hurricane winds reach Category III, which is 111 miles per hour or higher. Each plant has emergency diesel generators available if needed, additional diesel generators (normally used in routine operations), and emergency battery power available should the need arise. Safety-related issues are covered in the Grand Gulf early site permit safety evaluation report (NRC 2005). This comment did not result in a change to the environmental impact statement.*

Comment: Aside from being near the Mississippi River, overflows from which could become problematic, the Grand Gulf plant and proposed GGII are on the New Madrid earthquake fault. (AO-3)

Response: *The geology of the Grand Gulf site is described only briefly in the environmental impact statement. Section 2.5 of the safety evaluation report (NRC 2005) contains a description of the geology of the site. This discussion includes a detailed description of the seismic characteristics of the region including the New Madrid fault. This comment provides no new information. This comment did not result in a change to the environmental impact statement.*

Subject: Socieconomics

Comment: To put all of this in some kind of perspective: The above just-mentioned Environmental effects are clearly noticeable and are sufficient to destabilize important attributes of the resource {LARGE}!

What will it profit the Citizens of Claiborne County, 1) approve a site within the existing Grand Gulf Nuclear Station boundaries as suitable for the construction and operation of a new nuclear power generating facility, and 2) issue an ESP for the proposed site identified as the Grand Gulf ESP site collocated with Gulf Nuclear Station and lose the benefits.

According to this Environmental Impact Statement, the first Grand Gulf Nuclear Power Plant, did nothing, absolutely nothing, to change and affect the minority and low-income population, poverty, housing, medical, and the unemployment rate, within the County (Claiborne County) where the first Grand Gulf Nuclear Power Plait [plant] is located. (AV-2)

Comment: Further, the information that is contained in the document suggests that the peculiar economic situation faced by the host community makes it unlikely that an emergency at the plant can be addressed in the necessary manner. (BB-2, BG-2, BJ-2, MM-2)

Comment: And the information that is contained in the document suggests that the peculiar economic situation faced by the host community makes it unlikely that an emergency at the plant can be addressed in the necessary manner. (BD-2)

Comment: I have heard that the information contained in the document suggests that the peculiar economic situation faced by the host community makes it unlikely that an emergency at the plant can be addressed in the necessary manner. (BH-2)

Response: *The comments provide no new information. These comments did not result in a change to the environmental impact statement.*

Comment: And I find it more peculiar that the Nuclear Regulatory Commission, in licensing this plant in 1985, never revisited the fact that the Mississippi State legislature went about stripping this county of money that needs to go into emergency planning and security. (H-3)

Response: *Control of or influence on local, regional, or state taxing and revenue distribution is outside the authority of the U.S. Nuclear Regulatory Commission. The distribution of revenue from the existing Grand Gulf facility is outside the scope of this environmental impact statement. However, current and possible future revenue distributions from a new nuclear facility at the Grand Gulf early site permit site were evaluated and their effects addressed in this environmental impact statement. This comment did not result in a change to the environmental impact statement.*

Comment: Page 2-63 of the DEIS uses a 16 km (10 mile) reference for discussion on population numbers. It is unknown where this 16 km figure arises from. The population figure is apparently limited to residents, and does not include workers affected, which may be significant. The only reference to workers is a table discussing residential locations of workers. (AZ-16)

Response: *A discussion of transient population has been added to Section 2.8.1. This comment resulted in a change to Section 2.8.1.*

Comment: I would like to see an educational program set up in the school system of Claiborne County to encourage children to study math and science. I would much rather see the majority of the workforce for another unit to come from Claiborne County. (AS-8)

Response: *A workforce educated in mathematics and science and specifically trained for nuclear industry jobs likely would have a better chance of securing employment at a new nuclear facility in Claiborne County than would a workforce without such skills. This observation also applies to the existing Grand Gulf Nuclear Station. Hiring decisions for jobs at any future nuclear plant at the Grand Gulf early site permit site would be made based on the*

qualifications of the candidates that present themselves at the time the plant is built and put into operation. The development of local general education or specific training programs is the responsibility of state and local government and could be assisted by the operating company should they choose to do so. The environmental impact statement only evaluates whether an adequate workforce can be made available at the Grand Gulf early site permit site. Additional information has been added to the environmental impact statement to evaluate System Energy Resources Inc.'s assumption that 50 percent of the workforce could come from the region. This comment resulted in a change to Section 4.5.2.

Comment: Mississippi tax code is unique in that nuclear plants are exempt from all county, municipal, and district taxes. Instead, SERI pays taxes to the state of Mississippi in a sum based on the assessed value of the plant, and the State redistributes the brunt of the funds—about 70 percent—to other counties. Still, Claiborne County receives at least $7.8 million annually from SERI, roughly 83 percent of the county's tax revenues (EIS, pg. 2-68). This position of dependency puts Claiborne County in a tenuous situation that may deteriorate if SERI moves forward with this project. Indeed, the existing reactor, in more than twenty years of operation, has not lifted the community out of poverty. More than 32 percent of the population in Claiborne County exists below the poverty level, and the county has been classified as a "persistent poverty" county (EIS, pg. 2-64) with an unemployment rate of 12.4 percent (EIS, pg. 2-67). Considering SERI's desire to operate its new reactor as an unregulated merchant facility, its value as a source of tax revenue in the county is in question. The development of an unregulated, merchant facility would not bode well for Claiborne County or Mississippi, since such a facility may be exempt from a large portion of the taxes required of a regulated facility (EIS, pg. 4-30). The NRC's presumption that a deregulated facility may actually increase SERI's property tax payments to Claiborne County (EIS, pg. 5-34) is unjustified and contrary to experience. Unregulated electric generation facilities are less reliable sources of tax revenue than regulated facilities. In Illinois, for example, nuclear operator Exelon exploited changes in the tax structure under a deregulated utility environment to dramatically reduce its local property tax payments. The NRC's draft EIS for an ESP at the Exelon ESP site at the Clinton Power Station (CPS) in Illinois reports that the annual property taxes paid by Exelon on its CPS have declined dramatically since 1996, when it paid roughly $17.9 million to DeWitt County and other taxing districts, to $9.1 million in 2002 (Exelon EIS, Table 2-13). Over this period, Exelon's property tax payments have declined from 80 percent of the county's total property tax revenue in 1996 to 53 percent in 2002 (Exelon EIS, pg. 2-61). The cause for the precipitous decline is attributed to "a transition period of declining property tax collections due to deregulation" (Exelon EIS, pg. 2-53). Whereas before deregulation property taxes were based on the "depreciated assessed value of the CPS" (Exelon EIS, pg. 2-53), the institution of deregulation has allowed Exelon to pay taxes based on the market value of power produced from the plant, and Exelon's assessed valuation of the plant has plummeted from $559 million in 1996 to a mere $165 million in 2003, only 40 percent of DeWitt County's assessment for that same year (Exelon EIS, Table 2-14). Meanwhile, the draft EIS for

Exelon's ESP reports that the consensus feeling among DeWitt County officials is that the economy of the region has "reached bottom" (pg. 2-47), and Clinton School District 15 has been forced to cut its budget by $3 million and spending reserves over the past several years (EIS, pg. 2-60). This scenario of deregulation should be considered in the final EIS for the Grand Gulf ESP. (AM-18)

Response: *Although the existing Grand Gulf Nuclear Station has not lifted Claiborne County out of poverty, it does provide about 83 percent of tax revenues received by the county and allows a lower property tax rate than prevails in nearby Jefferson County, which is similar economically in other respects but has no nuclear power plant. In addition, some of the county population does work at the facility. The Illinois experience in Dewitt County is not directly germane. There, under deregulation, the management of the existing nuclear power plant was able to negotiate a reduction in assessed property value because the basis for assessed value changed. In the case of the Grand Gulf site, no change in taxation of the existing nuclear power plant is contemplated, so it will continue to generate revenue under existing provisions of the Mississippi tax law. However, a new nuclear power plant, if it were treated as an ordinary industrial asset because of its merchant plant status, could yield considerable new tax revenue to local government. This likely would be true even if the assessed property value were negotiated downward or System Energy Resources, Inc. made payments to the local government in lieu of taxes. Even if the plant were treated for tax purposes as operated by a public utility, the increase in Claiborne County's share of annual revenues under current law would be a minimum of $7.8 million, an 87 percent increase in total county revenue. This comment did not result in a change to the environmental impact statement.*

Comment: Have members of the school board for the Port Gibson district been contacted about the potential influx of 460 children—a 38 percent increase over the present student population—that could result from construction activities at the GGNS (EIS, § 4.5.4.5)? Such an increase could be a substantial burden, yet it does not appear that school administrators were contacted for this draft EIS (see Appendix B, "Organizations Contacted"). (AM-22)

Response: *Although the Superintendent of Schools was on the staff's list of requested attendees and was invited, neither the members of the Port Gibson school board nor the school administration staff attended the meeting with public officials held in Port Gibson on April 13, 2004. To the staff's knowledge, no one representing the school district attended either the public scoping meeting or the public meeting on the draft environmental impact statement, nor did anyone from the school district comment on either the proposed scope of the environmental impact statement or the draft environmental impact statement. This comment did not result in a change to the environmental impact statement.*

Comment: Based on the information provided in this Environmental Impact Statement, SERI, Entergy, the second Grand Gulf Nuclear Power Plant should be exempt from county, municipal, and district ad valorem taxes, as well as any in lieu payment of county, municipal, and district ad valorem taxes, totally EXEMPT.

SERI, Entergy, the second Grand Gulf Nuclear Power Plant would pay a sum based upon INCOME to fund local 501(c)(3) organization(s) considering Education, Economic Development, Housing, and Health on a competitive basic, to help develop Claiborne County and its residents (who are disproportionately minority and low-income), no less than the value of the nuclear generating plant, thus further guaranteeing a TAX WRITE-OFF, for SERI, Entergy. (AV-5)

Response: *In Sections 2.8.2.3, 4.5.3.2, and 5.5.3.2, the environmental impact statement identifies the possibility that a second Grand Gulf nuclear power plant might be exempt from county, municipal, and district level taxes if System Energy Resources, Inc. is treated under Mississippi State tax code as a "public utility." If the plant is operated as a merchant plant, the rationale for treating System Energy Resources, Inc. as a public utility is much less obvious, and the nuclear power plant may be treated as an ordinary industrial facility that is subject to either property taxes or in lieu payments. The commenter proposes a private poverty assistance program that would be funded by System Energy Resources, Inc. Such arrangements could be helpful to the community but would not mitigate any environmental or socioeconomic impact of construction and operation of a nuclear power plant and would not be required for early site permit approval. This comment did not result in a change to the environmental impact statement.*

Comment: Based on the information provided in the environmental impact statement, SERI, Entergy, the second Grand Gulf nuclear power plant should be exempt from county, municipal and district level on taxes as well as any other in lieu payments of county, municipal and district level on taxes totally exempt. (D-4)

Response: *In Sections 2.8.2.3, 4.5.3.2, and 5.5.3.2, the environmental impact statement identifies the possibility that a second Grand Gulf nuclear power plant might be exempt from county, municipal, and district level taxes if System Energy Resources, Inc. is treated under Mississippi State tax law as a "public utility." If the plant is operated as a merchant plant, the rationale for treating System Energy Resources, Inc. as a public utility is much less obvious, and the nuclear power plant may be treated as an ordinary industrial facility that is subject to either property taxes or in lieu payments. However, either way, the increase in revenue to Claiborne County would be substantial under existing law. This comment did not result in a change to the environmental impact statement.*

Comment: To put all this in some kind of perspective, the above just mentioned environmental effects are clearly noticeable and are sufficient to destabilize important attributes of the resources. What would it profit Claiborne County to approve of this site out there, and then lose all of the benefits? (D-1)

Response: *None of the information presented in the comment demonstrates any environmental effect that would result in destabilizing important attributes of resources near the Grand Gulf early site permit. The likeliest situation is that Claiborne County would gain a significant measure of economic benefit and wouls not have to provide public services to a significantly larger resident population. This comment did not result in a change to the environmental impact statement.*

Comment: The DEIS states that the "staff assumed the plant would be taxed as an ordinary taxable business asset" and therefore taxable by Claiborne County. Under the current State tax code this is a baseless assumption. (AR-3)

Response: *Section 27-35-309 of the Mississippi Code specifically relates to a nuclear generating plant "located in the state, which is owned or operated by a public utility rendering electric service in the state and not exempt from ad valorem taxation under any other statute." It is questionable whether the owner or operator of a new nuclear power plant at the Grand Gulf early site permit site would be a "public utility rendering electric service in the State" under Mississippi law if it sold no electricity at retail in Mississippi. A "public utility" in Mississippi law includes persons, corporations, trustees, and receivers who own or operate equipment or facilities for the generation, manufacture, transmission or distribution of electricity to or for the public for compensation. Grand Gulf Nuclear Station was originally 90 percent owned by Middle South Utilities (a multi-state holding company that sold no electricity at retail in Mississippi) and 10 percent by the Southeast Mississippi Electric Power Association. It was operated by Mississippi Power and Light Company, a wholly owned subsidiary of Middle South Utilities. Mississippi Power and Light Company was a public utility rendering electric service in the state. The plant was taxable because Mississippi Power and Light operated the plant. Middle South was not considered a public utility in the state, and Southeast Mississippi Electric Power Association was not a public utility and was, in any case, tax-exempt under Section 27-31-15 (Mississippi Attorney General 1990). Based on this observation, an entity that owned and operated a new plant for wholesale markets outside of Mississippi might not fall under Section 27-35-309 and would be an ordinary industrial asset, so far as this special provision of state law is concerned. This comment did not result in a change to the environmental impact statement.*

Comment: Population: The DEIS does not address the population of workers in the selected 10 km or 80 km radius. In addition, it does not define: a quantitative or qualitative description of the chemical plant facilities in this proximity, or even a wider radius that may be more

realistically affected; types of chemicals that are produced and released to the environment by these facilities; and specifics of the nuclear-related accident scenarios that may be potentially generate adverse radiological and non-radiological health effects, and have potential adverse productivity on these worker neighbors. A GIS map of all the regulated facilities within the project area of concern (80 km radius) should be incorporated in the FEIS. (AZ-15)

Response: *Sections 2.8.1 and 4.5.2 have had an expanded assessment of worker availability and large employers added. Non-radiological and radiological health impacts of normal operations are addressed in Sections 5.8 and 5.9. Although based on resident populations, these impacts are expected to be conservative because net daily commuting is out of the nearby counties and away from the Grand Gulf early site permit site. Effects of both design basis accidents and severe accident scenarios are addressed in Section 5.10. There is no valid basis for combining the potential emissions of nuclear and non-nuclear facilities in the manner requested. This comment resulted in a change to Sections 2.8.1 and 4.5.*

Comment: On page 2-75, the discussion should be expanded on the Police, Fire and Medical capabilities in more detail. It is clear that there are already serious deficiencies in response capacity. (AZ-17)

Response: *The comment does not discuss what other details would be required for a more meaningful analysis. The section describes local officials' concerns and compares these concerns with performance in emergency planning tests. Emergency preparedness is a safety issue that is addressed in the Grand Gulf early site permit safety evaluation report (NRC 2005). In accordance with 10 CFR 52.18, the Commission must determine, in consultation with the Federal Energy Management Agency, whether the information submitted by the applicant shows there is no significant impediment to the development of emergency response plans. This comment did not result in a change to the environmental impact statement.*

Comment: AAEA concurs with the NRC staff position that the Grand Gulf ESP site "would not result in disproportionate and adverse offsite environmental impacts to minority and low-income populations." We agree with the findings that impacts during the construction would be temporary and insignificant. The NRC concluded that there would be a MODERATE impact if tax revenues were not allocated to the local community to mitigate for additional construction traffic and new residents. The city, county and state governments should assure that any tax revenues generated by a new nuclear power plant should be equitably distributed. The tax considerations are included in EIS Section 2.8: Socioeconomics. (AW-4)

Comment: AAEA believes that the operation of a second nuclear unit at Grand Gulf would be positive for the local, state, regional, and national communities. The regional and national impacts would be reductions in smog-forming and greenhouse gases that would be beneficial to downwind states. AAEA concurs with the conclusions in the report that operation of a new

facility would be beneficial to the local community and "the impacts to minority and low-income populations from operating new units at the Grand Gulf ESP site would be minor." The tax questions surrounding the operation of the facility will be determined at some future date by the county and state legislatures. This is also the conclusion of the NRC staff. (AW-5)

Comment: AAEA concurs with NRC staff in concluding that, "the cumulative environmental impacts related to environmental justice would be SMALL." Concurrently, "if tax revenues dramatically increase, the residents of Claiborne County (who are disproportionately minority and low-income) would enjoy LARGE beneficial tax revenue impacts." (AW-6)

Response: *These comments provide no new information for additional analysis. These comments did not result in a change to the environmental impact statement.*

Comment: SERI, Entergy, the second Grand Gulf nuclear power plant will pay a sum based upon income to fund local 501(c)(3) organizations considering education, economic development, housing, and health on a competitive basis to help develop Claiborne County and its residents who are disproportionately minority and low income. No less than the value of the nuclear generating plant does further guarantee a tax write off for SERI Entergy. (D-5)

Response: *The commenter proposes a private poverty assistance program that would be funded by System Energy Resources, Inc. Such arrangements could be helpful to the community but do not mitigate any environmental or socioeconomic impact of a nuclear power plant and would not be required for early site permit approval. This comment did not result in a change to the environmental impact statement.*

Comment: It is not clear that a new reactor at the GGNS would provide an economic benefit to the people of Claiborne County; in fact, new development at the GGNS may prove to be a drain on the county's resources. According to findings in the draft EIS, it is "not clear whether Claiborne County would receive property taxes, sales, and use taxes, or other taxes and public monies commensurate with the costs of its additional emergency management and public services obligations. The net financial burden may fall on local residents and taxpayers, most of whom are minority and low-income persons" (§ 5.7.3). If this situation is realized, the NRC staff judges that "the socioeconomic burden on local taxpayers (largely minority, and a majority of whom are low income) may be adverse, disproportionate, and MODERATE" (EIS, § 4.7.2). Construction of the first reactor at the GGNS resulted in very large cost overruns which were passed on to electric ratepayers who were subsequently represented in a successful lawsuit against Entergy over the extraordinarily expensive plant. Local officials have testified to the fact that an additional reactor could overburden their already insufficient resources (EIS, pg. 2-74). The Claiborne County sheriff, Frank Davis, said in an affidavit that "additional man power is needed to fully fill the required needs of our emergency evacuation plan and provide additional services at Grand Gulf Nuclear Power Plant since the 911 disaster," while the deputy sheriff

attested that “the addition of another plant or two plants will further burden the limited resources and infrastructure of the Claiborne County’s Sheriff’s Department while exacerbating a disproportionate impact on the minority and low-income community of Claiborne County.” Furthermore, Claiborne County Hospital Administrator, Wanda Fleming, affirmed in an affidavit that “any additional nuclear power station unit or units to the current Grand Gulf nuclear generating station would further complicate effective medical response to a radiological emergency and would, most likely, multiply our inabilities to do so many times over.” This testimony calls into question whether the nuclear generation development at the GGNS proposed by SERI meets the NRC regulatory requirement at 10 CFR § 52.18 that ESP applications must demonstrate that “there is no significant impediment to the development of emergency plans” and “provide reasonable assurance that adequate protective measures can and will be taken in the event of a radiological emergency.” Assurance that a new nuclear unit at the GGNS would not compromise the ability of emergency responders to handle an accident at the GGNS is absent from SERI’s ESP application and the EIS. (AM-17)

Comment: It is not clear that a new reactor at Grand Gulf would provide an economic benefit to the people of Claiborne County. In fact, new development at Grand Gulf may prove to be a drain on the county’s resources. According to findings in the draft EIS, it is “not clear whether Claiborne County would receive property taxes, sales, and use taxes, or other taxes and public monies commensurate with the costs of its additional emergency management and public services obligations. The net financial burden may fall on local residents and taxpayers, most of whom are minority and low-income persons.” Local officials have testified to the fact that an additional reactor could overburden their already insufficient emergency preparedness resources. (BD-4, BG-4, BH-4, BJ-5, MM-4)

Comment: It is not clear that a new reactor at Grand Gulf would provide an economic benefit to the people of Claiborne County; in fact, new development at Grand Gulf may prove to be a drain on the county’s resources. According to findings in the draft EIS, it is “not clear whether Claiborne County would receive property taxes, sales, and use taxes, or other taxes and public monies commensurate with the costs of its additional emergency management and public services obligations. The net financial burden may fall on local residents and taxpayers, most of whom are minority and low-income persons.” Local officials have testified to the fact that an additional reactor could overburden their already insufficient emergency preparedness resources. (BL-4)

Comment: Economic development is no excuse for this either, since, according to findings in the draft EIS, it is “not clear whether Claiborne County would receive property taxes, sales, and use taxes, or other taxes and public monies commensurate with the costs of its additional emergency management and public services obligations. The net financial burden may fall on

local residents and taxpayers, most of whom are minority and low-income persons." Local officials have testified to the fact that an additional reactor could overburden their already insufficient emergency preparedness resources. (BI-3)

Response: *The environmental impact statement discusses the distribution of tax revenues and their consequences in Sections 2.8.2.3, 4.5.3.2, and 5.5.3.2 as well as in Sections 4.7 and 5.7. The sections describe local officials' concerns and compare these concerns with performance in emergency planning tests. Emergency preparedness is a safety issue, which is addressed in the Grand Gulf early site permit safety evaluation report (NRC 2005). In accordance with 10 CFR 52.18, the Commission must determine in consultation with the Federal Emergency Management Agency, whether "there is no significant impediment to the development of emergency plans." Because an early site permit is an approval for a site only and does not constitute an approval to construct and operate a facility, an applicant for an early site permit may, but need not, propose major features of emergency plans or propose complete and integrated emergency plans (see 10 CFR 52.17(b)(2)). The Commission must only determine whether there is "reasonable assurance that adequate protective measures can and will be taken in the event of a radiological emergency" if the early site permit applicant does in fact propose complete and integrated emergency plans under 10 CFR 52.17(b)(2)(ii). System Energy Resources Inc. has elected to propose major features of an emergency plan under 10 CFR 52.17(b)(2)(i), which the U.S. Nuclear Regulatory Commission has reviewed and found acceptable in the final safety evaluation report for the Grand Gulf early site permit site.*

Pursuant to 10 CFR 52.79(d), System Energy Resources, Inc. would be required to submit complete emergency plans in connection with a combined license application referencing the proposed Grand Gulf early site permit. The U.S. Nuclear Regulatory Commission defers to the Federal Emergency Management Agency on the adequacy of offsite emergency preparedness. The Federal Emergency Management Agency has evaluated emergency plans and training in past offsite exercises and has found the plans and their execution adequate. The siting of a second nuclear power plant at the Grand Gulf site does not double the offsite planning and evacuation burden and, depending on where Grand Gulf workers decide to live, may not significantly add to nearby populations or to responsibilities of local government. Additional information on the emergency planning and response analysis for the Grand Gulf early site permit application is contained in the site safety analysis report (SERI 2005). This comment did not result in a change to the environmental impact statement.

Comment: The possibility of luring a second unit at GGNS is palatable to our governing authorities and now presented as Claiborne County's best chance (and possible last chance) for economic renewal and revival. They're betting everything on Unit II. They expect the construction period to jump start our economy. They have high expectations that a higher percentage of local residents will land permanent jobs when Unit II opens that we presently have under Unit I. They hope that the Mississippi Legislature which took tax dollars from this

country in the past will either be precluded by law from doing so; or will alternatively be merciful enough to allow this country to retain those benefits because it's the right thing to do. We desperately need new employers and an expanded tax base to prevent further demise and deterioration in our community, as is occurring in surrounding communities. For example, our neighbor, Jefferson County (whose governing board has also endorsed GG Unit II) had to resort to bringing not one, but two prisons (undesirable industries) to that community. Just as Jefferson county has doubled up on prisons, Claiborne County now appears poised to double-up and become the home of not one, but two nuclear power units. Grand Gulf Nuclear Station is a significant employer, offering by far, the best opportunities and benefits in this country. Entergy, Inc. has distinguished itself as a premier entity in the field of nuclear power as evidenced by its numerous safety and operation awards presented to GGNS. While the technology used in constructing and operating Unit II will be second to none in the world, nothing man-made is flawless or perfect. (AQ-2)

Response: *This comment provided no new information for additional analysis. This comment did not result in a change to the environmental impact statement.*

Comment: I would like to see a clearer statement of the impact on health and the economy of the area. (BM-2)

Response: *Effects of new nuclear power on the health and health-related economy of the region are discussed in Sections 4.5.4, 4.8, 4.9, 5.5.4, 5.8, and 5.9 of the environmental impact statement. The comment provides no new information. This comment did not result in a change to the environmental impact statement.*

Subject: Support for NRC's ESP Process

Comment: The early site process preserves the option to build new nuclear power plants, helping ensure that we will have a diverse, secure, sustainable, energy source to power our future. And we need reliable and affordable and clean energy supplies for Mississippi and for America in the decades to come. (T-2)

Comment: The early site process preserves the option to build new nuclear power plants, helping ensure that we will have a diverse, secure, sustainable, energy supply to power our future. We need reliable ... affordable ... clean sources of energy for Mississippi and America. (AX-2)

Comment: And it's good to see that the NRC is reviewing nuclear plants, reviewing them extensively and reviewing generically so that the process can move along much quicker than it has been in the past. (C-1)

Comment: This is a very important process, it's a very important topic, and it shows that the people are very interested in this early site permitting process. (K-1)

Comment: But I'm so happy that we have this meeting here so that people can hear opposing views and they can use their own intelligence and common sense to make up their minds. (Q-1)

Response: *These comments provided no new information for additional analysis. These comments did not result in a change to the environmental impact statement.*

Subject: Support for the Licensee or Licensee's Application

Comment: I mean, this is something that I know can be good and will be good, you know, even for the state of Mississippi. Let's not leave them out. But I'm more concerned about Claiborne County/Port Gibson. (A-1)

Comment: I support Entergy's decision to build a nuclear – a new facility at Grand Gulf. We think that this is something that can be good and positive for our community. (A-3)

Comment: The Jefferson County Board of Supervisors recognizes the important impact that is associated with locating a new, advanced technology nuclear power plant in this area. All elected leaders appreciate the economic impact and job creation opportunities that are created for our citizens. We recognize the exemplary safety track record of Grand Gulf, Entergy, and System Energy Resources. (AU-1)

Comment: As there are positive economic opportunities associated with the expansion of Grand Gulf, there are also potential negative externalities that all elected representative of the public must consider since our first obligation is to protect the health, safety, and welfare of our citizens. (AU-2)

Comment: AAEA supports the Early Site Permit (ESP) to build a new nuclear power plant at the Grand Gulf site. (AW-1)

Comment: AAEA supports the Nuclear Regulatory Commission (NRC) staff recommendation, based on the draft environmental impact statement (DEIS), that an ESP should be issued to System Energy Resources, Inc. (SERI) to build a new nuclear power plant within the existing Grand Gulf Nuclear Station (GGNS).

The fundamental reasons that AAEA supports nuclear power are:

- Nuclear power provides electricity safely and reliably,

- Nuclear power produces no smog forming emissions,
- Nuclear power produces no greenhouse gases,
- Spent fuel can be reprocessed for reuse,
- Yucca Mountain is acceptable as a repository for non-recyclable products,
- Nuclear power has an excellent quarter century safety record, and
- Nuclear power plants can use nuclear bomb warhead material as a fuel. (AW-2)

Comment: AAEA supports the ESP for the Grand Gulf location. We encourage the facility owner to accelerate its decision to apply for a construction and operating license and to construct a new plant at the earliest possible date. (AW-9)

Comment: I would like to applaud SERI and Entergy for pursuing an early site permit at the Grand Gulf Station, and for its efforts in preserving options to make prudent future choices to provide electricity for customers in Mississippi for decades to come. (AX-1)

Comment: The Jefferson County Board of Supervisors recognizes the important impact that is associated with locating a new advanced technology nuclear power plant in this area. All elected leaders appreciate the economic impact and job creation opportunities that are created for our citizens. (B-1)

Comment: We recognize the safe track record of Grand Gulf energy and System Energy Resources, as there are positive economic opportunities associated with this expansion of Grand Gulf. (B-2)

Comment: We support nuclear power, and we support this ESP for Grand Gulf. We support it because nuclear power is emission free, no carbon dioxide emissions, no NOX, no SOX emissions, and you can also use weapons grade material and blend it down and use it in nuclear power plants. So for many reasons, we support nuclear power. But let's just be careful with that. (E-1)

Comment: And it's my pleasure to join with the local Mississippi ANS sector to add our support for SERI's application for a license to Grand Gulf for a potential new nuclear building. That recommendation is built upon our belief that the performance of the current nuclear fleet of 103 reactors had demonstrated that nuclear power can produce electricity safely, securely, reliably, and an affordable and emission free manner. (F-1)

Comment: I can whole heartedly say – and stand here and say, that we support the early site permit of Grand Gulf. (J-1)

Comment: We're committed to planning for our future. We cannot sit back and wait till there's a shortage of power to look at opportunities. It is an opportunity to create jobs, we are very committed to creating jobs. (L-1)

Comment: Get behind it, let's support it locally. (M-2)

Comment: If more base load power will be needed, and we know that eventually it will, if aging power plants with environmentally harmful emissions need to be retired, and we know that they will, then nuclear is the safest, most secure, and cleanest opportunity to provide for emissions free power. (R-2)

Comment: I support acceptance of the ESP, and that I think the community should take into consideration something which has been brought up, and it's a sore spot for a lot of folks because there's a lot of misconception. (S-1)

Comment: I would like to applaud SERI and Entergy for pursuing an early site permit at the Grand Gulf Station, and for its efforts in preserving options to make prudent future choices to provide electricity for customers in Mississippi for decades to come. (T-1)

Comment: I'd just like to join many local government leaders, residents here in Port Gibson and Claiborne County, and 83 percent of Americans who believe that nuclear energy is going to be an important part of our energy future. (T-3)

Comment: I am in support of the application for the early site permit. I believe that the vast majority of people in this county are supportive of it, very deeply. (U-1)

Comment: I also want to commend them for reaching out to the community, particularly over the last year, and involved [themselves] with helping Claiborne County and the City of Port Gibson assess their needs, not only for the existing nuclear facility, but for any other nuclear facility that may ever be located here. They've spent a lot of time and energy working not only with government officials, but including a lot of us as private citizens. (U-2)

Comment: The third and final thing is I own land very close to the nuclear power plant. Most of it's hunting land, and a part of it is in the federal wetlands programs. I've owned that land for, you know, probably 15 years, and I can say clearly that the nuclear power plant has had absolutely no adverse affect on my hunting ground. And I can see the nuclear tower when I'm hunting my deer, so I'm pretty close to it. (U-3)

Comment: Grand Gulf has been a wonderful corporate citizen in terms of grant monies that are provided to the town of Port Gibson, in terms of grant monies that are provided to the schools of Port Gibson, in terms of the tax base, in terms of personnel who work at Grand Gulf

that have been involved with our community. On a personal level, living in our community, contributing to the society here in Port Gibson, and we are in support of the building of another nuclear facility at the Grand Gulf site. (V-1)

Response: *These comments provided no new information for additional analysis. These comments did not result in a change to the environmental impact statement.*

Subject: Surface Water Use and Quality

Comment: Surface Water: Section 4.4.2 of the DEIS discusses the addition of a new surface water intake to provide water to the proposed facility. As noted in the DEIS, discharges to surface water would require an NPDES permit. (AZ-19)

Response: *A National Pollution Discharge Elimination System permit issued by the Mississippi Department of Environmental Quality would be required prior to operation of the proposed facility. Additionally, during the construction phase, a National Pollution Discharge Elimination System storm water construction permit would be required to ensure that appropriate measures are implemented to limit impacts to the aquatic ecosystem during the construction phase. Further information on the National Pollution Discharge Elimination System permit for the proposed facility is discussed in Sections 4.3 and 4.10 of the environmental impact statement. This comment did not result in a change to the environmental impact statement.*

Comment: New Orleans depends on the Mississippi to supply its drinking water (scary, but true). (AF-3)

Response: *Any nonradiological discharges to the Mississippi River would be regulated through the facility's National Pollutant Discharge Elimination System permit. Pursuant to the Clean Water Act, the U.S. Environmental Protection Agency is responsible for administering the National Pollution Discharge Elimination System program. In Mississippi, the U.S. Environmental Protection Agency has delegated the responsibility for administering the National Pollution Discharge Elimination System program to the Mississippi Department of Environmental Quality. Radiological discharges, if any, to the Mississippi River would be regulated by the U.S. Nuclear Regulatory Commission. The staff concluded (see Section 5.3.3.4) that construction and operation of a plant at the Grand Gulf site would not jeopardize the water quality of the Mississippi River. This comment did not result in a change to the environmental impact statement.*

Comment: Page 2-25, Section 2.6.1.3 Hydrological Monitoring, second paragraph - There is only one gauging station at Vicksburg, with river stage currently being monitored by the U.S. Army Corps of Engineers (Corps) and reported on their website. The U.S. Geological Survey (USGS) ceased to operate the gauge, number 07289000 (not 0789000 as reported in

the document), on September 30, 1998. The river stage information collected by the Corps also is reported on the USGS website for convenience. Corps website: http://www2.mvr.usace.army.mil/WaterContr01/stationinfo2.cfm?sid=CE40FF58&fid=VCKM6&d~SUSGS website:http://nwis.waterdata.usgs.gov/nwis/nwism?siteno=O7289000&agency~cd=USGS (AH-3)

Response: *Section 2.6.1.3 of the environmental impact statement has been revised to only refer to the one currently operating gauge maintained by the U.S. Army Corps of Engineers at Vicksburg.*

Comment: The flow of the Mississippi River in the vicinity of the Grand Gulf site has shifted considerably to the east in the past 30 years, consuming 85 acres of land so that the site boundary line that originally abutted the bank of the river now extends halfway into the middle of the river (EIS § 2.7.1; Figure 2-4). Is it possible that the flow of this massive river could shift farther east in the next fifty years and intrude further upon the Grand Gulf site, even despite the revetments constructed by the Army Corps of Engineers? (AM-23)

Response: *The staff acknowledges that prior to the completion of the revetments erosion occurred that resulted in the Mississippi River encroaching on the Grand Gulf site. At least part, if not all, of that bank erosion was managed by the U.S. Army Corps of Engineers to revise the course of the Mississippi River. The staff also acknowledges that a severe flood on the Mississippi River could cause further alteration of the shoreline possibly encroaching further on the Grand Gulf site. While this is a consideration in the staff's safety analysis of the proposed early site permit facility, it is not an impact of the proposed project on the environment but an impact of the environment on the proposed plant. The impact of the environment on the ability of the proposed facility to function safely at the site is described in the safety evaluation report (NRC 2005). The commenter is referred to the discussion of channel diversions in Section 2.4 of the safety evaluation report. This comment did not result in a change to the environmental impact statement.*

Subject: Threatened or Endangered Species

Comment: Page 4-20, Line 25. The discussion of potential impacts to the threatened Louisiana black bear appears to be inconsistent. In the 2nd paragraph on page 4-20 the NRC states “In summary, the potential impact to the Louisiana black bear from construction at the Grand Gulf ESP site would be considered negligible.” The preferred habitat for the Louisiana black bear is bottomland hardwood, however, they may use upland forests that are adjacent to the bottomland hardwoods (see page 4-18). This discussion does not specifically include transmission line corridors, although, they are mentioned in the introduction to Section 4.4.3 (page 4-16). On page 5-25 (Section 5.4.3.1) the NRC states in the discussion of potential

impacts to the Louisiana black bear, "Thus, the potential effect from operation of one or more cooling towers for the Grand Gulf ESP facility would be expected to be negligible. The Louisiana black bear would not be expected to be affected by transmission line operation and right-of-way maintenance." In section 7.4, the NRC describes the potential cumulative impacts to the Louisiana black bear (page 7-5, 2nd paragraph, line 15). They state "However, such an impact would be unlikely, given the relatively small amount of bottomland forested wetland that would be disturbed (22 ha [55 ac]). Nonetheless, because of the relatively large amount of forest (mostly upland) that would be disturbed by possible expansion of the GGNS Unit 1 power transmission corridors (427 ha [1056 ac]), the staff concludes that the overall contribution of construction to cumulative losses of important species and habitats in the region would be moderate." This conclusion does not follow directly from the preceding arguments. There is no information on the size of the trees in either the bottomland or upland forests. The Louisiana black bear dens in trees, primarily bald cypress and tupelo gum, with visible cavities, having a diameter at breast height of 3 feet and occurring along rivers, lakes, streams, bayous, sloughs, or other water bodies (page 4-19). It appears that additional information was taken into account when reaching the conclusion of moderate cumulative impacts that may not be included in the document. (AP-12)

Response: *The discussion of possible effects of transmission line right-of-way widening on Louisiana black bear habitat in Section 4.4.3.1 of the draft environmental impact statement was inadvertently omitted. Section 4.4.3.1 was revised to include the missing information. However, inclusion of this discussion does not change the estimated magnitude of construction impacts to the Louisiana black bear due to habitat loss (i.e., it will still be negligible as currently stated in Section 4.4.3.1). The wording in the draft environmental impact statement Section 7.4, Page 7-5, Lines 15-20 was confusing as to whether cumulative construction impacts to the Louisiana black bear would still be negligible in light of transmission line right-of-way widening. This text was revised to clarify that cumulative construction impacts to the Louisiana black bear would be negligible (even with revision of Section 4.4.3.1 to include the discussion of transmission line right-of-way widening). The finding of moderate cumulative construction impacts to overall terrestrial resources is due to the large area of forest, and thus a number of terrestrial species, including the Louisiana black bear, could be impacted by transmission line right-of-way widening. This comment resulted in a change to Sections 4.4.3.1 and 7.4.*

Comment: Endangered Species: We have determined that the federally-listed species listed under the Endangered Species Act (ESA) described below could be found in the proposed project area and could be affected by the proposed project.

The endangered interior least tern (*Sterna antillarum*) migrates up the Mississippi River and lays its eggs directly on the sandbars associated with the river. Hundreds of these birds may nest together to form a colony.

The endangered pallid sturgeon (*Scaphirhynchus albus*) is found in the lower Mississippi River, although it is rare throughout its range. These fish require large, turbid, free-flowing riverine habitats, and feed mainly on other fish. They are usually found near the bottom of streams or lakes in sand flats or gravel bars. Little information is known on spawning or migration habits of these fish, although spawning likely occurs in the spring and summer months.

The breeding/spawning season for terns and sturgeons is approximately May through July. Avoidance of these areas during the above time would prevent adverse impacts to either species. Both species can change nesting/spawning areas from year to year, so an onsite survey for both species just before start of construction is recommended.

The threatened Bayou darter (*Etheostoma rubrum*) is found only in Bayou Pierre and its tributaries: White Oak Creek, Foster Creek, and Turkey Creek. The darter prefers stable gravel riffles or sandstone exposures with large sized gravel or rock. Habitat loss or degradation has been a major contributor to the reduction in bayou darter numbers.

The endangered fat pocketbook mussel (*Potamilus capax*) has recently been found in the main channel of the lower Mississippi River. The fat pocketbook occurs primarily in sand and mud substrates, although the species has been found in fine gravel and hard clay occasionally. Water depth ranges from a few inches to several feet. The life cycle of fat pocketbooks is similar to that of other freshwater mussels. They are long-term brooders, with females becoming gravid in the fall, retaining glochidia over winter, and releasing the progeny during spring and summer. The fish host for this species is primarily freshwater drum. The greatest impact on the fat pocketbook throughout its historic range has been from activities resulting in the loss of habitat and a reduction in water quality.

The threatened bald eagle (*Haliaeetus leucocephalus*) is the only species of “sea eagle” regularly occurring on the North American continent. The bald eagle is predominantly a winter migrant in the southeast; however, increasing occurrences of nesting have been observed. The bald eagle nests in the transitional area between forest and water. They construct their nests in dominant living pines or bald cypress trees. Eagles often use alternate nests in different years with nesting activity occurring between September and January of each year. Young are usually fledged by midsummer.

The threatened Louisiana black bear (*Ursus a. luteolus*) occurs primarily in bottomland hardwood and floodplain forests along the Mississippi River and the southern part of the State. Although the bear is capable of surviving under a range of habitat types, some necessary habitat requirements include hard mast, soft mast, escape cover, denning sites, forested corridors, and limited human access. Forest management practices, agricultural, commercial and industrial development, and highways can cause adverse impacts to bear habitats by increasing human disturbance, fragmenting forests, and removing den trees.

All of the above listed species are very sensitive to human disturbance, and could be affected directly and also indirectly by the proposed project. Therefore, before the use or transportation of any heavy construction equipment, or the removal of any vegetation within potential habitats, the U.S. Fish and Wildlife Service recommends the following:

1. Onsite surveys for federally-listed species should be conducted prior to any construction activities.

2. Important fish and wildlife habitats (e.g., wetlands, fish spawning grounds) should be avoided during construction of the proposed project. If unavoidable adverse effects to important fish and wildlife habitats would result from this project, those impacts should be fully mitigated or compensated in-kind via close coordination with State and Federal resource agencies.

3. Existing water quality should be fully protected and maintained during construction, operation, and maintenance of the proposed project.

If a permit is required from a Federal agency for the proposed development, you must comply with Section 7 of the Endangered Species Act. The Federal agency, the U.S. Nuclear Regulatory Commission, must conduct an analysis of the proposed project for potential impacts to federally protected species. Using this analysis, the Federal agency (or its designated non-Federal representative) makes a determination of effect for federally-protected species. The Federal agency must make one of the following determinations: 1) no effect; 2) is not likely to adversely affect; or 3) is likely to adversely affect. "No effect" is the appropriate conclusion if the proposed action will not affect listed species. "Is not likely to adversely affect" is the appropriate conclusion when effects on listed species are expected to be discountable, insignificant, or completely beneficial. "Is likely to adversely affect" is the appropriate conclusion if any adverse effect to listed species may occur as a direct or indirect result of the proposed action or its interrelated or interdependent actions (50 CFR 402). If a "no effect" determination is made, the Federal agency is not obligated to contact the Service for concurrence. If a "not likely to adversely affect" determination is made, the Federal agency must contact the Service for written concurrence. If a determination of "likely to adversely affect" is made, the Federal agency must initiate formal consultation with the Service (See 50 CFR 402 for additional information). (AH-1)

Response: *The U.S. Fish and Wildlife Service and other Federal and State agencies were contacted regarding the occurrence of Federally listed species in the project area. The U.S. Nuclear Regulatory Commission informed the U.S. Fish and Wildlife Service (Jackson, Mississippi office) that a biological assessment of potential impacts to Federally listed species would not be developed for this environmental impact statement because the proposed action is an early site permit to bank the Grand Gulf site for possible construction of one or more new*

nuclear units. Pursuant to 10 CFR 52.18, the environmental review for an early site permit application focuses on the environmental effects of construction and operation of postulated reactors; however, SERI included no site redress plan in its application, therefore, no actual construction activities would be authorized at the Grand Gulf ESP site and no physical impacts would actually occur as a result of the action before the Commission. The action is purely administrative in nature. There will be no site preparation or construction activities resulting from the proposed action and thus no potential impacts to Federally listed species. Therefore, a Section 7 Consultation will not be initiated at this time.

The known occurrences of and potential impacts to all the Federally listed species mentioned in the comment are described in the environmental impact statement. Should an early site permit be granted for the Grand Gulf early site permit site, and the permit holder subsequently submit an application to the U.S. Nuclear Regulatory Commission for a construction permit or combined license, environmental documentation would be prepared by the U.S. Nuclear Regulatory Commission for that application. This documentation would include the required biological assessment that would be submitted to the U.S. Fish and Wildlife Service under the Section 7 requirements of the Endangered Species Act. This comment did not result in a change to the environmental impact statement.

Subject: Uranium Fuel Cycle and Waste Management

Comment: The draft EIS estimates that, for the reference reactor-year (a 1000-MW(e) LWR), 1.1 million metric tons (MT) of raw ore would be required to produce 1200 MT of yellowcake for ultimate use as fuel after conversion, enrichment, and fabrication (EIS, § 6.1.2.5). Over time, as worldwide uranium ore supplies are depleted, requiring exploitation of less pure deposits of ore, would this ratio of ore to yellowcake increase? If so, would the environmental impacts of mining and milling become greater? (AM-14)

Response: *If less-pure ores are used, the ratio of raw ore to yellowcake would increase and the associated environmental impacts would increase proportionally. This also assumes that no new high-purity ore deposits are found and no fuel is reprocessed. The environmental impacts presented in the environmental impact statement were taken from Table S-3 of 10 CFR 51.51(a), which assumed conventional underground and strip mining of uranium ore. Two factors that will offset these increased impacts are (1) the increased reliance on in situ leach mining for uranium, and (2) increased reliance on foreign sources for uranium. In situ leach mining has fewer environmental impacts compared to underground and strip mining of the ore because (1) the dusty ore crushing process is not needed and (2) extensive waste tailings are not generated. All steps in the in situ leach mining operation have the uranium in a less dispersible liquid form. In 2001 and 2002, the last years with reportable data, all the uranium produced in the United States was from in situ leaching operations (Uranium Industry Annual*

2002, May 2003). This same report indicated that foreign-origin uranium accounted for 88 percent of the uranium purchases for U.S. civilian nuclear power plants in 2002. This comment did not result in a change to the environmental impact statement.

Comment: I think we are foolhardy in this country to expand nuclear power plants when we have no idea (regarding safe disposal) what we are doing with waste, transporting waste, and safeguarding plants, to say nothing of the fact that this plant is upriver from New Orleans. (AF-2)

Response: *Section 3.2.3 addresses solid waste management. Because a specific reactor design has not been determined and because the plant parameter envelope concept was used, System Energy Resources, Inc. did not specify solid radioactive waste management practices; however, a bounding total annual volume of solid radioactive waste was estimated. Regarding spent nuclear fuel, the U.S. Nuclear Regulatory Commission's Waste Confidence Rule, found in 10 CFR 51.23, states:*

> *The Commission has made a generic determination that, if necessary, spent fuel generated in any reactor can be stored safely and without significant environmental impacts for at least 30 years beyond the licensed life for operation (which may include the term of a revised or renewed license) of that reactor at its spent fuel storage basin or at either onsite or offsite independent spent fuel storage installations. Further, the Commission believes there is reasonable assurance that at least one mined geologic repository will be available within the first quarter of the twenty-first century, and sufficient repository capacity will be available within 30 years beyond the licensed life for operation of any reactor to dispose of the commercial high-level waste and spent fuel originating in such reactor and generated up to that time.*

In its Statement of Considerations for the 1990 update of the Waste Confidence Rule (55 FR 38472), the Commission addressed the impacts of the disposal of spent fuel discharged from the current fleet of reactors operating under existing and renewed licenses and from a new generation of operating reactors. Therefore, the current rule covers new reactors and applies to the staff's review of an early site permit or a combined license application. The rule was last reviewed by the Commission in 1999 when it reaffirmed the findings in the rule (64 FR 68005, dated December 6, 1999). Furthermore, the Atomic Safety and Licensing Board presiding over the proceeding on the Grand Gulf early site permit application affirmed that the Waste Confidence Rule and its subsequent amendments clearly include waste produced by a new generation of reactors. (Dominion 2005).

Comment: The draft EIS only considers the "no recycle" option for irradiated fuel management, which treats spent fuel as waste to be stored at a federal waste repository, and

does not fully consider the possible reprocessing of spent nuclear fuel (EIS, pg. 6-5). But, as mentioned above, the DOE has had significant setbacks in its attempt to attain a license for a federal repository for irradiated nuclear fuel at Yucca Mountain, and the federal policy banning the reprocessing of spent nuclear fuel far from intractable. In fact, the DOE was granted more than $67 million in fiscal year (FY) 2005 for the "Advanced fuel cycle initiative," a research and development program intended to provide technology to "recover the energy content in spent nuclear fuel," and it has requested $70 million from Congress for FY 2006 for the same program. This continued government interest in reprocessing, combined with the failure to establish a national repository for irradiated nuclear fuel, should compel the NRC to consider the impacts of spent fuel reprocessing in the final EIS. (AM-12)

Response: *Federal policy does not prohibit reprocessing; however, reprocessing is unlikely in the foreseeable future (NEPDG 2001). Table S–3 from 10 CFR 51.51 does include impacts from reprocessing. Per Section 6.1 of the environmental impact statement, the contributions in Table S–3 for reprocessing, waste management, and transportation of wastes are maximized for either of the two fuel cycles (uranium only and no recycle); that is, the cycle that results in the greater impact is used. As discussed in the environmental impact statement, 10 CFR 51.51(a) allows the applicant to use Table S–3 as the basis for evaluating the contribution of the environmental effects of the uranium fuel cycle that includes reprocessing. Section 6.1 of the environmental impact statement was modified to indicate that Federal policy does not prohibit spent fuel reprocessing. This comment resulted in a change to Section 6.1.*

Comment: In addition, the second alternative poses potential long term environmental, public health and economic issues for nearby EJ populations. Nuclear waste storage issues may be a relatively important issue for residents within the immediate surrounding areas. (AZ-10)

Response: *Regarding environmental justice, the comment has no specific recommendations for additional analysis. The U.S. Nuclear Regulatory Commission's Waste Confidence Rule, found in 10 CFR 51.23, states:*

> *the Commission has made a generic determination that, if necessary, spent fuel generated in any reactor can be stored safely and without significant environmental impacts for at least 30 years beyond the licensed life for operation (which may include the term of a revised or renewed license) of that reactor at its spent fuel storage basin or at either onsite or offsite independent spent fuel storage installations. Further, the Commission believes there is reasonable assurance that at least one mined geologic repository will be available within the first quarter of the twenty-first century, and sufficient repository capacity will be available within 30 years beyond the licensed life for operation of any reactor to dispose of the commercial high-level waste and spent fuel originating in such reactor and generated up to that time.*

In its Statement of Considerations for the 1990 update of the Waste Confidence Rule (55 FR 38472), the Commission addressed the impacts of the disposal of spent fuel discharged from the current fleet of reactors operating under existing and renewed licenses and from a new generation of operating reactors. Therefore, the current rule covers new reactors and is applicable to the staff's review of an early site permit application. The rule was last reviewed by the Commission in 1999 when it reaffirmed the findings in the rule (64 FR 68005, dated December 6, 1999). Furthermore, the Atomic Safety and Licensing Board presiding over the proceeding on the Grand Gulf early site permit application affirmed that the Waste Confidence Rule and its subsequent amendments resolve issues associated with long-term disposal of high-level waste as they relate to future reactors (SERI 2004). This comment did not result in a change to the environmental impact statement.

Comment: The draft EIS lacks a consideration of the environmental and public health impacts resulting from military applications of depleted uranium (DU), a byproduct of the enrichment process of the fuel cycle. Moreover, there is not a complete consideration of the impacts of managing this substance as a waste. There is no repository established for the permanent disposal of depleted uranium, but the impacts of such a hypothetical facility should be considered. (AM-13)

Response: *The environmental and public health impacts resulting from military applications of depleted uranium and deposition of depleted uranium waste are beyond the scope of the environmental impact statement. This comment did not result in a change to the environmental impact statement.*

Comment: Nuclear Power is Too Polluting: Beyond operating concerns remains the unsolved and disturbing issue of waste disposal. Some 95% of the radioactivity ever generated in the U.S. is contained in the nation's civilian high-level atomic waste. Despite almost two decades of pushing to make Yucca Mountain in Nevada the nation's high-level waste repository, it has not been shown scientifically to be suitable to safely store the waste. The Yucca Mountain project is further thrown into doubt by the recent revelations of the falsification of scientific data by USGS scientists, as well as the court ruling that found EPA's public health standards for the site to be illegal. No country in the world has solved its nuclear waste problem. It makes little sense to begin building new reactors when we don't know what to do with the lethal waste from the ones we have. (AC-7)

Comment: Entergy has produced no evidence that they can secure its wasteful production for the entire life and through its de-commissioning. Entergy has produced no evidence that future generations will honor its wasteful protection promises. (AJ-2)

Comment: Nuclear generated electricity that must, of necessity, be produced in large and costly centralized power plants that produce enormous amounts of highly radioactive wastes –

wastes that neither the government nor the private utility industry, has accepted responsibility for in the long-term. These wastes continue to be stored, above ground, at the plant sites where they were generated thus turning these sites into relatively insecure nuclear waste dumps. This is akin to disposing of household sanitary wastes in a concrete lined pit in the backyard of our homes—an act that is illegal in most places. (AK-2)

Comment: The NRC's assumption that "no [radioactive] release to the environment is expected" (EIS, pg. 6-12) at deep repositories like Yucca Mountain is unfounded; rather, the geologic integrity of this site is far from proven. Moreover, the Department of Energy (DOE) has not yet submitted its license application to the NRC, although the statutory deadline was more than two years ago. DOE was supposed to begin accepting waste in 1998 and is highly unlikely to meet its revised goal of accepting waste by 2012. (AM-10)

Comment: Even if Yucca Mountain is opened, the site cannot hold the high-level radioactive waste that will be generated by existing reactors after 2010. Therefore, in addition to the waste generated by existing reactors, waste created by a new nuclear unit at the GGNS would also have to remain onsite for an indefinite period of time, though SERI has admitted that by 2007 it will no longer have the onsite capacity to handle the waste produced by the existing reactor at the GGNS. The NRC recently approved an unprecedented 40-year license extension for the nuclear operator Dominion to store high-level nuclear waste on-site at its Surry nuclear plant near Williamsburg, Virginia, indicating that fuel can reasonably be expected to be stored at reactor sites for at least that long. The environmental impacts of indefinite storage must be thoroughly evaluated in the final EIS. (AM-11)

Comment: Safety issues are another major concern. The continued generation of highly toxic and long-lived nuclear wastes should be stopped. There is yet no national waste repository, resulting in the current storage of 20 years of waste above ground and on site at GGNS, with more waste being continually generated. Entergy has stated that its current storage capacity will be filled in 2007 and plans are being made to store future waste above ground in concrete casks that last one hundred years. As NRC commissioners and staff know, many of the isotopes generated by nuclear fission last for tens of thousands of years, some for millions of years. To generate more waste without a safe way to deal with it is madness, highly irresponsible, and not in the best interests of the People of the United States, particularly when viable alternatives exist. We can't even build a house in this country without adequate waste disposal, yet we are considering building and continue to use facilities that will generate tons of these highly radioactive and deadly materials. No new nuclear reactors should even be considered, and those currently on line should be gradually phased out. If a national repository is ever created, the tens of thousands of tons of waste already generated will be transported by rail, truck, and barge across the country, providing targets for terrorists and danger to the public from accidents. (AN-2)

Comment: The environmental impacts from the proliferation of nuclear waste has been trivialized and ignored. The DEIS identifies the environmental risk from the additional high-level nuclear waste generated at the site as "small." The Commission staff acknowledges in the DEIS that for the high-level nuclear waste disposal component of the nuclear fuel cycle, there is "uncertainty" with respect to offsite releases of radiation from a federal repository potentially sited at Yucca Mountain, Nevada. Yucca Mountain is the only site under characterization and before an Atomic Safety and Licensing Board. The DEIS states that staff is relying upon the NRC "Waste Confidence Decision" that a nuclear waste repository can and likely will be developed at some site that will comply with standards and limits for peak radiation exposures to U.S. populations. However, NRC DEIS has failed to quantify the acknowledged "uncertainty." In fact, the uncertainty is considerably greater than even the NRC is willing to acknowledge. Total commercial high-level radioactive waste generated at the Grand Gulf nuclear power station Unit 1 will surpass the currently established technological limits for modeling the environmental capacity of the proposed Yucca Mountain repository. In the year 2011, the current US reactors will have generated more than 63,000 metric tons of commercial high-level radioactive waste, enough to fill Yucca Mountain even if it should successfully be licensed, constructed and opened. All waste generated after 2011 will be in excess to Yucca Mountain. Any additional high-level nuclear waste (HLRW) generated in Mississippi at the Grand Gulf unit 1 site will be in excess to Yucca Mountain. To date, Grand Gulf has generated 664 metric tons of HLRW. By 2011, Unit 1 will have generated 856 metric tons of HLRW. Should Grand Gulf Unit 1 receive a twenty-year license extension by 2045 it will have generated 1074 metric tons in excess to Yucca Mountain. If Grand Gulf is operated for 60 years and two additional reactors are built and operated for 60 years, the total amount of HLRW in excess to Yucca Mountain at Grand Gulf site would then be approximately 4,900 metric tons or more that seven times what is currently stored there. Given that the acknowledged "uncertainty" includes the fact that NRC and the nuclear industry have failed to provide a scientifically accepted long-term HLRW management plan with a scientifically accepted site for the first cupful of radioactive waste generated more than a half century ago, NRC should reject the SERI application which would potentially exacerbate the environmental damage from an incomplete and unanalyzed high-level nuclear waste management plan for the additional and excess HLRW generated by the new units. (AR-5)

Comment: Radiation Concerns regarding Contingency for Storing Spent Nuclear Fuel Onsite: Given the uncertainty of licensing the Yucca Mountain Nevada facility for the storage of spent nuclear fuel, all utilities planning on constructing additional nuclear units on current sites should plan on the contingency of having to store waste onsite for an extended period of time. (AZ-2)

Comment: Based on the DEIS, it is unclear where the radioactive waste from the Grand Gulf Reactors will reside. Yucca Mountain and on-site storage were the two alternatives discussed in the DEIS. The first alternative is currently closed and the second alternative does not have the capacity for long-term storage (2007 for the current nuclear reactor). (AZ-9)

Comment: But there is one other point that I'd like to raise here in my remaining time, and that is the fact that the DEIS has also trivialized the known and harmful environmental impacts of new nuclear waste generation, with the proposed expansion of the Grand Gulf Nuclear Power Station. In the year 2011, the current nuclear reactors will have generated more than 63,000 metric tons of commercial high level radioactive waste, enough to fill Yucca Mountain, which is the only site that the country's currently looking at, to its legal limit. The waste generated after 2011 will be excess to Yucca Mountain, and stuck in Mississippi, even if Yucca were to open an fill to capacity. Now let's look at some of those figures real quick here in the closing time that I have. Between 1985 and 2005, Grand Gulf Unit 1, generated 664 metric tons. Between 1985 and 2011, that'll be 856 metric tons; by 2035, that'll 1600 tons; by 2045, if the plant applies and is granted a 20 year extension, that will be over 1900 tons. And that figure is 1,074 metric tons in excess of Yucca Mountain. If you add Grand Gulf Unit 2, and Grand Gulf Unit 3, those totals go up to 3,840 tons. (H-4)

Comment: First, the nuclear waste problem ongoing for the past at least thirty years has not been solved. Do we assume it will be solved in the near future? How can the environmental impact be determined to be insignificant until this problem is solved? (W-2)

Comment: Is the nuclear waste being stored at the plant? Do we have a plan about what to do with this waste? (Y-2)

Comment: When someone comes up with a way to store this waste (which is not under a mountain) then one might start to even think of such a thing. (AA-3)

Comment: The draft EIS fails to evaluate the environmental impacts and security threat of indefinitely storing the additional irradiated fuel that would be generated by the proposed additional nuclear unit onsite. Another nuclear unit at the GGNS could create annually 20 to 30 metric tons of additional irradiated fuel, yet in its application SERI has not even identified radioactive waste management systems for any new nuclear facilities at the site (EIS, pg. 3-11). Despite the NRC's Waste Confidence Decision, the only national repository site under consideration, Yucca Mountain in Nevada, is far from a done deal. Numerous scientific questions remain about whether the site can safely store waste, and, recently, a scandal has erupted over the possible falsification of scientific studies used to justify the geologic suitability of the site. (AM-9)

Comment: At the last meeting we had here in this room, and official from Entergy was asked how long – when the storage of the nuclear waste at Grand Gulf would reach capacity. And he responded, 2007. With that cut off period, I don't understand how we can continue to talk about generating yet more waste when we're going to reach our local capacity in 2007, and we know that even if Yucca Mountain were used, it would reach its capacity by 2011. So for me it seems like a no brainer. It's the waste, it's the waste, it's the waste. (N-1)

Comment: What will happen with the inevitable radioactive waste products? It will be around for many, many lifetimes. (X-4)

Comment: The draft EIS fails to evaluate the environmental impacts and security threat of indefinitely storing the additional irradiated fuel that would be generated by the proposed additional nuclear unit onsite. Yucca Mountain in Nevada is far from a done deal. Numerous scientific questions remain about whether the site can safely store waste and recently a scandal has erupted over the possible falsification of scientific studies used to justify the geologic suitability of the site. The environmental impacts of indefinite storage must be thoroughly evaluated in the final EIS. (BB-5, BC-2, BD-6, BG-6, BJ-7, BK-3, BL-6, MM-6)

Comment: My main concern on Nuclear power is that we have not found a suitable way to dispose of the nuclear waste created during the making of electricity. Currently we are using dump sites that are not secure and the proposal to use the Yucca Mountain Nevada site is unacceptable because it is so far from all of the Nuclear plants that it would pose a hazard to peoples in the many states through which the waste would have to travel to dump in NV, to say nothing of the environmental impact in the immediate surrounding area to the dump site. (BE-2)

Comment: But the main reason for my opposition is that our main means of disposing of nuclear waste currently involves using it in weapons as “depleted” uranium. That term depleted drives me nuts because it is like saying that a woman is kinda pregnant. The damage that we are doing to our own soldiers as well as to innocent people in other countries as well as to their environment will be on our conscience long after the holocaust is forgotten. (BE-3)

Comment: New nuclear plants are very unwise seeing that we can't even find a good place for the nuclear waste that has already been generated. From things I have read in the past, Yucca Mountain will not be big enough to hold all the nuclear waste already generated by the 100 nuclear plants that already exist. There are also earthquake faults at Yucca Mt. I read that the data about Yucca Mt. storage was improperly prepared. (BF-5)

Comment: The draft EIS fails to evaluate the environmental impacts and security threat of indefinitely storing the additional irradiated fuel that would be generated by the proposed additional nuclear unit onsite. Yucca Mountain in Nevada is not necessarily going to be available. Numerous scientific questions remain about whether the site can safely store waste. This is further complicated by the recent scandal over possible falsification of the scientific studies used to justify the geologic suitability of the site. The environmental impacts of indefinite storage must be thoroughly evaluated in the final EIS. (BH-6)

Comment: Nuclear energy is too risky for everyone. Storage of the radioactive waste is another whole can of worms. (BI-4)

Response: *The U.S. Nuclear Regulatory Commission's Waste Confidence Rule, found in 10 CFR 51.23, states:*

> *the Commission has made a generic determination that, if necessary, spent fuel generated in any reactor can be stored safely and without significant environmental impacts for at least 30 years beyond the licensed life for operation (which may include the term of a revised or renewed license) of that reactor at its spent fuel storage basin or at either onsite or offsite independent spent fuel storage installations. Further, the Commission believes there is reasonable assurance that at least one mined geologic repository will be available within the first quarter of the twenty-first century, and sufficient repository capacity will be available within 30 years beyond the licensed life for operation of any reactor to dispose of the commercial high-level waste and spent fuel originating in such reactor and generated up to that time.*

In its Statement of Considerations for the 1990 update of the Waste Confidence Rule (55 FR 38472), the Commission addressed the impacts of the disposal of spent fuel discharged from the current fleet of reactors operating under existing and renewed licenses and from a new generation of operating reactors. Therefore, the current rule covers new reactors and is applicable to the staff's review of an early site permit application. The rule was last reviewed by the Commission in 1999 when it reaffirmed the findings in the rule (64 FR 68005, dated December 6, 1999). Furthermore, the Atomic Safety and Licensing Board presiding over the proceeding on the Grand Gulf early site permit application affirmed that the Waste Confidence Rule and its subsequent amendments resolve issues associated with long-term disposal of high-level waste as they relate to future reactors (SERI 2004). These comments did not result in a change to the environmental impact statement.

Comment: Page 3-11, Line 4-10. Text says: "Bounding effluent concentrations were determined, based on a composite of the highest activity content of the individual isotopes from two surrogate AP1000 reactors (6400 MW(t)), three IRIS reactors (3000 MW(t)), one ABWR reactor (3926 MW(t)), one ESBWR reactor (4000 MW(t)), four GT-MHR modules (2400 MW(t)), and eight PBMR modules (3200 MW(t)). Bounding gaseous effluent releases are found in Table 3.0-7 of the Grand Gulf ESP environmental report (SERI 2003c). Bounding liquid effluent releases are found in Table 3.0-8 of the environmental report (SERI 2003c)."

This is not completely correct. Liquid releases were determined as follows: As several different plant types are under consideration for the proposed site, a composite release that bounds the potential release from two (2) ABWR units, two (2) AP1000 units and four (4) ACR700 plant types was used. Annual average liquid releases for each of these plant types were compared. The most limiting isotopic releases were identified and then included in the composite release.

Note: Westinghouse International Reactor Innovative and Secure (IRIS) specific release information was not available. The AP1000 data was assumed to bound the releases from 3 single IRIS units (3000 MWt, 1005 MWe).

Gaseous releases were determined as follows: The types of reactors from which the bounding parameters were determined, are:

- Advanced Boiling Water Reactor (ABWR) – 2 units
- Advanced Pressurized Water Reactor (AP1000) – 2 units
- Gas Turbine-Modular Helium Reactor (GT-MHR) – 8 modules
- Advanced Canada Deuterium Uranium (CanDU) Reactor (ACR-700) – 4 units
- International Reactor Innovative and Secure (IRIS) – 6 units.

The activity of radionuclides released is obtained from a composite of the releases for each evaluated plant type. For each radionuclide, the highest release for any proposed plant was used for the source term. Also, the thermal power for the ABWR was assumed to be 4300 MWt (assuming a ~10% power uprate from the nominal 3926 MWt). (AP-9)

Response: *The statements regarding the bounding gaseous and liquid effluents were revised in Chapter 3 of the environmental impact statement. This comment resulted in a change to Chapter 3.*

Comment: Transportation Accidents (§ 6.2): This section and the accompanying Appendix H of the draft EIS do not give adequate weight and consideration to the possibility and consequences of severe accident scenarios resulting from the transportation of spent nuclear fuel. The possibility of extreme accidents, while slight, exists, as evidenced by recent incidents such as the Baltimore train tunnel fire of 2001 and the more recent accident in Graniteville, South Carolina in January, where a violent train crash and release of chlorine killed nine people, sent hundreds to the hospital, and required thousands to evacuate their homes. (AM-15)

Response: *The transportation impact analysis in Section 6.2 and Appendix H of the draft environmental impact statement analyzed the full spectrum of transportation accidents, from minor fender-benders to severe collisions and fires. Detailed supporting studies for the accident frequencies, conditional probabilities, and releases from potential spent fuel transportation accidents formed the basis for the analysis of transportation accidents in the environmental impact statement. The U.S. Nuclear Regulatory Commission has sponsored studies to analyze the consequences of specific accident scenarios on rail and truck transportation casks carrying spent fuel. For example, the U.S. Nuclear Regulatory Commission undertook an investigation of a July 2001 accident that involved a freight train carrying hazardous materials derailing and catching fire while passing through the Howard Street railroad tunnel in downtown Baltimore, Maryland, to determine the possible regulatory*

implications of this particular event for the transportation of spent fuel by railroad. The U.S. Nuclear Regulatory Commission assembled a team of experts from the National Institute of Standards and Technology, Center for Nuclear Waste Regulatory Analyses, and Pacific Northwest National Laboratory to determine the thermal conditions that existed in the Howard Street tunnel fire and to analyze the effects of this fire on various spent fuel transportation cask designs. The staff concluded that the spent fuel transportation casks analyzed would withstand a fire with thermal conditions similar to those that existed in the Baltimore tunnel fire event. No release of radioactive materials would result from exposure of the spent fuel transportation casks exposed to such an event. This comment did not result in a change to the environmental impact statement.

Comment: The waste issue is one of the biggest things going for nuclear power, because it generates massive amounts of electricity for such a small amount of waste. If anything, this draft environmental impact statement needs to address the environmental impact of not building new nuclear reactors, because the power will still be needed, and it would likely be from more environmentally harmful sources than nuclear power. (P-2)

Comment: I'm going to carry on with Michael's thoughts, you know, about nuclear use, nuclear fuel, nuclear waste, nuclear garbage, whatever you want to call it. I'd like to maybe ask you to re-think your perception about it. I consider that to be a – you know, not bragging or anything, but I think it's something – I think it's a positive point. Something we should be proud of. I think if we continue that behavior, being responsible with the stuff that gets produced from our commercial activity, that that's a good sign, that's something that everybody here should be glad that we do. And that there are other industries in this country unfortunately that do not follow that example. We should all work towards trying to apply these standards to those other industries. I think that would do our nation a great deal of good. (S-2)

Response: *These comments provide no new information for additional analysis. These comments did not result in a change to the environmental impact statement.*

References

10 CFR Part 51. Code of Federal Regulations, Title 10, *Energy*, Part 51, "Environmental Protection Regulations for Domestic Licensing and Related Regulatory Functions."

10 CFR Part 50. Code of Federal Regulations, Title 10, *Energy*, Part 50, "Domestic Licensing of Production and Utilization Facilities."

10 CFR Part 52. Code of Federal Regulations, Title 10. *Energy*, Part 52, "Early Site Permits, Standard Design Certifications, and Combined Licenses for Nuclear Power Plants." Available at http://www.gpoaccess.gov/cfr/index.html.

10 CFR Part 100. Code of Federal Regulations, Title 10, *Energy*, Part 100, "Reactor Site Criteria."

36 CFR Part 800. Code of Federal Regulations, Title 36, *Parks, Forests, and Public Property*, Part 800, "Protection of Historic Properties," Section 800.8, "Coordination with the National Environmental Policy Act."

40 CFR Part 1502. Code of Federal Regulations, Title 40, *Protection of the Environment*, (Environmental Impact Statement), Part 1502, Section 1502.14, "Alternatives Including the Proposed Action."

40 CFR Part 1508. Code of Federal Regulations, Title 40, *Protection of Environment*, Part 1508, "Terminology and Index."

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64 FR 68005. December 6, 1999. "Waste Confidence Decision Review: Status." *Federal Register.*

69 FR 52040. August 24, 2004. "Policy Statement on Treatment of Environmental Justice Matters in NRC Regulations and Licensing Actions." *Federal Register*.

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System Energy Resources, Inc. (Early Site Permit for Grand Gulf ESP Site). LBP-04-19, 60 NRC 277 (2004). Available at http://www.nrc.gov/reading-rm/adams.html, Accession No. ML042300040.

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Appendix F

Key Correspondence

Appendix F

Key Correspondence

Key correspondence during the evaluation process of the early site permit (ESP) application submitted by System Energy Resources, Inc., (SERI) for the Grand Gulf ESP site is identified in Table F-1. Copies of the correspondence are included at the end of this appendix.

Table F-1. Key Early Site Permit Consultation Correspondence

Date of Letter (Accession No.)	Topic	Source	Recipient
January 6, 2004 (ML040081014)	Letter requesting a list of endangered, threatened, and candidate or proposed species and critical habitat that are known to occur or could potentially occur in Claiborne County, Mississippi and West Feliciana Parish, Louisiana	U.S. Nuclear Regulatory Commission (P.-T. Kuo)	National Oceanic and Atmospheric Administration Fisheries Southeast Regional Office (G. Cranmore)
January 6, 2004 (ML040081042)	Letter informing of NRC's review of the ESP application submitted by SERI and stating that the subsequent EIS will include analyses of potential impact to historic and cultural resources	U.S. Nuclear Regulatory Commission (P.-T. Kuo)	Office of Federal Agency Programs Advisory Council on Historic Preservation (D. Klima)
January 6, 2004 (ML040081119)	Letter requesting a list of endangered, threatened, and candidate or proposed species and critical habitat that are known to occur or could potentially occur in Oswego County, New York	U.S. Nuclear Regulatory Commission (P.-T. Kuo)	U.S. Fish and Wildlife Service New York Ecological Services Office (D. Stilwell)
January 6, 2004 (ML040081088)	Letter requesting a list of endangered, threatened, candidate, and proposed species and critical habitat that are known to occur or could potentially occur in Oswego County, New York and Plymouth County, Massachusetts	U.S. Nuclear Regulatory Commission (P.-T. Kuo)	National Oceanic and Atmospheric Administration Fisheries Northeast Regional Office (P. Kurkul)

Table F-1. (contd)

Date of Letter (Accession No.)	Topic	Source	Recipient
January 6, 2004 (ML040081108)	Letter requesting a list of endangered, threatened, candidate, and proposed species and critical habitat that are known to occur or could potentially occur in Plymouth County, Massachusetts	U.S. Nuclear Regulatory Commission (P.-T. Kuo)	U.S. Fish and Wildlife Service New England Ecological Services Office (M. Bartlett)
January 8, 2004 (ML040090099)	Letter requesting a list of endangered, threatened, candidate, and proposed species and critical habitat that are known to occur or could potentially occur in Claiborne County, Mississippi	U.S. Nuclear Regulatory Commission (P.-T. Kuo)	U.S. Fish and Wildlife Service Mississippi Ecological Services Office (R. Aycock)
January 8, 2004 (ML040090125)	Letter inviting Mississippi Department of Archives and History staff to participate in the review of the Grand Gulf ESP application	U.S. Nuclear Regulatory Commission (P.-T. Kuo)	Federal and State Review Program Mississippi Department of Archives and History (T. Wagner)
January 8, 2004 (ML040090141)	Letter requesting a list of endangered, threatened, candidate, or proposed species and critical habitat that are known to occur or could potentially occur in West Feliciana Parish, Louisiana	U.S. Nuclear Regulatory Commission (P.-T. Kuo)	U.S. Fish and Wildlife Service Louisiana Ecological Services Office (R. Watson)
January 8, 2004 (ML040090292)	Letter inviting participation in the environmental scoping process for the Grand Gulf ESP review	U.S. Nuclear Regulatory Commission (P.-T. Kuo)	Mississippi Band of Choctaw Indians (P. Martin)
January 8, 2004 (ML040090309)	Letter inviting participation in the environmental scoping process for the Grand Gulf ESP review	U.S. Nuclear Regulatory Commission (P.-T. Kuo)	Choctaw Nation of Oklahoma (G. E. Pyle)
January 8, 2004 (ML040090330)	Letter inviting participation in the environmental scoping process for the Grand Gulf ESP review	U.S. Nuclear Regulatory Commission (P.-T. Kuo)	Tunika Biloxi Indian Tribe of Louisiana (E. J. Barbry, Jr.)
January 21, 2004 (ML040260250)	Letter responding to a January 8, 2004 NRC letter requesting a list of threatened and endangered species. Provides list of threatened and endangered species that could be found near the Grand Gulf site	U.S. Fish and Wildlife Service Mississippi Field Office (C. B. James)	U.S. Nuclear Regulatory Commission (P.-T. Kuo)

Table F-1. (contd)

Date of Letter (Accession No.)	Topic	Source	Recipient
January 26, 2004 (ML040370323)	Letter responding to a January 6, 2004 NRC letter that requested a list of threatened and endangered species. No threatened or endangered species live in the vicinity of the FitzPatrick Nuclear Power Plant, in Scriba, Oswego County, New York	U.S. Fish and Wildlife Service New York Field Office (D. A. Stilwell)	U.S. Nuclear Regulatory Commission (P.-T. Kuo)
January 28, 2004 (ML040350504)	Letter responding to a January 6, 2004 NRC letter that requested a list of threatened and endangered species. Provides a list of threatened and endangered species under NOAA Fisheries jurisdiction in the vicinity of the Grand Gulf and alternate sites.	National Oceanic and Atmospheric Administration Fisheries Northeast Regional Office (M. A. Colligan)	U.S. Nuclear Regulatory Commission (P.-T. Kuo)
February 5, 2004 (ML040500681)	Letter responding to a January 8, 2004 NRC letter requesting a list of threatened and endangered species. Provides a list of threatened and endangered species in West Feliciana Parish, Louisiana	U.S. Fish and Wildlife Service Louisiana Field Office R. C. Watson)	U.S. Nuclear Regulatory Commission (P.-T. Kuo)
February 9, 2004 (ML040650620)	Letter providing a list of threatened and endangered species for Plymouth County, Massachusetts	U.S. Fish and Wildlife Service New England Field Office (M. J. Amaral)	U.S. Nuclear Regulatory Commission (P.-T. Kuo)
April 14, 2004 (ML041310449)	Letter adding one more species to the list of threatened and endangered species in Claiborne County, Mississippi	U.S. Fish and Wildlife Service Mississippi Field Office (C. B. James)	U.S. Nuclear Regulatory Commission (M. T. Masnik)

Accession No. ML040081014

January 6, 2004

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

SUBJECT: APPLICATION FOR AN EARLY SITE PERMIT FOR THE GRAND GULF SITE

Dear Ms. Cranmore:

The U.S. Nuclear Regulatory Commission (NRC) staff is reviewing an application by System Energy Resources, Inc. (SERI) for an early site permit (ESP) for the potential future construction of one or more new nuclear power plants. As part of the review of this application, the NRC is preparing an environmental impact statement (EIS). The impact analysis in the EIS includes the potential impacts of the construction and operation of a new nuclear power plant at the preferred or alternate sites, including the potential impacts to fish and wildlife and threatened and endangered species.

SERI's preferred location for the proposed new power plant(s) is within the site boundaries of the existing Grand Gulf Nuclear Power Station (GGNS), site near the town of Port Gibson in Claiborne County, Mississippi. Three alternate sites will also be evaluated in the EIS. They are River Bend in West Feliciana County, Louisiana; Fitzpatrick in Oswego County, New York; and Pilgrim in Plymouth County, Massachusetts.

The application for an ESP was submitted by System Energy Resources, Inc. (SERI) on October 16, 2003, pursuant to NRC requirements at Title 10 of the *Code of Federal Regulations* Part 52 (10 CFR 52). If approved, the ESP will document the NRC staff's determination regarding the suitability of the proposed site for the construction and operation of one or more new nuclear plants. The ESP would not authorize the applicant to begin construction of the unit(s). However, in its review the NRC staff will evaluate the environmental impacts of construction and operation and will also consider alternatives, including alternative sites.

To support the EIS preparation process and to ensure compliance with Section 7 of the Endangered Species Act of 1973, the NRC requests a list of endangered, threatened, candidate, or proposed species and critical habitat that are known to occur or could potentially occur in Claiborne County, Mississippi and West Feliciana County, Louisiana. In addition, please provide any information you consider appropriate under the provisions of the Fish and Wildlife Coordination Act of 1934.

Accession No. ML040081014

If you have any questions concerning the ESP application, or other aspects of this project, please contact Ms. Cristina Guerrero, at (301) 415-2981 or by e-mail at CXG3@nrc.gov.

Sincerely,
/RA/
Pao-Tsin Kuo, Program Director
License Renewal and Environmental Impacts
Division of Regulatory Improvement Programs
Office of Nuclear Reactor Regulation

Docket Nos.: 52-009

Accession No. ML040081042

January 6, 2004

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

SUBJECT: EARLY SITE PERMIT REVIEW FOR THE GRAND GULF SITE

Dear Mr. Klima:

The U.S. Nuclear Regulatory Commission (NRC) staff is reviewing an application for an early site permit (ESP) submitted by System Energy Resources, Inc. (SERI) on October 16, 2003. An ESP allows an applicant to set aside a site for potential future construction of one or more new nuclear power plants, and provides the opportunity to resolve site safety and environmental issues before construction begins. An ESP does not allow actual construction of a nuclear plant, which must be requested through another application. The ESP site proposed by SERI is on property co-located with the existing Grand Gulf Power Station site near the town of Port Gibson in Claiborne County, Mississippi. The application was submitted by SERI pursuant to NRC requirements at Title 10 of the *Code of Federal Regulations* Part 52 (10 CFR Part 52).

As part of its review of the application, the NRC staff will prepare an environmental impact statement (EIS) pursuant to 10 CFR Part 51, the NRC regulations that implement the National Environmental Policy Act of 1969 (NEPA). In accordance with 36 CFR 800.8, the EIS will include analyses of potential impacts to historic and cultural resources. A draft EIS is scheduled for publication in February 2005, and will be provided to you for review and comment.

If you have any questions or require additional information, please contact Ms. Cristina Guerrero at 301-415-2981 or CXG3@nrc.gov.

Sincerely,
/RA/
Pao-Tsin Kuo, Program Director
License Renewal and Environmental Impacts
Division of Regulatory Improvement Programs
Office of Nuclear Reactor Regulation

Docket No.: 52-009

Accession No. ML040081119

January 6, 2004

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

SUBJECT: APPLICATION FOR AN EARLY SITE PERMIT (ESP) FOR THE GRAND GULF ESP SITE

Dear Mr. Stilwell:

The U.S. Nuclear Regulatory Commission (NRC) staff is reviewing an application by System Energy Resources, Inc. (SERI) for an early site permit (ESP) for the potential future construction of one or more new nuclear power plants. As part of the review of this application, the NRC is preparing an environmental impact statement (EIS). The impact analysis in the EIS includes the potential impacts of the construction and operation of a new nuclear power plant at the preferred or alternate sites, including the potential impacts to fish and wildlife and threatened and endangered species.

SERI's preferred alternative for the location of the proposed new power plant(s) is within the site boundaries of the existing Grand Gulf Nuclear Power Station (GGNS), site near the town of Port Gibson in Claiborne County, Mississippi. Three alternate sites will also be evaluated in the EIS. They are River Bend in West Feliciana County, Louisiana; FitzPatrick in Oswego County, New York; and Pilgrim in Plymouth County, Massachusetts.

The application for an ESP was submitted by SERI on October 16, 2003, pursuant to NRC requirements at Title 10 of the *Code of Federal Regulations* Part 52 (10 CFR 52). If approved, the ESP will document the NRC staff's determination regarding the suitability of the proposed site for the construction and operation of one or more new nuclear plants. The ESP would not authorize the applicant to begin construction of the unit(s). However, in its review the NRC staff will evaluate the environmental impacts of construction and operation and will also consider alternatives, including alternative sites.

To support the environmental impact statement preparation process and to ensure compliance with Section 7 of the Endangered Species Act of 1973, the NRC requests a list of endangered, threatened, candidate, and proposed species and critical habitat that are known to occur or could potentially occur in Oswego County, New York. In addition, please provide any information you consider appropriate under the provisions of the Fish and Wildlife Coordination Act of 1934.

Accession No. ML040081119

D. Stilwell 2

If you have any questions concerning the ESP application, or other aspects of this project, please contact Ms. Cristina Guerrero, at (301) 415-2981 or by e-mail at CXG3@nrc.gov.

Sincerely,
/RA/
Pao-Tsin Kuo, Program Director
License Renewal and Environmental Impacts
Division of Regulatory Improvement Programs
Office of Nuclear Reactor Regulation

Docket Nos.: 52-009

Accession No. ML040081088

January 6, 2004

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

SUBJECT: APPLICATION FOR AN EARLY SITE PERMIT (ESP) FOR THE GRAND GULF ESP SITE

Dear Ms. Kurkul:

The U.S. Nuclear Regulatory Commission (NRC) staff is reviewing an application by System Energy Resources, Inc. (SERI) for an early site permit (ESP) for the potential future construction of one or more new nuclear power plants. As part of the review of this application, the NRC is preparing an environmental impact statement (EIS). The impact analysis in the EIS includes the potential impacts of the construction and operation of a new nuclear power plant at the preferred or alternate sites, including the potential impacts to fish and wildlife and threatened and endangered species.

SERI's preferred alternative for the location of the proposed new power plant(s) is within the site boundaries of the existing Grand Gulf Nuclear Power Station (GGNS), site near the town of Port Gibson in Claiborne County, Mississippi. Three alternate sites will also be evaluated in the EIS. They are River Bend in West Feliciana County, Louisiana; FitzPatrick in Oswego County, New York; and Pilgrim in Plymouth County, Massachusetts.

The application for an ESP was submitted by System Energy Resources, Inc. (SERI) on October 16, 2003, pursuant to NRC requirements at Title 10 of the *Code of Federal Regulations* Part 52 (10 CFR 52). If approved, the ESP will document the NRC staff's determination regarding the suitability of the proposed site for the construction and operation of one or more new nuclear plants. The ESP would not authorize the applicant to begin construction of the unit(s). However, in its review the NRC staff will evaluate the environmental impacts of construction and operation and will also consider alternatives, including alternative sites.

To support the environmental impact statement preparation process and to ensure compliance with Section 7 of the Endangered Species Act of 1973, the NRC requests a list of endangered, threatened, candidate, and proposed species and critical habitat that are known to occur or could potentially occur in Oswego County, New York and Plymouth County, Massachusetts. In addition, please provide any information you consider appropriate under the provisions of the Fish and Wildlife Coordination Act of 1934.

Accession No. ML040081088

P. Kurkul 2

If you have any questions concerning the ESP application, or other aspects of this project, please contact Ms. Cristina Guerrero, at (301) 415-2981 or by e-mail at CXG3@nrc.gov.

Sincerely,
/RA/
Pao-Tsin Kuo, Program Director
License Renewal and Environmental Impacts
Division of Regulatory Improvement Programs
Office of Nuclear Reactor Regulation

Docket Nos.: 52-009

Accession No. ML040081108

January 6, 2004

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

SUBJECT: APPLICATION FOR AN EARLY SITE PERMIT (ESP) FOR THE GRAND GULF ESP SITE

Dear Mr. Bartlett:

The U.S. Nuclear Regulatory Commission (NRC) staff is reviewing an application by System Energy Resources, Inc. (SERI) for an early site permit (ESP) for the potential future construction of one or more new nuclear power plants. As part of the review of this application, the NRC is preparing an environmental impact statement (EIS). The impact analysis in the EIS includes the potential impacts of the construction and operation of a new nuclear power plant at the preferred or alternate sites, including the potential impacts to fish and wildlife and threatened and endangered species.

SERI's preferred alternative for the location of the proposed new power plant(s) is within the site boundaries of the existing Grand Gulf Nuclear Power Station (GGNS), site near the town of Port Gibson in Claiborne County, Mississippi. Three alternate sites will also be evaluated in the EIS. They are River Bend in West Feliciana County, Louisiana; FitzPatrick in Oswego County, New York; and Pilgrim in Plymouth County, Massachusetts.

The application for an ESP was submitted by SERI on October 16, 2003, pursuant to NRC requirements at Title 10 of the *Code of Federal Regulations* Part 52 (10 CFR 52). If approved, the ESP will document the NRC staff's determination regarding the suitability of the proposed site for the construction and operation of one or more new nuclear plants. The ESP would not authorize the applicant to begin construction of the unit(s). However, in its review the NRC staff will evaluate the environmental impacts of construction and operation and will also consider alternatives, including alternative sites.

To support the environmental impact statement preparation process and to ensure compliance with Section 7 of the Endangered Species Act of 1973, the NRC requests a list of endangered, threatened, candidate, and proposed species and critical habitat that are known to occur or could potentially occur in Plymouth County, Massachusetts. In addition, please provide any information you consider appropriate under the provisions of the Fish and Wildlife Coordination Act of 1934.

Accession No. ML040081108

M. Bartlett 2

If you have any questions concerning the ESP application, or other aspects of this project, please contact Ms. Cristina Guerrero, at (301) 415-2981 or by e-mail at CXG3@nrc.gov.

Sincerely,
/RA/
Pao-Tsin Kuo, Program Director
License Renewal and Environmental Impacts
Division of Regulatory Improvement Programs
Office of Nuclear Reactor Regulation

Docket Nos.: 52-009

Accession No. ML040090099

January 8, 2004

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

SUBJECT: APPLICATION FOR AN EARLY SITE PERMIT FOR THE GRAND GULF SITE

Dear Mr. Aycock:

The U.S. Nuclear Regulatory Commission (NRC) staff is reviewing an application by System Energy Resources, Inc. (SERI) for an early site permit (ESP) for the potential future construction of one or more new nuclear power plants. As part of the review of this application, the NRC is preparing an environmental impact statement (EIS). The impact analysis in the EIS includes the potential impacts of the construction and operation of a new nuclear power plant at the preferred or alternate sites, including the potential impacts to fish and wildlife and threatened and endangered species.

SERI's preferred location for the proposed new power plant(s) is within the site boundaries of the existing Grand Gulf Nuclear Power Station (GGNS), site near the town of Port Gibson in Claiborne County, Mississippi. Three alternate sites will also be evaluated in the EIS. They are River Bend in West Feliciana County, Louisiana; Fitzpatrick in Oswego County, New York; and Pilgrim in Plymouth County, Massachusetts.

The application for an ESP was submitted by SERI on October 16, 2003, pursuant to NRC requirements at Title 10 of the *Code of Federal Regulations* Part 52 (10 CFR 52). If approved, the ESP will document the NRC staff's determination regarding the suitability of the proposed site for the construction and operation of one or more new nuclear plants. The ESP would not authorize the applicant to begin construction of the unit(s). However, in its review the NRC staff will evaluate the environmental impacts of construction and operation and will also consider alternatives, including alternative sites.

To support the EIS preparation process and to ensure compliance with Section 7 of the Endangered Species Act, the NRC requests a list of endangered, threatened, candidate, or proposed species and critical habitat that are known to occur or could potentially occur in Claiborne County, Mississippi. In addition, please provide any information you consider appropriate under the provisions of the Fish and Wildlife Coordination Act of 1934.

Accession No. ML040090099

R. Aycock 2

If you have any questions concerning the ESP application, or other aspects of this project, please contact Ms. Cristina Guerrero, at (301) 415-2981 or by e-mail at CXG3@nrc.gov.

Sincerely,
/RA/
Pao-Tsin Kuo, Program Director
License Renewal and Environmental Impacts
Division of Regulatory Improvement Programs
Office of Nuclear Reactor Regulation

Docket Nos.: 52-009

Accession No. ML040090125

January 8, 2004

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

SUBJECT: EARLY SITE PERMIT (ESP) REVIEW FOR THE GRAND GULF SITE

Dear Mr. Wagner:

The U.S. Nuclear Regulatory Commission (NRC) staff is reviewing an application for an ESP to set aside a site for the potential future construction of one or more new nuclear power plants. The NRC staff is currently seeking information from consulting parties, and other individuals and organizations likely to have knowledge of, or concerns with, historic properties in the area, to identify issues relating to the proposed undertaking's potential effects on historic properties.

If built, the new unit(s) would be co-located with the existing Grand Gulf Nuclear Power Station (GGNS) site near the town of Port Gibson in Claiborne County, Mississippi. The application for an ESP was submitted by System Energy Resources, Inc, (SERI), on October 16, 2003, pursuant to NRC requirements at Title 10 of the *Code of Federal Regulations* Part 52 (10 CFR Part 52). The application is available through the web-based version of the NRC's Agencywide Documents Access and Management System (ADAMS) which can be found at http://www.nrc.gov/reading-rm/adams.html. The application is listed under Accession Number ML032960315.

As part of its review of the application, the NRC staff will prepare an environmental impact statement (EIS) under the provisions of 10 CFR Part 51, the NRC rules that implement the National Environmental Policy Act of 1969 (NEPA). In accordance with 36 CFR 800.8, the EIS will include analyses of potential impacts to historic properties, and will document the NRC staff's determination regarding the suitability of the proposed site for the construction and operation of one or more new nuclear plants.

If approved, the ESP would not authorize the applicant to begin construction of the unit(s). However, in its review the NRC staff will evaluate the environmental impacts of construction and operation and will also consider alternatives, including alternative sites.

Accession No. ML040090125

T. Wagner 2

In the context of the National Historic Preservation Act of 1966, as amended, the NRC staff has determined that the area of potential effect (APE) for this ESP review is the area at the power plant site and its immediate environs which may be impacted by land-disturbing activities associated with the construction and operation of the new unit(s). The power plant site is located in Claiborne County, Mississippi.

We invite you and your staff to participate in the review of the Grand Gulf ESP application. We will also be contacting any Native American Tribes, including the Choctaw Nation of Oklahoma, the Choctaw of Mississippi, and the Tunika Biloxi Indian Tribe of Louisiana that may have a potential interest in the proposed undertaking, affording them the opportunity to participate in this process and identify issues of concern to them. These tribes have been identified by records research with the Bureau of Indian Affairs, State and local governments, tribal organizations, and at a meeting the NRC had with Department of Archives and History staff on July 30, 2003.

On January 21, 2004, the NRC will conduct a public environmental scoping meeting from 7:00 p.m. until 10:00 p.m. at the Port Gibson City Hall, located at 1005 College Street, Port Gibson, Mississippi. You and your staff are invited to attend. Your office will receive a copy of the draft EIS along with a request for comments after it is issued. The draft EIS will include identification of historic properties, assessment of impacts, and our preliminary determination. The anticipated publication date for the draft EIS is February 2005. If you have any questions or require additional information, please contact Ms. Cristina Guerrero at 301-415-2981 or CXG3@nrc.gov.

Sincerely,
/RA/
Pao-Tsin Kuo, Program Director
License Renewal and Environmental Impacts
Division of Regulatory Improvement Programs
Office of Nuclear Reactor Regulation

Docket No.: 52-009

Accession No. ML040090141

January 8, 2004

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

SUBJECT: APPLICATION FOR AN EARLY SITE PERMIT FOR THE GRAND GULF SITE

Dear Mr. Watson:

The U.S. Nuclear Regulatory Commission (NRC) staff is reviewing an application by System Energy Resources, Inc. (SERI) for an early site permit (ESP) for the potential future construction of one or more new nuclear power plants. As part of the review of this application, the NRC is preparing an environmental impact statement (EIS). The impact analysis in the EIS includes the potential impacts of the construction and operation of a new nuclear power plant at the preferred or alternate sites, including the potential impacts to fish and wildlife and threatened and endangered species.

SERI's preferred location for the proposed new power plant(s) is within the site boundaries of the existing Grand Gulf Nuclear Power Station (GGNS), site near the town of Port Gibson in Claiborne County, Mississippi. Three alternate sites will also be evaluated in the EIS. They are River Bend in West Feliciana County, Louisiana; Fitzpatrick in Oswego County, New York; and Pilgrim in Plymouth County, Massachusetts.

The application for an ESP was submitted by SERI on October 16, 2003, pursuant to NRC requirements at Title 10 of the *Code of Federal Regulations* Part 52 (10 CFR 52). If approved, the ESP will document the NRC staff's determination regarding the suitability of the proposed site for the construction and operation of one or more new nuclear plants. The ESP would not authorize the applicant to begin construction of the unit(s). However, in its review the NRC staff will evaluate the environmental impacts of construction and operation and will also consider alternatives, including alternative sites.

To support the EIS preparation process and to ensure compliance with Section 7 of the Endangered Species Act, the NRC requests a list of endangered, threatened, candidate, or proposed species and critical habitat that are known to occur or could potentially occur in West Feliciana County, Louisiana. In addition, please provide any information you consider appropriate under the provisions of the Fish and Wildlife Coordination Act of 1934.

Accession No. ML040090141

R. Watson 2

If you have any questions concerning the ESP application, or other aspects of this project, please contact Ms. Cristina Guerrero, at (301) 415-2981 or by e-mail at CXG3@nrc.gov.

Sincerely,

/RA/

Pao-Tsin Kuo, Program Director
License Renewal and Environmental Impacts
Division of Regulatory Improvement Programs
Office of Nuclear Reactor Regulation

Docket Nos.: 52-009

Accession No. ML040090292

January 8, 2004

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

SUBJECT: EARLY SITE PERMIT (ESP) REVIEW FOR THE GRAND GULF SITE

Dear Chief Martin:

The U.S. Nuclear Regulatory Commission (NRC) staff is reviewing an application for an ESP to set aside a site for the potential future construction of one or more new nuclear power plants. The application was submitted by System Energy Resources, Inc. (SERI), on October 16, 2003, pursuant to NRC requirements at Title 10 of the *Code of Federal Regulations* Part 52 (10 CFR Part 52). If built, the new unit(s) would be co-located with the existing Grand Gulf Nuclear Power Station (GGNS) site near the town of Port Gibson in Claiborne County, Mississippi.

As part of its review of the application, the NRC staff will prepare an environmental impact statement (EIS) under the provisions of 10 CFR Part 51, the NRC rules that implement the National Environmental Policy Act of 1969 (NEPA). The NRC environmental review process includes an opportunity for public participation in the environmental review. The Grand Gulf ESP site is located on land that may be of interest to the Mississippi Band of Choctaw Indians. We want to ensure that you are aware of our efforts and, pursuant to our regulations at 10 CFR 51.28(b), the NRC invites the Mississippi Band of Choctaw Indians to provide input to the scoping process relating to the NRC's environmental review of the application. The following is a description of the application and the environmental review process.

The EIS will document the NRC staff's determination regarding the suitability of the proposed site for the construction and operation of one or more new nuclear plants. In addition, the staff will also consider alternatives to the proposed action, including alternative sites. The EIS will contain the results of the review of the environmental impacts on the area surrounding the Grand Gulf ESP site that are related to terrestrial ecology, aquatic ecology, hydrology, socioeconomic issues, and historic properties (among others), and will contain a recommendation regarding the environmental acceptability of granting an ESP. If approved, the ESP would not authorize the applicant to begin construction of the unit(s).

As part of this review, and in accordance with 36 CFR 800.8, the EIS will include analyses of potential impacts to historic properties. Accordingly, pursuant to 10 CFR 51.28 and 36 CFR 800.2(c), the NRC wishes to ensure that Indian tribes that might have an interest in any potential historic properties in the area of potential effect (APE) are afforded the opportunity to identify their concerns, provide advice on the identification and evaluation of historic properties, including those of traditional religious and cultural importance, and, if necessary, participate in the resolution of any adverse effects to such properties.

Accession No. ML040090292

The Honorable P. Martin

In the context of the National Historic Preservation Act of 1966, as amended, the APE for this ESP review is the area at the power plant site and its immediate environs that may be impacted by land-disturbing activities associated with the construction and operation of the new unit(s). GGNS is located in Claiborne County, Mississippi. The application is available through the web-based version of the NRC's Agencywide Documents Access and Management System (ADAMS) which can be found at http://www.nrc.gov/reading-rm/adams.html. The application is listed under accession number ML032960315.

On January 21, 2004, the NRC will conduct a public environmental scoping meeting from 7:00 p.m. until 10:00 p.m. at the Port Gibson City Hall, located at 1005 College Street, Port Gibson, Mississippi. Representatives of your tribe are invited to attend. The meeting will be preceded by a one-hour open house during which members of the public may meet and talk with NRC staff members on an informal basis.

Please submit any written comments your tribe may have to offer on the scope of the environmental review by February 12, 2004. Comments should be submitted either by mail to the Chief, Rules and Directives Branch, Division of Administrative Services, Mail Stop T-6D59, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555-0001, or by e-mail to *GrandGulfEIS@nrc.gov.*

At the conclusion of the scoping process, the NRC staff will prepare a summary of the significant issues identified and the conclusions reached, and will send a copy to you. In addition, after it is issued, your office will receive a copy of the draft EIS along with a request for comments. The anticipated publication date for the draft EIS is February 2005. If you have any questions or require additional information, please contact Ms. Cristina Guerrero at 301-415-2981 or *GrandGulfEIS@nrc.gov.*

Sincerely,
/RA/
Pao-Tsin Kuo, Program Director
License Renewal and Environmental Impacts
Division of Regulatory Improvement Programs
Office of Nuclear Reactor Regulation

Docket No.: 52-009

Accession No. ML040090309

January 8, 2004

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

SUBJECT: EARLY SITE PERMIT (ESP) REVIEW FOR THE GRAND GULF SITE

Dear Chief Pyle:

The U.S. Nuclear Regulatory Commission (NRC) staff is reviewing an application for an ESP to set aside a site for the potential future construction of one or more new nuclear power plants. The application was submitted by System Energy Resources, Inc. (SERI), on October 16, 2003, pursuant to NRC requirements at Title 10 of the *Code of Federal Regulations* Part 52 (10 CFR Part 52). If built, the new unit(s) would be co-located with the existing Grand Gulf Nuclear Power Station (GGNS) site near the town of Port Gibson in Claiborne County, Mississippi.

As part of its review of the application, the NRC staff will prepare an environmental impact statement (EIS) under the provisions of 10 CFR Part 51, the NRC rules that implement the National Environmental Policy Act of 1969 (NEPA). The NRC environmental review process includes an opportunity for public participation in the environmental review. The Grand Gulf ESP site is located on land that may be of interest to the Choctaw Nation of Oklahoma. We want to ensure that you are aware of our efforts and, pursuant to our regulations at 10 CFR 51.28(b), the NRC invites the Choctaw Nation of Oklahoma to provide input to the scoping process relating to the NRC's environmental review of the application. The following is a description of the application and the environmental review process.

The EIS will document the NRC staff's determination regarding the suitability of the proposed site for the construction and operation of one or more new nuclear plants. In addition, the staff will also consider alternatives to the proposed action, including alternative sites. The EIS will contain the results of the review of the environmental impacts on the area surrounding the Grand Gulf ESP site that are related to terrestrial ecology, aquatic ecology, hydrology, socioeconomic issues, and historic properties (among others), and will contain a recommendation regarding the environmental acceptability of granting an ESP. If approved, the ESP would not authorize the applicant to begin construction of the unit(s).

As part of this review, and in accordance with 36 CFR 800.8, the EIS will include analyses of potential impacts to historic properties. Accordingly, pursuant to 10 CFR 51.28 and 36 CFR 800.2(c), the NRC wishes to ensure that Indian tribes that might have an interest in any potential historic properties in the area of potential effect (APE) are afforded the opportunity to identify their concerns, provide advice on the identification and evaluation of historic properties, including those of traditional religious and cultural importance, and, if necessary, participate in the resolution of any adverse effects to such properties.

Accession No. ML040090309

The Honorable G. Pyle -2-

In the context of the National Historic Preservation Act of 1966, as amended, the APE for this ESP review is the area at the power plant site and its immediate environs that may be impacted by land-disturbing activities associated with the construction and operation of the new unit(s). GGNS is located in Claiborne County, Mississippi. The application is available through the web-based version of the NRC's Agencywide Documents Access and Management System (ADAMS) which can be found at http://www.nrc.gov/reading-rm/adams.html. The application is listed under accession number ML032960315.

On January 21, 2004, the NRC will conduct a public environmental scoping meeting from 7:00 p.m. until 10:00 p.m. at the Port Gibson City Hall, located at 1005 College Street, Port Gibson, Mississippi. Representatives of your tribe are invited to attend. The meeting will be preceded by a one-hour open house during which members of the public may meet and talk with NRC staff members on an informal basis.

Please submit any written comments your tribe may have to offer on the scope of the environmental review by February 12, 2004. Comments should be submitted either by mail to the Chief, Rules and Directives Branch, Division of Administrative Services, Mail Stop T-6 D59, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555-0001, or by e-mail to *GrandGulfEIS@nrc.gov.*

At the conclusion of the scoping process, the NRC staff will prepare a summary of the significant issues identified and the conclusions reached, and will send a copy to you. In addition, after it is issued, your office will receive a copy of the draft EIS along with a request for comments. The anticipated publication date for the draft EIS is February 2005. If you have any questions or require additional information, please contact Ms. Cristina Guerrero at 301-415-2981 or *GrandGulfEIS@nrc.gov.*

Sincerely,
/RA/
Pao-Tsin Kuo, Program Director
License Renewal and Environmental Impacts
Division of Regulatory Improvement Programs
Office of Nuclear Reactor Regulation

Docket No.: 52-009

Accession No. ML040090330

January 8, 2004

Earl J. Barbry Jr., State Historic Preservation Officer
Tunika Biloxi Indian Tribe of Louisiana
PO 1589
Marksville, LA 71351

SUBJECT: EARLY SITE PERMIT (ESP) REVIEW FOR THE GRAND GULF SITE

Dear Mr. Barbry:

The U.S. Nuclear Regulatory Commission (NRC) staff is reviewing an application for an ESP to set aside a site for the potential future construction of one or more new nuclear power plants. The application was submitted by System Energy Resources, Inc. (SERI), on October 16, 2003, pursuant to NRC requirements at Title 10 of the *Code of Federal Regulations* Part 52 (10 CFR Part 52). If built, the new unit(s) would be co-located with the existing Grand Gulf Nuclear Power Station (GGNS) site near the town of Port Gibson in Claiborne County, Mississippi.

As part of its review of the application, the NRC staff will prepare an environmental impact statement (EIS) under the provisions of 10 CFR Part 51, the NRC rules that implement the National Environmental Policy Act of 1969 (NEPA). The NRC environmental review process includes an opportunity for public participation in the environmental review. The Grand Gulf ESP site is located on land that may be of interest to the Tunika Biloxi Indian Tribe of Louisiana. We want to ensure that you are aware of our efforts and, pursuant to our regulations at 10 CFR 51.28(b), the NRC invites the Tunika Biloxi Indian Tribe of Louisiana to provide input to the scoping process relating to the NRC's environmental review of the application. The following is a description of the application and the environmental review process.

The EIS will document the NRC staff's determination regarding the suitability of the proposed site for the construction and operation of one or more new nuclear plants. In addition, the staff will also consider alternatives to the proposed action, including alternative sites. The EIS will contain the results of the review of the environmental impacts on the area surrounding the Grand Gulf ESP site that are related to terrestrial ecology, aquatic ecology, hydrology, socioeconomic issues, and historic properties (among others), and will contain a recommendation regarding the environmental acceptability of granting an ESP. If approved, the ESP would not authorize the applicant to begin construction of the unit(s).

As part of this review, and in accordance with 36 CFR 800.8, the EIS will include analyses of potential impacts to historic properties. Accordingly, pursuant to 10 CFR 51.28 and 36 CFR 800.2(c), the NRC wishes to ensure that Indian tribes that might have an interest in any potential historic properties in the area of potential effect (APE) are afforded the opportunity to identify their concerns, provide advice on the identification and evaluation of historic properties, including those of traditional religious and cultural importance, and, if necessary, participate in the resolution of any adverse effects to such properties.

Accession No. ML040090330

The Honorable E. J. Barbry

In the context of the National Historic Preservation Act of 1966, as amended, the APE for this ESP review is the area at the power plant site and its immediate environs that may be impacted by land-disturbing activities associated with the construction and operation of the new unit(s). GGNS is located in Claiborne County, Mississippi. The application is available through the web-based version of the NRC's Agencywide Documents Access and Management System (ADAMS) which can be found at http://www.nrc.gov/reading-rm/adams.html. The application is listed under accession number ML032960315.

On January 21, 2004, the NRC will conduct a public environmental scoping meeting from 7:00 p.m. until 10:00 p.m. at the Port Gibson City Hall, located at 1005 College Street, Port Gibson, Mississippi. Representatives of your tribe are invited to attend. The meeting will be preceded by a one-hour open house during which members of the public may meet and talk with NRC staff members on an informal basis.

Please submit any written comments your tribe may have to offer on the scope of the environmental review by February 12, 2004. Comments should be submitted either by mail to the Chief, Rules and Directives Branch, Division of Administrative Services, Mail Stop T-6 D59, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555-0001, or by e-mail to *GrandGulfEIS@nrc.gov*.

At the conclusion of the scoping process, the NRC staff will prepare a summary of the significant issues identified and the conclusions reached, and will send a copy to you. In addition, after it is issued, your office will receive a copy of the draft EIS along with a request for comments. The anticipated publication date for the draft EIS is February 2005. If you have any questions or require additional information, please contact Ms. Cristina Guerrero, at 301-415-2981 or *GrandGulfEIS@nrc.gov.*

Sincerely,
/RA/
Pao-Tsin Kuo, Program Director
License Renewal and Environmental Impacts
Division of Regulatory Improvement Programs
Office of Nuclear Reactor Regulation

Docket No.: 52-009

Accession No. ML040260250

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Mississippi Field Office
6578 Dogwood View Parkway, Suite A
Jackson, Mississippi 39213
January 21, 2004

Proj-720
52-009

Mr. Pao-Tsin Kuo
Office of Nuclear Reactor Regulation
Nuclear Regulatory Commission
Washington, D.C. 20555-0001

Dear Mr. Kuo:

The U.S. Fish and Wildlife Service (Service) received your letter dated January 8, 2004, regarding the preparation of an Environmental Impact Statement (EIS) for the construction of one or more new nuclear power plants in Claiborne County, Mississippi. Our comments are submitted in accordance with the Endangered Species Act (87 Stat. 884, as amended; 16 U.S.C. 1531 et seq.).

The following listed species could be found in the proposed project area:

The endangered interior least tern (*Sterna antillarum*) migrates up the Mississippi River and lays its eggs directly on the sandbars associated with the river. Hundreds of these birds may nest together to form a colony.

The endangered pallid sturgeon (*Scaphirhynchus albus*) is found in the lower Mississippi River, although it is rare throughout its range. These fish require large, turbid, free-flowing riverine habitats, and feed mainly on other fish. They are usually found near the bottom of streams or lakes in sand flats or gravel bars. Little information is known on spawning or migration habits of these fish, although spawning likely occurs in the spring and summer months.

The breeding/spawning season for terns and sturgeons is approximately May through July. Avoidance of these areas during the above time would prevent adverse impacts to either species. Both species can change nesting/spawning areas from year to year, so an onsite survey for both species just before start of construction is recommended.

The threatened Bayou darter (*Etheostoma rubrum*) is found only in Bayou Pierre and its tributaries: White Oak Creek, Foster Creek, and Turkey Creek. The darter prefers stable gravel riffles or sandstone exposures with large sized gravel or rock. Habitat loss or degradation has been a major contributor to the reduction in bayou darter numbers.

Add: Laura Dudes
Steve Koenick
Andy Kugler
Tom Kenyon
Jim Wilson

D069

Accession No. ML040260250

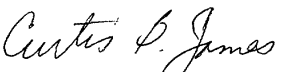
The threatened bald eagle (*Haliaeetus leucocephalus*) is the only species of "sea eagle" regularly occurring on the North American continent. The bald eagle is predominantly a winter migrant in the southeast; however, increasing occurrences of nesting have been observed. The bald eagle nests in the transitional area between forest and water. They construct their nests in dominant living pines or bald cypress trees. Eagles often use alternate nests in different years with nesting activity occurring between September and January of each year. Young are usually fledged by midsummer.

The federally listed threatened Louisiana black bear (*Ursus a. luteolus*) occurs primarily in bottomland hardwood and floodplain forests along the Mississippi River and the southern part of the state. Although the bear is capable of surviving under a range of habitat types, some necessary habitat requirements include hard mast, soft mast, escape cover, denning sites, forested corridors, and limited human access. Forest management practices, agricultural, commercial and industrial development, and highways can cause adverse impacts to bear habitats by increasing human disturbance, fragmenting forests, and removing den trees.

All of the above listed species are very sensitive to human disturbance, and could be affected directly and also indirectly by the proposed projects. Therefore, before the use or transportation of any heavy construction equipment, or the removal of any vegetation within potential habitats, the Service recommends a qualified biologist conduct a visual survey for these species. Areas surveyed should also include ingress and egress areas, equipment storage areas, and staging areas.

The Service will provide you additional information and specific project recommendations during the EIS preparation process. If you have any additional questions, please feel free to contact Kathy Lunceford in this office, telephone: (601) 321-1132.

Sincerely,



Curtis B. James
Assistant Field Supervisor

Accession No. ML040370323

United States Department of the Interior

FISH AND WILDLIFE SERVICE
3817 Luker Road
Cortland, NY 13045

January 26, 2004

Proj 720
52-009

Mr. Pao-Tsin Kuo
Program Director
License Renewal & Environmental Impacts
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555-0001

Attention: Ms. Cristina Guerrero

Dear Mr. Kuo:

This responds to your letter of January 6, 2004, requesting information on the presence of endangered or threatened species in the vicinity of the proposed Grand Gulf ESP alternate site, the Fitzpatrick Nuclear Power Plant, in the Town of Scriba, Oswego County, New York.

Except for occasional transient individuals, no Federally listed or proposed endangered or threatened species under our jurisdiction are known to exist in the project impact area. In addition, no habitat in the project impact area is currently designated or proposed "critical habitat" in accordance with provisions of the Endangered Species Act (87 Stat. 884, as amended; 16 U.S.C. 1531 et seq.). Therefore, no further Endangered Species Act coordination or consultation with the U.S. Fish and Wildlife Service (Service) is required. Should project plans change, or if additional information on listed or proposed species or critical habitat becomes available, this determination may be reconsidered. The most recent compilation of Federally listed and proposed endangered and threatened species in New York* is available for your information.

The above comments pertaining to endangered species under our jurisdiction are provided pursuant to the Endangered Species Act. This response does not preclude additional Service comments under other legislation.

For additional information on fish and wildlife resources or State-listed species, we suggest you contact the appropriate New York State Department of Environmental Conservation regional office(s),* and:

D069

Accession No. ML040370323

New York State Department of Environmental Conservation
New York Natural Heritage Program Information Services
625 Broadway
Albany, NY 12233-4757
(518) 402-8935

Since wetlands may be present, you are advised that National Wetlands Inventory (NWI) maps may or may not be available for the project area. However, while the NWI maps are reasonably accurate, they should not be used in lieu of field surveys for determining the presence of wetlands or delineating wetland boundaries for Federal regulatory purposes. Copies of specific NWI maps can be obtained from:

Cornell Institute for Resource Information Systems
302 Rice Hall
Cornell University
Ithaca, NY 14853
(607) 255-4864

Work in certain waters of the United States, including wetlands, may require a permit from the U.S. Army Corps of Engineers (Corps). If a permit is required, in reviewing the application pursuant to the Fish and Wildlife Coordination Act, the Service may concur, with or without recommending additional permit conditions, or recommend denial of the permit depending upon potential adverse impacts on fish and wildlife resources associated with project construction or implementation. The need for a Corps permit may be determined by contacting the appropriate Corps office(s).*

If you require additional information or assistance please contact Michael Stoll at (607) 753-9334.

Sincerely,

Mark W. Clough

Acting For

David A. Stilwell
Field Supervisor

*Additional information referred to above may be found on our website at: http://nyfo.fws.gov/es/esdesc.htm.

cc: NYSDEC, Syracuse, NY (Environmental Permits)
NYSDEC, Albany, NY (Natural Heritage Program)
COE, Buffalo, NY

2

Accession No. ML040350504

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
NORTHEAST REGION
One Blackburn Drive
Gloucester, MA 01930-2298

Proj 720
52-009

JAN 28 2004

Pao-Tsin Kuo
Program Director, License Renewal and Environmental Impacts
Division of Regulatory Improvement Projects
Office of Nuclear Reactor Regulation
United States Nuclear Regulatory Commission
Washington, DC 20555-0001

Re: Docket No. 52-009

Dear Mr. Kuo,

This responds to your letter dated January 6, 2004, requesting information on the presence of any federally listed threatened or endangered species and/or designated critical habitat for listed species under the jurisdiction of the National Marine Fisheries Service (NOAA Fisheries) in the vicinity of two sites for potential new nuclear power plants. The US Nuclear Regulatory Commission (NRC) is currently reviewing an application submitted by System Energy Resources Inc. (SERI) for an early site permit for the potential future construction of one or more new nuclear power plants. The preferred alternative for the location of the proposed new power plants is within the site boundaries of the existing Grand Gulf Nuclear Power Station (GGNS), site near the town of Port Gibson in Clairborne County, Mississippi. As part of the review of this application, the NRC is preparing an environmental impact statement (EIS). Three alternate sites will also be evaluated in the EIS. They are River Bend in West Feliciana County, Louisiana; FitzPatrick in Oswego County, New York; and Pilgrim in Plymouth County, Massachusetts.

The sites in Mississippi and Louisiana fall under the jurisdiction of NOAA Fisheries' Southeast Regional Office. It is our understanding that in a July 2002 letter, that office indicated that the Grand Gulf Site is within the historic range of the threatened Gulf sturgeon (*Acipenser oxyrinchus desotoi*). Biological information on federally protected sea turtles, sturgeon, Gulf sturgeon, Gulf sturgeon critical habitat, and other listed and candidate species potentially present near the River Bend site can be found at the following website address: NOAA Fisheries Southeast Regional Office (http://caldera.sero.nmfs.gov/protect/protect.htm). The Southeast Regional Office can be contacted at: 9721 Executive Center Drive North, St. Petersburg, Florida 33702 or (727)570-5333.

No federally listed or proposed threatened or endangered species under the jurisdiction of

D069

Accession No. ML040350504

NOAA Fisheries are known to exist in the vicinity of the existing FitzPatrick Site. However, several threatened and endangered species are known to exist in Cape Cod Bay in the vicinity of the Pilgrim Site. Four species of federally threatened or endangered sea turtles and three species of endangered whales are found seasonally in Massachusetts waters. The sea turtles in northeastern nearshore waters are typically small juveniles with the most abundant being the federally threatened loggerhead (*Caretta caretta*) followed by the federally endangered Kemp's ridley (*Lepidochelys kempi*). Loggerhead turtles have been found to be relatively abundant off the Northeast coast (from near Nova Scotia, Canada to Cape Hatteras, North Carolina). From November to March in 1985 through 1988, 130 cold-stunned turtles were collected along the Long Island shoreline, including 97 Kemp's ridleys. Loggerheads and Kemp's ridleys have been documented in waters as cold as 11°C, but generally migrate northward when water temperatures exceed 16°C. As such, these species usually arrive in Southern New England in June. Green sea turtles may occur sporadically in Massachusetts waters, but those instances would be rare. Federally endangered leatherback sea turtles (*Dermochelys coriacea*) are located in near shore New England waters during the warmer months as well.

Federally endangered North Atlantic right whales (*Eubalaena glacialis*), humpback whales (*Megaptera novaeangliae*), and fin whales (*Balaenoptera physalus*) may all also be found seasonally in Massachusetts waters. North Atlantic right whales have been documented in the nearshore waters of New England from January through September. Humpback whales feed during the spring, summer, and fall over a range that encompasses the eastern coast of the United States. Fin whales are common in waters of the United States Exclusive Economic Zone, principally offshore from Cape Hatteras northward.

While not protected under the Endangered Species Act (ESA) of 1973, as amended, minke whales (*Balaenoptera acutorostrata*), gray seals (*Halichoerus grypus*), harbor seals (*Phoca vitulina*), harbor porpoises (*Phocoena phocoena*), and white-sided dolphins (*Lagenorhynchus acutus*) are common residents of Massachusetts waters and may be present in the vicinity of the Plymouth Site. All marine mammals receive protection under the Marine Mammal Protection Act of 1972 (MMPA).

Section 7(a)(2) of the Endangered Species Act (ESA) states that each Federal agency shall, in consultation with the Secretary, insure that any action they authorize, fund, or carry out is not likely to jeopardize the continued existence of a listed species or result in the destruction or adverse modification of designated critical habitat. Because listed species may be present in the vicinity of several of the proposed sites and may be affected by the construction and operation of a new nuclear power project, an action at these sites would have to undergo Section 7 consultation. The federal action agency, in this case the NRC, would be responsible for initiating Section 7 consultation. If one of the sites where listed species are present is chosen, please submit a description of the project along with an assessment of the projects impacts on listed species to the appropriate NOAA Fisheries Regional Office. After reviewing this information, NOAA Fisheries will then be able to conduct a consultation under Section 7 of the ESA. If you have any questions or concerns about these comments or about

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the consultation process in general, please contact Julie Crocker of my staff at (978) 281-9328 ext. 6530 (Northeast Region) or Dr. Stephania Bolden at (727)570-5312 (Southeast Region).

Sincerely,

Mary A. Colligan
Assistant Regional Administrator
for Protected Resources

Cc: Bolden, F/SER3

File Code: Sec 7 NRC Massachusetts

Accession No. ML040500681

United States Department of the Interior
FISH AND WILDLIFE SERVICE
646 Cajundome Blvd.
Suite 400
Lafayette, Louisiana 70506
February 5, 2004

10/31/03
68 FR 61456
(1)

Mr. Pao-Tsin Kuo
U.S. Nuclear Regulatory Commission
Division of Regulatory Improvement Programs
Office of Nuclear Reactor Regulation
Washington, District of Columbia 20555-0001

Dear Mr. Kou:

Please reference your January 8, 2004, letter regarding the application by System Energy Resources, Incorporated for an early site permit for the potential future construction of a nuclear power plant in one or more of the following locations: Port Gibson, Claiborne County, Mississippi; River Bend, West Feliciana Parish, Louisiana; Fitzpatrick, Oswego County, New York; and Pilgrim, Plymouth County, Massachusetts. Your letter requests information regarding threatened and endangered species, as well as environmentally sensitive areas, which may occur within West Feliciana Parish, Louisiana. The requested information will assist in the preparation of the environmental impact statement (EIS) by the U.S. Nuclear Regulatory Commission (NRC). As such, this letter also serves as our input to the Notice of Intent published in the December 31, 2003, Federal Register. Various U.S. Fish and Wildlife Service offices have reviewed the information you provided; pertaining solely to the River Bend Alternative in West Feliciana Parish, Louisiana, the Lafayette Field Office offers the following comments in accordance with the Endangered Species Act of 1973 (87 Stat. 884, as amended; 16 U.S.C. 1531 et seq.), and the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. 661 et seq.).

The threatened Louisiana black bear (*Ursus americanus luteolus*) is primarily associated with forested wetlands; however, it utilizes a variety of habitat types, including marsh, spoil banks, and upland forests. Within forested wetlands, black bear habitat requirements include soft and hard mast for food, thick vegetation for escape cover, vegetated corridors for dispersal, large trees for den sites, and isolated areas for refuge from human disturbance. Remaining Louisiana black bear populations occur in the Tensas River Basin, the Upper Atchafalaya River Basin, and coastal St. Mary and Iberia Parishes. The primary threats to the species are continued loss of bottomland hardwoods, fragmentation of remaining forested tracts, and human-caused mortality (e.g., illegal killing and accidental collisions with motor vehicles).

Louisiana black bears, particularly pregnant females, normally den from December through April. In order to avoid disturbance of denning bears and possible abandonment of cubs, the Service recommends that any work in the project area be prohibited during the denning season.

E-RIDS = ADM-03
Add = James Wilson (JHW1)

Template = ADM-013

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To further protect denning bears, the Service, through the final rule, has extended legal protection to candidate or actual den trees. These are defined in the final rule as bald cypress (*Taxodium distichum*) and tupelo gum (*Nyssa* sp.) with visible cavities, having a diameter at breast height of 36 inches or greater, and occurring in or along rivers, lakes, streams, bayous, sloughs, or other water bodies. If construction is to be performed during the denning season or if bald cypress or tupelo gum with diameters at breast height of 36 inches or greater will be removed or destroyed, further consultation with this office will be necessary.

The pallid sturgeon (*Scaphirhynchus albus*) is an endangered fish found in both the Mississippi and Atchafalaya Rivers (with known concentrations in the vicinity of the Old River Control Structure Complex); it is possibly found in the Red River as well. The pallid sturgeon is adapted to large, free-flowing, turbid rivers with a diverse assemblage of physical habitats that are in a constant state of change. Detailed habitat requirements of this fish are not known, but it is believed to spawn in Louisiana. Habitat loss through river channelization and dams has adversely affected this species throughout its range.

As you may be aware, activities that involve wetlands are regulated by the U.S. Army Corps of Engineers (Corps). We, therefore, recommend that you contact the Corps to determine their interest in the proposed projects.

We appreciate the opportunity to provide these initial comments in the planning stages of this proposed project, and look forward to reviewing the forthcoming draft EIS. If you need further assistance, please contact Angela Culpepper (337/291-3137) of this office.

Sincerely,

Russell C. Watson
Supervisor
Louisiana Field Office

cc: USFWS, Mississippi Ecological Services Office, Jackson, MS
USFWS, New York Ecological Services Office, Cortland, NY
USFWS, New England Ecological Services Office, Concord, NH
Chief, Rules and Directives Branch, USNRC, Washington, D.C.
Corps of Engineers, New Orleans, LA
LDWF, Natural Heritage Program, Baton Rouge, LA

Accession No. ML040650620

United States Department of the Interior

FISH AND WILDLIFE SERVICE

New England Field Office
70 Commercial Street, Suite 300
Concord, New Hampshire 03301-5087

RE: Application for an early site permit (ESP)
Grand Gulf ESP Site

February 9, 2004

Proj 720
52-009

Pao-Tsin Kuo
Office of Nuclear Reactor Regulations
United States Nuclear Regulatory Commission
Washington D.C. 20555-0001

Dear Mr. Kuo:

I have reviewed your request for information on endangered and threatened species and their habitats for the above-referenced project. My comments are provided in accordance with Section 7 of the Endangered Species Act (ESA) of 1973, as amended (16 U.S.C. 1531-1543). This letter addresses only the compliance with the Section 7 of the ESA and not the Fish and Wildlife Coordination Act of 1934.

This office has reviewed the proposed alternative site in Plymouth County, Massachusetts. The following is a list of federally-threatened or endangered species found in the county: northern red-bellied cooter (*Chrysemys rubriventris bangsi*), roseate tern (*Sterna dougallii dougallii*), piping plover (*Charadrius melodus*), and bald eagle (*Haliaeetus leucocephalus*). In order to comply with the Massachusetts Endangered Species Act and the Massachusetts Wetlands Protection Act (310 CMR 10), we suggest that you consult with the Massachusetts Natural Heritage and Endangered Species Program, Route 135, Westborough, MA 01581, telephone (508) 792-7270, extension 200, for information on state-listed species that are present.

Thank you for your cooperation and please contact me at 603-223-2541, extension 23, if we can be of further assistance.

Sincerely yours,

Michael J. Amaral

Michael J. Amaral
Endangered Species Specialist
New England Field Office

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Accession No. ML041310449

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Mississippi Field Office
6578 Dogwood View Parkway, Suite A
Jackson, Mississippi 39213
April 14, 2004

52-009

Dr. Michael T. Masnik
Office of Nuclear Reactor Regulation
Nuclear Regulatory Commission
Mail Stop: O11F1
Washington, D.C. 20555-0001

Dear Dr. Masnik:

In a letter dated January 21, 2004, the U.S. Fish and Wildlife Service (Service) provided your agency with information on federally listed threatened and endangered species as it pertained to the preparation of an Environmental Impact Statement (EIS) for the construction of one or more new nuclear power plants in Claiborne County, Mississippi. Since that correspondence, another listed species, the endangered fat pocketbook mussel (*Potamilus capax*), has been identified in the project area. Our comments are provided in accordance with the Endangered Species Act (ESA) of 1973, as amended, (16 U.S.C. 1531 et seq.).

In August 2003, Mississippi Museum of Natural Science biologists collected two fresh dead shells of the fat pocketbook in the Ben Lomond Dike Field near Vicksburg in the Mississippi River channel. The Service was notified of the new record and confirmed the identification of the specimens. Service biologists conducted cursory mussel surveys in the area and collected 14 fresh dead shells and one live fat pocketbook.

The fat pocketbook is a broad, rounded, inflated, and slightly angular near the hinge. The anterior margin is very narrow and rounded. The valves do not close perfectly on each other but gape at the posterior margin. The nacre is white or bluish white and often iridescent. The beaks are curved over the hinge ligament.

Fat pocketbooks occur primarily in sand and mud substrates, although the species has been found in fine gravel and hard clay occasionally. Water depth ranges from a few inches to several feet. The life cycle of fat pocketbooks is similar to that of other freshwater mussels, in which the glochidia (larvae) require a fish host to transform to the juvenile stage. Fat pocketbooks are long-term brooders, with females becoming gravid in the fall, retaining glochidia over winter, and releasing the progeny during spring and summer. The fish host for this species is primarily freshwater drum.

The historic range of the fat pocketbook included the upper and middle Mississippi, Ohio,

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Accession No. ML041310449

Wabash, White, St. Francis, Black, Spoon, Illinois, Des Moines, Iowa, Cumberland, and Neosho Rivers. However, during the past decade, three populations have been discovered in the lower Mississippi River in Mississippi, and the species was recently discovered surviving in the White River of Arkansas. The greatest impact on the fat pocketbook throughout its historic range has been from activities resulting in the loss of habitat and a reduction in water quality.

Although there is little data regarding the presence of the fat pocketbook mussel in the immediate project vicinity, potential project impacts to this species should be considered during the EIS preparation process. If you have any questions, please feel free to contact Kathy Lunceford in this office, telephone: (601) 321-1132.

Sincerely,

Curtis B. James

Curtis B. James
Assistant Field Supervisor

cc: Pacific Northwest National Laboratory, Richland, WA
Attn: Jim Becker, Amoret L. Bunn
Mississippi Museum of Natural Science, Jackson, MS
Attn: Tom Mann