

U.S. Department of Energy  
in cooperation with  
U.S. Army Corps of Engineers

# KEMPER COUNTY IGCC PROJECT

FINAL ENVIRONMENTAL IMPACT STATEMENT

DOE/EIS-0409

VOLUME 3—RESPONSES TO COMMENTS



May 2010



Office of Fossil Energy  
National Energy Technology Laboratory



US Army Corps  
of Engineers®

**VOLUME 3  
COMMENTS AND RESPONSES ON THE  
DRAFT ENVIRONMENTAL IMPACT STATEMENT**

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## 1. INTRODUCTION

The Draft EIS for the Kemper County IGCC Project was published in November 2009. DOE distributed copies of the Draft EIS to officials, agencies, Native American tribes, organizations, libraries, and members of the public identified in the distribution list (Chapter 12 of Draft EIS, Volume 1). DOE announced the notice of availability of the Draft EIS in the *Federal Register* (FR) on November 5, 2009 (74 FR 57297); and EPA published the notice of availability in the *Federal Register* on November 6, 2009 (74 FR 57466). This Volume 3 provides a summary of the public hearing, explains the methodology for receiving comments and comment documents, and provides responses to comments received.

DOE held a public hearing for the Draft EIS at the same location as the scoping meeting. The hearing was held at the Kemper County High School in DeKalb, Mississippi, on December 1, 2009. DOE advertised the hearings in the following newspapers: *Kemper County Messenger* (Thursday, November 19); *Meridian Star* (Tuesday, November 17, and Sunday, November 21); *Clarke County Tribune* (Thursday, November 19); and *Jasper County News* (Wednesday, November 18). An informal information session was held at the high school prior to the hearing from 5 to 7 p.m., during which time attendees were given information about the project and were able to view project-related posters.

Based on cards used to register attendance, the hearing was attended by 80 people not affiliated with the project. DOE led the presentations and presided over the public hearing. The public was encouraged to provide oral comments at the hearing and to submit written comments to DOE by December 21, 2009. A court reporter was present at the hearing to ensure all oral comments were recorded and legally transcribed.

## 2. METHODOLOGY

In preparing the Final EIS, DOE considered all comments to the extent practicable. An identification code was assigned to each originator of a comment (i.e., each commenter), including those expressed orally at the public hearings. Each specific comment by the same commenter was assigned a sequential comment number; for example, Comment JW-20 refers to the 20<sup>th</sup> comment by the commenter assigned the identifier JW (initials of first and last names). Section 3 that follows provides a summary of the principal comments received on the Draft EIS.

Based on the comments received on the Draft EIS, DOE prepared responses and modified the EIS (Volume 1) and Appendices (Volume 2) where appropriate. The EIS was also revised based on DOE's internal technical and editorial review of the Draft EIS (i.e., changes made to the EIS that were not in response to a comment received). In most of these instances, the revisions were based on events that took place or actions that occurred between the publication of the Draft EIS and the preparation of the Final EIS. For example, the Final EIS includes results of fieldwork to characterize a portion of a proposed pipeline corridor that was not completed in time to be included in the Draft EIS.

Transcripts of the public hearing as well as scanned images of the original comment documents are included in their entirety in Section 4 of this volume. The commenters and their comments are identified and labeled on each comment document image beginning with the public hearing transcript. All comment documents on the Draft EIS, as included in this comment-response volume, as well as any supporting attachments, have been entered into the administrative record for this EIS. Individual responses for each comment are provided on the

pages immediately following the comment document (or group of documents). In some cases where comments address the same issue, references are made to another comment for an appropriate response. In some cases where a commenter addressed an issue that was the subject of a related comment by an agency having jurisdiction over the subject area, the response refers to the response given for the respective agency's comment even if it occurs later in the document.

### 3. SUMMARY OF COMMENTS AND IDENTIFICATION OF COMMENTERS

DOE received comments on the Kemper County IGCC Project Draft EIS at the hearing both orally and through comment cards, by letter, and by e-mail. A summary of the major comments received, grouped by subject area, is provided in the following:

- General comments—support for or opposition to the project; general concerns regarding environmental impacts and use of coal to generate electricity.
- NEPA Process:
  - DOE's statement of purpose and need—more expansive definition of purpose and need to include the need for power and resources to meet that need.
  - Alternatives considered reasonable to the proposed action by DOE—consideration given to other sites for the IGCC plant such as other existing Southern Company or Mississippi Power sites, alternative mine sites, alternative fuels, transportation of lignite from existing mine, alternative sequestration, alternative energy technologies, and energy efficiency conservation measures to reduce the need for electricity.
- Environmental Impacts:
  - Air pollutant emissions, emissions controls, and air quality impacts—emissions of criteria pollutants and hazardous air pollutants (HAPs), sulfur and mercury controls, flare design, controls on diesel powered construction equipment, increases to current ambient levels of fine particulate matter, and regional haze.
  - Aesthetics—visual impact of the power plant, mine facilities, and transmission lines.
  - CO<sub>2</sub> and GHG emissions, capture, and sequestration—contribution of the project to global emissions of GHGs.
  - Climate change effects locally, regionally, and globally—increased strength of storms and hurricanes and ecological effects.
  - Ash/solid waste management—health effects, ground water effects.
  - Cultural and historic resources—potential effects on Native American tribal resources.
  - Surface water quality and stormwater impacts—use of air cooling design, suspended and dissolved solids, temperature effects, acid mine drainage, and downstream effects on Pascagoula River and Gulf of Mexico.
  - Stream restoration following mining—changes in flow quantity, ecological effects, and sinuosity of restored streams.

- Floodplains, flooding, and flood control—increases in flood elevations and effects on floodplain area.
- Wetlands impacts and mitigation—acreage of wetlands affected, restoration of wetland functions, and adequacy of mitigation of unavoidable impacts.
- Hydrologic impacts, especially on Lake Okatibbee—increases in suspended solids and temperatures in the lake, effects on recreation, and effects on flood control capability of the lake.
- Ground water impacts and effects on drinking water supplies—quantity and quality of drinking water supplies and other uses of ground water.
- Noise impacts—construction noise, truck traffic noise, mining equipment noise, and hum from power lines.
- Mining impacts, including soils, and land reclamation—adequacy of restoration and reclamation.
- Threatened and endangered species—effects on habitat and population of species and effects of mercury and other HAPs.
- Wildlife impacts—loss of wildlife habitat, effects of toxic air pollutants, and cumulative effects on aquatic resources in the area and downstream in the Pascagoula River and Gulf of Mexico.
- Risks to Human Health:
  - HAPs—inhalation risks, chronic and acute impacts, effects on vegetation and wildlife, and ammonia releases.
  - Fine particulate matter emissions and impacts—respiratory effects and impacts to sensitive populations.
  - Mercury emissions, deposition, and bioaccumulation—concentration of mercury in fish and effects on vegetation.
- Socioeconomic Impacts:
  - Cost of project and effect on ratepayers—project costs and increases in utility rates.
  - Environmental justice, including community involvement—health, quality of life, traffic, and noise.
  - Traffic impacts—increases in truck traffic and effects on local roads.
  - Land and right-of-way acquisition—property owner rights, use of eminent domain, locations of transmission lines, and use of existing pipelines.
  - Community resources—law enforcement, increased crime, and plans for community involvement.
- Decisionmaking by the Applicant and Mississippi PSC:
  - Need for power from the project—justification of need for power and resources to meet the need.
  - Adequacy of site selection process—considerations of alternative sites by Mississippi Power Company.

The following table lists commenters (in order of their first appearance in Section 4), their assigned identification numbers, their affiliations, and the page number where the respective comments and DOE's responses can be found:

<b>ID No.</b>	<b>Name</b>	<b>Affiliation</b>	<b>Page Nos.</b>
JW	John Williams	Industrial consultant, Concerned Citizens for Clean Air	22-25, 47-50, 143-211
LM	Louie Miller	State Director, Mississippi Chapter of the Sierra Club	25-27, 50-51
SM	Steve McKenna	Private person	28, 51-52, 66
CC	Chris Collins	Private person	29, 44, 52, 63
LSM	Linda St. Martin	Private person	29-31, 52-54
RL	Rick Lambert	Private person	32-33, 54-55
LE	Laurence David Everett	Private person	33-34, 55-56, 66-70
TW	Thomas Webb	Private person	34, 56-57, 125-127
RH	Raleigh Hoke	Mississippi Organizer, Gulf Restoration Network (GRN)	35-38, 57-60
BC	Barbara J. Correro	Private person	39, 60-61, 115-116
JO	Julia O'Neal	Private person and Sierra Club Member	41-42, 61-62, 281, 329, 341-346
BR	Bill Ready, Jr.	Private person	42-44, 62
RW	Rob Worden	Private person	64, 68
JB	Joe Boswell	Private person	64, 68
RC	Rae Clarke	Private person	64, 68
VC	Vanessa Clarke	Private person	65, 68
TG	Tommy Gunn	Private person	65, 68
HD	Harlan Davis	Private person	65, 68
MW	Margaret Stennis Womble	Private person	66, 68, 117-118
FEMA	William R. Straw, Ph.D.	Regional Environmental Planning & Historic Preservation Officer, FEMA	71-73
EPA	Heinz J. Mueller	Chief, NEPA Program Office, Office of Policy and Management, EPA	74-99
DOI	Gregory Hogue	Regional Environmental Officer, DOI	100-107
MDAH	Jim Woodrick	Review and Compliance Officer, MDAH	108-109
MDA	Gray Swoope	Mississippi Development Authority	110-111
DWFP	Andy Sanderson	Ecologist, Mississippi Natural Heritage Program, MDWFP	112-114
MC	Michael D. Correro	Private person	119-122
MM	Melinda Mahone	Private person	123-124
KEDA	Brian Henson	Kemper County Economic Development Authority	128-129
RC2	Rosie Colman	Private person	130-131
CB	Charles Blackwell	Private person	132-133
GRN	Casey DeMoss Roberts, MSPH	Assistant Director, Water Resources Program, GRN	134-142
SC	Louie Miller Andrea Issod Evan House	MS Chapter, Sierra Club Sierra Club Staff Attorney Sierra Club Legal Intern	212-276
JW2	Jacquelyn Wesson	Sierra Club member	277, 328
PG	Pat and Gary Glover	Sierra Club member	277, 328
TB	Dr. Tom Brent	Sierra Club member	278, 328
JF	Jesse Fineran	Sierra Club member	278, 328
WL	William Larry	Sierra Club member	279, 328

<b>ID No.</b>	<b>Name</b>	<b>Affiliation</b>	<b>Page Nos.</b>
GD	Gary Dunavant	Sierra Club member	279, 328
LR	Lawrence Rives	Sierra Club member	280, 328-329
JL	Dr. James Lazell	Sierra Club member	280, 329
JM	Jerry Mayeux	Sierra Club member	281, 329
HW	Dr. Hugh Wolfe	Sierra Club member	282, 329
DL	Donald Landers	Sierra Club member	282, 329
ES	Edward Struthers	Sierra Club member	283, 329
BB	Brent Brackett	Sierra Club member	283, 329
ES2	Earl Gregg Swem	Sierra Club member	284, 329-330
EC	Dr. Elise Casey	Sierra Club member	284, 330
SH	Dr. Swink Hicks	Sierra Club member	285, 330
JW3	Jon Wesson	Sierra Club member	285, 330
DP	Dr. Dick Pyburn	Sierra Club member	286, 330
JG	Jane Gardner	Sierra Club member	286, 330
TBE	Terry Blake-Edwards	Sierra Club member	287, 330
GA	Gary Addis	Sierra Club member	287, 330
CD	Caleb Dana	Sierra Club member	288, 330-331
TW2	Tim Wallace	Sierra Club member	289, 331
DK	Donald Koontz	Sierra Club member	289, 331
CT	Dr. Crystal Twynham	Sierra Club member	290, 331
LB	Lisa Brouillette	Sierra Club member	290, 331
RA	Ray Ables	Sierra Club member	291, 331
DN	Dr. David Newton	Sierra Club member	291, 331
SP	Susan Putnam	Sierra Club member	292, 331
JG2	Dr. Jan Garrett	Sierra Club member	292, 331
RM	Rebecca May	Sierra Club member	293, 324
JC	Jan Cambre	Sierra Club member	293, 303, 315, 332, 334, 336
PB	Peter Bacuzzi	Sierra Club member	294, 332
TP	Thomas Powell	Sierra Club member	294, 332
PP	Phyllis Prichard	Sierra Club member	295, 332
HJ	H.F. Jaeckel	Sierra Club member	295, 332
BP	Barbara Powell	Sierra Club member	296, 332-333
FW	Dr. Frank Wiygul	Sierra Club member	297, 332-333
JS	Jacquelyn Smith	Sierra Club member	297, 333
FK	Frederick Kernbach	Sierra Club member	297, 333
RM2	Roger Mills	Sierra Club member	298, 333
EW	Edmund Wright	Sierra Club member	298, 333
GM	Gloria Mattingly	Sierra Club member	299, 333
GG	Mrs. Gary Gover	Sierra Club member	299, 333
ED	Edward Donovan	Sierra Club member	300, 333
PW	Phyllis Wallace	Sierra Club member	301, 325-334
RB	Dr. Robert Brooks	Sierra Club member	301, 334
PD	Paul Diamond	Sierra Club member	302, 334
MS	Maria Skinner	Sierra Club member	302, 334
BC2	Brantly Cochrane	Sierra Club member	303, 334
TD	Tommy Davis	Sierra Club member	304, 334
TR	Tezel Relyea	Sierra Club member	304, 334
JE	Joe Estes	Sierra Club member	305, 334
MC2	Mark Clodfelter	Sierra Club member	305, 326-335
EW2	Dr. Elizabeth Waldorf	Sierra Club member	306, 335
SW	Sarai Webb	Sierra Club member	307, 335
JP	Dr. James Puckett	Sierra Club member	308, 335
CD2	Curtis Dodd	Sierra Club member	309, 335

ID No.	Name	Affiliation	Page Nos.
MH	Marie Hatton	Sierra Club member	310, 335
RJ	Richard Johnson	Sierra Club member	311, 335
BM	Betsy Ogle Montgomery	Sierra Club member	312, 335
VM	Valya Mobley	Sierra Club member	313, 335-336
SF	Shannon Faye	Sierra Club member	314, 336
LM2	Dr. Lola McCord	Sierra Club member	315, 336
MR	Maxine Ramsay	Sierra Club member	316, 336
JL2	Dr. John Robins Langlow	Sierra Club member	317, 336
BE	Billy Easley	Sierra Club member	318, 336
DA	Donald Abrams	Sierra Club member	319, 336
AV	Aaron Viles	GRN member	320-321, 337-339
RA2	Rusty Anderson	GRN member	323, 339
MS2	Matthew Stevens	GRN member	324, 339-340
BW	Beth Willborn	GRN member	327, 340
TH	Tracy Harbour	Private person	347-348
TC	Tony Cawthorn	Private person	349-350
BW2	Bob Wilson	Private person	351-352
OW	Olivia Walters	Private person	353-354
CP	Carol Ann Pittman	Private person	355-356
RM3	Robbie McKee	Private person	357-358
BH	Bobbie Harbour	Private person	359-360
NA	Nancy Abercrombie	Private person	361-362
JA	Jennifer Aitken	Private person	363-364
DB	Debbie Berry	Private person	365-366
JK	John R. Kynerd	Private person	367-368
QS	Queshaun Sudbury	Private person	369-374

Note: DOI = U.S. Department of the Interior.  
EPA = U.S. Environmental Protection Agency.  
FEMA = Federal Emergency Management Agency.  
GRN = Gulf Restoration Network.  
MDAH = Mississippi Department of Archives and History.  
MDWFP = Mississippi Department of Wildlife, Fisheries, and Parks.  
NEPA = National Environmental Policy Act.

## 4. COMMENTS AND DOE RESPONSES

The comments are organized as follows:

- Draft EIS hearing transcript.
- Comment cards received at hearing.
- Letters from Federal agencies, by date received.
- Letters from State agencies, by date received.
- Letters from all others, by date received.
- E-mails from Sierra Club members, by date received.
- E-mails from Gulf Restoration Network members, by date received.
- E-mails from other individuals, by date received.

DOE's responses appear on the page(s) following the document(s) in each of these categories of comments. Note that DOE received numerous e-mails with identical comments from members of the Sierra Club and the Gulf Restoration Network (GRN). Only the first of the e-mails received from each organization is provided. However, e-mails from those members who added further comments to the common set of comments are also included.

1 DEPARTMENT OF ENERGY'S PUBLIC SCOPING MEETING  
 2 KEMPER COUNTY IGCC PROJECT

8 DATE: December 1, 2009  
 9 LOCATION: Kemper County High School  
 10 TIME: 7:00 p.m.

18 REPORTED BY: Ginger H. Brooks, CSR #1165  
 19 CRR, RPR, CSR  
 20 Brooks Court Reporting, Inc.  
 21 2105 5th Street  
 22 Meridian, Mississippi 39301  
 23 (601)693-8585

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 8 Mr. Berry .....10  
 9 Ms. Trouart .....16  
 10 Mr. Hargis .....26  
 11 Mr. Williams .....29  
 12 Mr. Miller .....35  
 13 Mr. McKenna .....40  
 14 Mr. Collins .....43  
 15 Ms. St. Martin .....43  
 16 Mr. Lambert .....50  
 17 Mr. Everett .....51  
 18 Mr. Webb .....53  
 19 Mr. Hoke .....54  
 20 Ms. Correro .....63  
 21 Ms. O'Neal .....64  
 22 Mr. Ready .....69  
 23 Mr. Collins .....73  
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1 MR. HARGIS: Good evening. Thanks for  
 2 coming tonight. My name is Rich Hargis. I work for  
 3 the U.S. Department of Energy. Welcome to the  
 4 Department of Energy's Public Hearing on the Kemper  
 5 County draft Environmental Impact Statement. My  
 6 role in this project is to manage the preparation of  
 7 the Federal EIS which is required by Federal law.  
 8 There are some other DOE people here. Diane Madden,  
 9 Project Manager, and she will be giving a  
 10 presentation of Clean Coal Power Program.

11 We also have representatives in the back  
 12 at the door from the Office of Communications, Dave  
 13 Anna, Shelley Martin have been -- are here tonight  
 14 to meet with the media representatives that have  
 15 been in attendance so far, and all of us work for  
 16 the National Energy Technology Laboratory of the  
 17 Department of Energy.

18 There are also representatives of the Army  
 19 Corps of Engineers here tonight. The Army Corps is  
 20 involved in the agency in cooperating with this EIS.  
 21 Cindy House-Pearson in the back. She's got her hand  
 22 raised there, and Skip Young. They're representing  
 23 the Army Corps in this EIS process.

24 We also have a representative, who, if you  
 25 came in and signed in, you met him, Jeff Meling.

1 He's with Environmental Consulting & Technology. He  
 2 leads the team of environmental experts from ECT  
 3 that are helping the DOE prepare the Environmental  
 4 Impact Statement.

5 Also in the audience are representatives  
 6 from the industrial participants in the project  
 7 which are Southern Company, Mississippi Power and  
 8 North American Coal, and if you had a chance to look  
 9 at some of the posters, you probably met some of  
 10 those people.

11 We also have some supervisors of Kemper  
 12 County. I won't go through the names. There's a  
 13 few of them here. They have not asked to speak, so  
 14 unless they get up and raise their hand at the end  
 15 of the formal session, we'll give them an  
 16 opportunity to make a statement.

17 I understand the Mayor of DeKalb is on the  
 18 way, so he may have an opportunity to speak as well.  
 19 We also have a number of state agencies. MDEQ is  
 20 here. The office of surface mining has a  
 21 representative here. I mentioned the Kemper County  
 22 economic development board. There's a long list.  
 23 Welcome to all.

24 Top of the agenda, there's going to be a  
 25 few brief presentations before we get to the

1 comment, brief description of the meeting purpose,  
2 and then Diane Madden is going to talk about the  
3 Clean Coal Power Initiative program, and then Rick  
4 Berry from Mississippi Power is going to give you an  
5 overview of the power plant side of the project, and  
6 then Joel Trouart of North American Coal will give a  
7 presentation on the lignite mine. And then after  
8 that, I'll just mention a few things about the  
9 Environmental Impact Statement process and the  
10 governing law which is the National Environmental  
11 Policy Act or NEPA. And then we'll turn the  
12 microphone over to you.

13           The meeting purpose, in light of having  
14 these public hearings, we're looking for comments  
15 from you on the draft of Environmental Impact  
16 Statement that was released in early November,  
17 November 6th. We'd like you to focus on the  
18 environmental impacts of the proposed project, the  
19 alternatives that we've considered in preparing the  
20 draft EIS, the emphasis that DOE gave to those  
21 issues that you consider important, and the level of  
22 environmental analysis that was given to those  
23 issues. Your comments tonight and throughout the  
24 public comment period will be considered when we  
25 prepare the final EIS.

1           Your comments are very important to us.  
2 The Federal government, not just DOE, but no agency  
3 within the Federal government can write an  
4 Environmental Impact Statement without input from  
5 the public, and that's why it's very important that  
6 you take this opportunity, either in your oral  
7 comments tonight or provide written comments so that  
8 we can address them. You know best what you desire  
9 in this area, in this local area, and we hope you'll  
10 help us in addressing those issues. Diane will be  
11 the first speaker. She's going to talk about the  
12 Clean Coal Power Initiative.

13           MS. MADDEN: Coal is our nation's most  
14 abundant fossil fuel, and it is a low cost energy  
15 source that provides for energy security and  
16 economic stability. Coal-fired power plants  
17 generate nearly 50 percent of the nation's  
18 electricity.

19           The continued use of our nation's coal  
20 reserves, however, relies on the development and  
21 deployment of advanced technologies that address the  
22 environmental concerns while maintaining coal's  
23 economic advantage.

24           In 1999 and 2000, major regions in our  
25 country were subjected to electric power blackouts

1 and brownouts. Congress responded by legislatively  
2 mandating that the Department of Energy demonstrate  
3 advanced coal-based technologies that can generate  
4 clean, reliable and affordable electricity in the  
5 United States. DOE conducted the power plant  
6 improvement initiative in 2001, and in 2002 created  
7 the Clean Coal Power Initiative as a multi-year  
8 program.

9 The CCPI is a cost-shared partnership  
10 between the Federal government and private industry,  
11 with the purpose to develop promising, advanced  
12 clean coal power generation technology that are  
13 protective of the environment and to accelerate  
14 these new systems into the market by conducting full  
15 scale demonstration.

16 The application submitted under the CCPI  
17 solicitations are rigorously evaluated against  
18 specific, programmatic criteria, which includes  
19 technical merit. We look at the proposed scientific  
20 and engineering approach, the data and other  
21 evidence to support the technology claims, the  
22 readiness of the technology for demonstration, and  
23 the potential benefits such as improved system  
24 performance, reliability, environmental performance  
25 and cost.

1 The next criteria is feasibility. We look  
2 at the appropriateness of the proposed site,  
3 including the availability and access to water,  
4 power transmission, coal transportation, facilities  
5 and equipment infrastructure and permits.

6 We also evaluate the ability of the  
7 proposed project team to successfully implement the  
8 project. The soundness and completeness of the  
9 proposed statement of works, the proposed project  
10 schedule, test plan milestones and decision points.

11 The next criteria is commercialization  
12 potential. We look at the commercial viability  
13 relative to the scale of the project, the potential  
14 for broad market impact and widespread deployment  
15 and the soundness of the commercialization plan,  
16 including the experience of the project team.

17 The final criteria is the adequacy of the  
18 financial business plan. We evaluate the financial  
19 condition and capability of the proposed funding  
20 sources, and we look at the priority placed by the  
21 applicant's management on the financing of the new  
22 project and the adequacy of the applicant's  
23 financial management system.

24 The Clean Coal Power Initiative is  
25 implemented in successive solicitations or rounds

1 that target priority areas of interest to meet DOE's  
2 goals. The first round was open to any technology  
3 advancement related to coal-based power generation  
4 that resulted in efficiency, environmental and  
5 economic improvements compared to the currently  
6 available state-of-the-art technology.

7 The second round was issued seeking  
8 proposals to demonstrate advances in coal  
9 gasification system technology, and technologies  
10 that improve the management of carbon emissions, and  
11 advancements that reduce mercury and other power  
12 plant emissions.

13 The third round was focused on coal-based  
14 technologies that capture and sequester, or put to  
15 beneficial reuse carbon dioxide emissions. The  
16 projects selected from this round's second closing  
17 will be announced soon.

18 The next slide is a map showing the  
19 locations of the various projects in DOE's CCPI  
20 program. The Kemper County IGCC project was  
21 selected under round two, and it meets DOE's  
22 objectives under the CCPI.

23 It provides reliable energy from a clean  
24 coal technology at a lower cost than other  
25 generating technologies. It's diversifies the fuel

1 mix by using lignite as its primary feed stock. It  
2 creates jobs and promotes the widespread deployment  
3 of the transport gasifier technology, and it  
4 demonstrates commercial scale CO2 control integrated  
5 into a coal-based power generation plant. Thank  
6 you. The next speaker will be Rick Berry.

7 MR. BERRY: Thank you, Diane. Good  
8 evening, my name is Rick Berry. I work with  
9 Mississippi Power, as the manager in the Department  
10 of Environmental Quality there. It's my pleasure to  
11 be here tonight on behalf of Mississippi Power and  
12 the invitation of Department of Energy to provide an  
13 overview of our Kemper County IGCC project.

14 First, a brief disclaimer, and that is  
15 that Mississippi Power is subject to the  
16 jurisdictions of the Mississippi Public Service  
17 Commission, and any proposal that we propose to  
18 construct in Kemper County, this IGCC project is  
19 specifically subject to get prior approval of that  
20 Commission.

21 The overall objective of the project is to  
22 demonstrate the feasibility of the selective IGCC  
23 technology, in this case, the transport gasifier on  
24 a commercial scale, and show that it is efficient,  
25 economically reliable and environmentally

1 acceptable. The technology is important, because  
 2 coal is a key part of our nation's progressive fuel  
 3 mix and our energy independence.

4 In fact, coal makes up 90 percent of the  
 5 fossil fuel reserves of North America, and over  
 6 60 percent of the worldwide reserves, and coal is  
 7 used to supply over 50 percent of our country's  
 8 electricity.

9 It is important that we find ways to  
 10 continue using coal as a low cost fuel source that  
 11 is environmentally acceptable. The gasifier used in  
 12 this project offers a simpler and more versatile  
 13 method for generating syngas fuel from coal and  
 14 other available alternatives.

15 It is cost effective when using the coal  
 16 types that are the most abundant in the United  
 17 States. Gasifiers have been around in the petroleum  
 18 and chemical industries, but these applications were  
 19 oxygen blown and used very high temperatures.

20 The scope of the project is to build and  
 21 operate a integrated gasification combined-cycle  
 22 facility using lignite as feed stock. I'll explain  
 23 gasification and combined-cycle technology later in  
 24 my presentation. But an important aspect is that  
 25 this project will use a new kind of gasifieregasifier

1 specifically tailored to power generation.

2 For instance in this project, Mississippi  
 3 Power Company, Southern Company, North American Coal  
 4 Corporation, support facilities for the proposed  
 5 power plant include construction and operation of a  
 6 lignite surface mine, which will be described in a  
 7 later presentation, construction of new and  
 8 upgrading of existing transmission lines, and  
 9 construction of reclaiming water, natural gas and  
 10 CO2 pipelines.

11 Post Kemper County project that you might  
 12 have seen, you can see it located near Liberty,  
 13 Mississippi, on a previously undeveloped site,  
 14 approximately 1650 acres. The facilities themselves  
 15 would occupy about 150 of those acres or 10 percent  
 16 of the plant property.

17 The construction of approximately 66 miles  
 18 of new transmission lines, most of the linear  
 19 facilities you can see outlined is in yellow, CO2 is  
 20 red transmission, blue is the reclaimed water.  
 21 There's approximately 27 miles of existing  
 22 transmission lines that would be upgraded,  
 23 construction of approximately five miles of new  
 24 natural gas pipeline, 60 miles of new CO2 pipeline,  
 25 and also the construction of about 30 miles of

1 reclaimed water pipeline from Meridian.

2           That is a little bit of a difficult aerial  
3 shot, but it at least gives you an idea of what the  
4 plant looks like in red, you can see here, and then  
5 the plant is in yellow as it is laid out on that  
6 property. So you have a general idea of the  
7 location. I think those posters is in the back.

8           How does the process work? Well, lignite  
9 coal, along with steam and air is put through a  
10 fully enclosed device called the gasifier. That's  
11 the gasifier gasifier portion of the fuel. When  
12 subjected to high temperature and high pressure,  
13 instead of burning, the coal undergoes a chemical  
14 reaction resulting in the creation of a gas that can  
15 then be burned to produce power.

16           The syngas undergoes several cleanup steps  
17 to remove particular and other pollutants prior to  
18 being utilized as a fuel gas. Those are the cleanup  
19 processes here. The clean syngas would be used to  
20 generate power by firing it in a combustion turbine.  
21 The hot exhaust gas from the combustion turbine then  
22 discharges into what's called a heat recovery steam  
23 generator or an HRSG, steam produced in that steam  
24 generator is sent to a steam turbine to generate  
25 additional power.

1           The combination of the combustion turbine  
2 here, the heat recovery steam generator, as well as  
3 the steam turbine generating power together is  
4 called combined cycle unit.

5           Air emissions would be less than  
6 conventional lignite-fired power plants. Water  
7 consumption would be less than conventional lignite  
8 power plants and would use recycled water from City  
9 of Meridian's municipal treatment facilities,  
10 provide approximately 6 million gallons per day of  
11 water, for uses such as cooling water in the steam  
12 cycle.

13           The plant would be designed as a zero  
14 wastewater discharge plant, which means no processed  
15 wastewater would be discharged. The project,  
16 operating at full load, would use about 580 tons per  
17 hour of lignite coal, neighboring -- the neighboring  
18 mine here would supply the lignite.

19           Ms. Joel Trouart will provide more  
20 information on that in a moment. To produce about  
21 850 tons per hour of syngas, that would be used to  
22 power that combined cycle, to generate about  
23 80 megawatts of rough fuel.

24           Kemper County IGCC would be planned with  
25 carbon capture systems sufficient to remove

1 approximately 65 percent of the CO2 from the syngas.  
2 The capture of the CO2 would be piped offsite for  
3 geologic storage via enhanced recovery. Byproducts  
4 would include commercial grade ammonia and sulfuric  
5 acid which would be that could be sold. The project  
6 would also produce about 60 tons per hour of  
7 gasification ash which would be stored on-site or  
8 made available for appropriate recycling.

9 What is the schedule for the project?

10 Well, we began the design of this project in 2007  
11 and will continue through early 2010. Once all  
12 permits and approvals have been obtained and if the  
13 record of decision is to provide cost-shared  
14 funding, then construction would begin probably in  
15 2010 and continue through 2014.

16 The DOE four-year demonstration period  
17 would begin in 2014, during which time the unit  
18 would operate on a commercial dispatch. Following  
19 the demonstration period, it is expected that the  
20 unit would continue in commercial operation.

21 Computer-generated layout of the site. I  
22 thank you.

23 MR. HARGIS: Thank you, Mr. Berry. The  
24 next speaker is Joel Trouart. She's going to talk  
25 about the lignite mine. She's from North American

1 Coal.

2 MS. TROUART: Thank you. Good evening.

3 My name is Joel Trouart. I'm the environmental  
4 manager with North American Coal Corporation. This  
5 will be a brief overview of the surface mining  
6 reclamation process and surface coal mine in  
7 Mississippi.

8 North American Coal or NAC will operate  
9 this mine to supply coal to the Kemper County  
10 gasification power plant. In the next few slides,  
11 I'll show you the lignite mine which is the one --  
12 similar to the one proposed for Kemper County. It's  
13 located in Choctaw County, which is about 70 miles  
14 northeast -- northwest of here, and it's also  
15 operated by North American Coal Corporation.

16 Okay. View of the mining process, this is  
17 a nice snapshot that shows the mining process in the  
18 step-by-step methodology. As an overview, starting  
19 from this left-hand side, you see on the left-hand  
20 side, this slide is -- this shows the advanced area  
21 of mining, so mining is heading in that direction,  
22 and you'll see the treatments prior to the mining.

23 Then we see a series of benching  
24 operations, and that's actually how we bench down to  
25 get to the coal. So you see the light tan and --

1 and the red area, and that is a -- that's your oxide  
2 material, and that is a material that will end up  
3 back on the surface of the reclaimed land. So this  
4 material will end up around the pit and then will be  
5 back on the area of the surface land.

6 So it's a self-contained window that  
7 moves, reclaiming -- we disturb and we reclaim at  
8 the same pace as we work our way through the mining  
9 process.

10 The next series of benches that we have  
11 are achieved by dozers and by truck shovel  
12 operation, I'll now show you that in a little more  
13 detail. The final bench of the mine as seen is  
14 accomplished with a dragline.

15 Once the lowest lignite seam of coal is  
16 exposed, it's removed and sold, and the pit is  
17 available to place spoil material in, and I'm using  
18 the term "spoil material," that is the material, the  
19 soil that has been moved that was on either side of  
20 the coal, on that -- above the coal seam and below  
21 the coal seam that has been moved.

22 The spoil materials will be raised and the  
23 top oxidized materials is hauled around. Let's go  
24 through this in a step by step process. Okay. The  
25 first step is to remove this topsoil, and to remove

1 this material, we take out the trees, and we remove  
2 this material, and as I showed you on the previous  
3 slide, we haul it around the pit and place it back  
4 on the reclaimed soil. These soils are used at the  
5 top or final surface area of the reclamation  
6 process, but plants grow well in it.

7 The next one we have is a series, and it  
8 depends on how many coal seams you have that need to  
9 be extracted. Once that suitable material is  
10 removed and hauled around the pit, then a dozer push  
11 operation or a truck shovel or truck and shovel  
12 loading and hauling operation begins the task of  
13 removing the overburden.

14 Again, here's another term. Overburden is  
15 the material that is in place prior to removing that  
16 is immediately above and below the coal. Spoil is  
17 once we handle it. Overburden is prior to us  
18 handling it.

19 So at Red Hills, which is what I'm showing  
20 in here, there are several coal seams that are  
21 suitable to extracting lignite. Now, not all the  
22 geology in Mississippi is the same, so it's not all  
23 the same type operation. This is a good  
24 representative sample here.

25 Once the coal seam is exposed by the truck

1 dozer operation, the coal is removed and utilized,  
 2 and this continues for as many coal seams as you  
 3 have until you get to your primary, your very deep,  
 4 thick overburden seam. A surface coal mine in  
 5 Mississippi may go as deep as 150 to 200 feet deep.

6 The large volume of overburden that covers  
 7 the lower coal seam is removed by a dragline. This  
 8 is a dragline. A dragline is utilized by many  
 9 surface coal mine operations because of ease in  
 10 removing large volumes of materials as it digs.

11 The large boom -- that's the boom -- the  
 12 large boom or the long boom of the dragline allows  
 13 it to reach, deposit and place over into the empty  
 14 pit of the previous mining area, thus filling it in  
 15 and beginning the reclamation process.

16 So when overburden is dug up and placed  
 17 out of the way of the coal removal process, and it's  
 18 typically placed into the previous empty pit.  
 19 That's how come you don't end up -- the question we  
 20 get is why is there not a hole? It's because your  
 21 next pit places your material into the previous open  
 22 pit, open hole. The Kemper County mine would  
 23 utilize a dragline similar to this one we're showing  
 24 you, similar to the one we have at Red Hills.

25 Now, this slide depicts the entire mining

1 reclamation process at the Red Hills Mine over time.  
 2 Fundamentally from the pre-mine vegetation located  
 3 down here at the bottom, through to the area that  
 4 has not been disturbed and will not be disturbed,  
 5 and so what you -- what you're seeing is that free  
 6 line vegetation, and that the series of benches that  
 7 I talked to you about earlier.

8 Then you have the spoil piles that are  
 9 created by a dragline operation. The next step is  
 10 the spoil piles are knocked down level to gently  
 11 clash (sic) or gently rolling area, and then this  
 12 material that's being moved to the next pit is  
 13 hauled around, placed on the surface, and then it's  
 14 vegetated. So that -- that makes the rolling window  
 15 of the process.

16 This slide shows about six years of  
 17 activities, all contained within this one slide.  
 18 That's about a six-year rolling window. Now, this  
 19 map is a reduced version. I know it's hard to see,  
 20 but there are several copies of it back on the  
 21 posters, in the poster section, and this is one  
 22 which you were able to visit earlier this evening  
 23 with the Red Hills general mine -- the general  
 24 manager, Tres Tipton.

25 This mining plan was reworked several

1 times to come up with the most economical reserve  
2 and to reduce -- and to reduce the environmental  
3 impact. So what you're looking at, it's hard to  
4 tell here, but you can confirm this with the posters  
5 in the back.

6 This yellow line is a mine study area.  
7 The red line is the power plant site or the power  
8 plant item. Rick showed you that earlier in the  
9 previous presentation.

10 There are two main county roads, 493 and  
11 495, and then you have -- there's a wildlife  
12 management area from Lake Okatibbee, it's right in  
13 here. Lake Okatibbee is off the screen to the right  
14 at the bottom.

15 And again, although the wild management  
16 area is inside the study, it is outside the area of  
17 our impact. The mine will not be impacting that.  
18 So the project acres, it looks like a lot of land.  
19 It is. The study area is 31,000 acres. Of the  
20 31,000 acres, the total acres that we will disturb  
21 through the 40 years, 12,500, so less than  
22 40 percent of the 31,000 acres will be disturbed at  
23 all during that 40-year time period.

24 The annual acres that we will reserve for  
25 coal removal, so the number of pits and the acres

1 that are associated with those pits that we will  
2 disturb in one year, approximately 290 acres. Now,  
3 if you remember from what I was telling you about  
4 the rolling window, the annual acres reclaimed  
5 averages about 290.

6 So you'll see we are reclaiming, which  
7 makes sense if we're hauling the material back  
8 around, it makes sense that you reclaim at the same  
9 pace that you disturb and mine coal.

10 The mine support facilities, which would  
11 be our offices and parking lots and maintenance  
12 buildings and those types of things occupy about  
13 320 acres, and that's pretty much on a constant  
14 basis for the 40 years. So that in any one year,  
15 there's an average of 1,400 to 1,700 acres, total,  
16 disturbed, including the benching, that -- the  
17 step-down area I showed you, your spoil piles, your  
18 pit and your ponds, roads, facilities you may have.

19 Okay. This is just for a point of  
20 reference. The arrows point to a marker feature.  
21 It's kind of hard to see, but there's a little clear  
22 patch, and a tree area, and this is that same  
23 location. So what this is trying to show you is in  
24 2002, this area where you're standing and looking at  
25 it was a pit. This same area, you can see it from

1 the marker features, this same area in 2005 is in a  
2 reclaimed state.

3           You have the same type of vegetation down  
4 here. You have a marked feature, that little knoll,  
5 and then that rise, you see that little knoll and  
6 the rise here. This area was reclaimed with  
7 permanent vegetation. And typically what we do is  
8 come back in and we plant, in this case, pine trees  
9 into that location.

10           Now, the type of vegetation that's planted  
11 is dependent upon the landowners, state regulations  
12 and stabilization needs, and I'll talk about that in  
13 a few minutes.

14           So this is -- this is a typical permit  
15 crop. It's in place, and it is stable. You'll see  
16 this is Bermuda grass, and it is planted on the  
17 slopes, and that's a real good soil stabilizer.  
18 It's a real good plant to have on your slopes, and  
19 we interseeded that. This slide shows the  
20 interseeding process. IC rock is planted in front  
21 of the reclamation revegetation process,  
22 particularly in this area. This picture shows  
23 loblolly pine that was planted into the seeded and  
24 stabilized vegetated area.

25           These young trees in the background in

1 this area, those are some of the newly reestablished  
2 pine trees in the reclaimed land. Again, like I  
3 said, the type of vegetation that we plant is  
4 typically driven by regulatory approval and  
5 landowner consultation.

6           Often the pre and post mine land use  
7 reflect each other. As an example, at Red Hills,  
8 pre-mine forest is 87 percent, post-mine forest is  
9 94 percent. This is part of the stabilization  
10 procedure that I was telling you about. This is a  
11 stabilized drainage area.

12           You'll note that rock check dams in the  
13 meandering nature of this stabilized stream, both of  
14 these techniques assist in stabilization, and they  
15 reduce the flow velocity of rainwater, so we begin  
16 to meander creeks back in, get them stabilized.

17           Now, this rock check dam that we have, and  
18 this is a stream location that we're showing you  
19 right here, and if you'll notice, it meanders  
20 through this area, too. This rock check dam slows  
21 the water, causes the sediments to drop out and  
22 disperse the sediments. Notice this quick sample,  
23 we have a Little Bywy Tributary up in Choctaw  
24 County, it is in a pre-mine area, if you'll notice  
25 the inside areas and the eroded banks, and that's

1 typical of some of the pre-mine areas.

2           And then we have the Little Bywy's  
3 diversion, diverting it to facilitate the mining  
4 operation, the outside slopes are flatter and  
5 they're stable, and then the stream, the creek  
6 meanders, the diversion meanders through this area.

7           Okay. This slide shows the proximity of  
8 the active mining area. And again, it's another  
9 view like the one I showed you earlier. The  
10 proximity of the active mine area to the reclaimed  
11 land to the ponds we have in this area, so you get a  
12 real good feel for the -- again, the moving window,  
13 as I call it, the moving window of activity and then  
14 reclamation.

15           You noticed in some of the slides there  
16 are quite a few ponds. These ponds are constructed  
17 to -- to enable the water quality, make sure it's  
18 suitable water quality before we release it. These  
19 constructed ponds also enhance wildlife and are used  
20 by water fowl and fish.

21           This is another view. The sediment ponds,  
22 post-pond reclamation ponds, constructed to mining  
23 to accommodate post-mine land use. The purpose of  
24 these ponds is to make mining possible and to  
25 protect the water quality.

1           And coal mining is a highly regulated  
2 industry, as you probably are aware, and  
3 Mississippi, it's under the Mississippi Departments  
4 of Environmental Quality in cooperation with other  
5 State and Federal agencies.

6           Inspections occur monthly at a minimum.  
7 It's MDEQ's responsibility to insure the mining  
8 conforms to the approved mine plan and make sure  
9 that the reclamation follows the approved  
10 reclamation plan.

11           MR. HARGIS: Thank you. Thank you, Joel.  
12 I just have a couple of more slides, and then we'll  
13 get to your comments. This -- the National  
14 Environmental Policy Act is a Federal law that  
15 applies to all Federal agencies and mandates that  
16 environmental information be made available to the  
17 public and elected officials and that the Federal  
18 decision-maker considers the environmental impacts  
19 before a final decision is made in any major Federal  
20 action that could significantly affect the quality  
21 of the human environment.

22           The objectives of the National  
23 Environmental Policy Act are to make sure that the  
24 decisions are based on an understanding of the  
25 environmental consequences and focus on whether the

1 truly significant issues for any major Federal  
2 action. The idea is to ensure that the public is  
3 informed and promote better environmental planning  
4 and ultimately better decision-making by the Federal  
5 agency.

6 This is just a flow chart of the EIS  
7 process. I'll try to show you where we are in this  
8 process. On the upper left is the notice of intent  
9 which is the beginning of the EIS.

10 In this case, the notice of intent was --  
11 was filed -- was issued in the Federal register on  
12 September 22nd of last year, and we were here a  
13 little over a year ago on October 14th to hold a  
14 scoping meeting on this project.

15 The scoping meeting -- both the scoping  
16 period ended on October 23rd, last year. Since that  
17 time or during the public scoping period, we  
18 received some 245 individual comments from -- from  
19 the public, from local, state and Federal agencies  
20 and from tribal governments.

21 DOE used these comments in preparing the  
22 draft EIS, which was just issued in November 6th of  
23 this year. The public hearing is where we are right  
24 now, and the public comment period ends on  
25 December 21st, and after that, we'll compile and

1 analyze the comments and prepare responses to each  
2 and every comment that we receive and, if necessary,  
3 make changes before issuing the final EIS.

4 That -- the next step in the process then  
5 is the issue of notice of availability for the final  
6 EIS, and then there's a mandatory 30-day waiting  
7 period before any decision can be made on the  
8 project.

9 Okay. Now, we're at the most important  
10 part of this meeting tonight. What I'll ask you to  
11 do is please focus your comments on the contents of  
12 the draft EIS and what you think should be added or  
13 changed when we prepare the final EIS.

14 I have a number of people who have filled  
15 out a comment card here tonight, and what I'll do is  
16 I'll go through these cards in the order that we  
17 received the request to speak, and I'll call out  
18 your name, and I'll ask you to go to that microphone  
19 in the center aisle there, or we do have -- I  
20 understand we do have a portable mic. If you raise  
21 your hand and don't want to come to that microphone,  
22 we can bring the microphone to you.

23 When you get to the microphone, please  
24 state your name and spell it. We do have a court  
25 reporter here. She has asked me to -- the speakers

1 to please speak loudly and clearly. That will make  
 2 her job a little easier. When the meeting is over,  
 3 the court reporter will prepare a transcript of all  
 4 the proceedings tonight, including your comments,  
 5 and this transcript will appear in the final EIS,  
 6 along with DOE's responses to each and every  
 7 comment.

8 Please try to limit your comments to five  
 9 minutes. If you need more time after we get  
 10 through, everybody who has requested an opportunity  
 11 to speak, we'll come back to you, and we won't leave  
 12 here until everybody has an opportunity to say  
 13 everything they want to say.

14 So with that, let me go to the first  
 15 comment card, and John, I think you know that you  
 16 are first. John was actually the only one that  
 17 pre-registered, although Louie claims he also  
 18 pre-registered. I must not have gotten that.  
 19 Anyway, John Williams is the first speaker.

20 MR. WILLIAMS: Good evening. My name is  
 21 John Paul Williams, J-O-H-N, P-A-U-L,  
 22 W-I-L-L-I-A-M-S. I'm an industrial consultant.  
 23 I've been reviewing power plants and environmental  
 24 impact statements for over 20 years, including EIS's  
 25 on power plants under the jurisdiction of the

1 Department of Energy, the EPA.

2 I'm here as an industrial consultant to a  
 3 group called the concerned citizens for clean air.  
 4 Their goal is to see a maximum economic benefit and  
 5 the maximum economic or environmental protection for  
 6 every project, every large industrial project. They  
 7 have members in the vicinity of the proposed  
 8 facility, and some of their supporting groups have  
 9 members in the vicinity of the proposed facility.

10 What I'm going to try and focus on tonight  
 11 is alternative designs for the project, because an  
 12 Environmental Impact Statement, the real heart of  
 13 the Environmental Impact Statement should be  
 14 alternatives, designs and methods that will reduce  
 15 the environmental impacts, and I'm very concerned  
 16 that this particular EIS is lacking in that capacity  
 17 in terms of providing alternative designs and  
 18 alternative looks at the way this project is going  
 19 to be built and designed and run.

20 First of all, the issue of air cooling  
 21 instead of water cooling is an alternative. The  
 22 projects is going to use 7 million gallons or  
 23 6 million gallons a day of water, and that's not  
 24 really necessary, and there may be a day when you're  
 25 going to need that water for houses, for

JW-01

JW-02

1 agricultural, for other uses instead of to generate  
2 power.

**JW-02  
(contd.)**

3 Many, many power plants in the United  
4 States and around the world use air cooling instead  
5 of water cooling. I personally witnessed air  
6 cooled, full powered power plants in operation in  
7 Wyoming, use large fans, instead of cooling towers  
8 for their water, and they use 90 percent less water.

9 Air cooling in the proposed Kemper  
10 facility would reduce the water use from  
11 6 million gallons a day to only 600,000 gallons a  
12 day, and at that lower level of use, maybe the plant  
13 wouldn't even need that reclaimed water pipeline.

**JW-02  
(contd.)**

14 Second important issue is the emissions of  
15 the very fine particulate matter. This is dust  
16 that's so small it's invisible, known by the name  
17 PM2.5. It's a very dangerous pollutant. You draw  
18 it deep into your lungs. You're never going to be  
19 able to breathe it out because it's so fine.

**JW-03**

20 It's so dangerous, the Environmental  
21 Protection Agency recently tightened the regulations  
22 for that fine particulate dust, how much you can be  
23 exposed to it. The problem is the draft  
24 Environmental Impact Statement never really tried to  
25 do accurate calculations about how much that level

**JW-03  
(contd.)**

1 of fine dust is going to be raised at ground level  
2 for the affected people.

3 And this is a very important issue,  
4 because for some reason, this vicinity has extremely  
5 high levels of fine particulate dust already,  
6 practically at what's considered the legal limit.  
7 Just a little more of that fine dust in the area,  
8 and it's going to be a very serious health risk.

**JW-03  
(contd.)**

9 Third issue is the threat Environmental  
10 Impact Statement failed to examine, alternative  
11 controls for the emissions of mercury. This is very  
12 important, because mercury is an extremely toxic  
13 substance. You put it out in the air. It's  
14 dangerous to breathe. It falls on plants. The  
15 animals eat the plants. You eat the animal. It's  
16 going to accumulate in your body. It falls in the  
17 lake. It falls in the reservoirs. You eat those  
18 fish, it's going to accumulate in you.

**JW-04**

19 Now, the problem is is the suggested  
20 method of mercury control is a -- is a reactor that  
21 has a sulfide metal in it. I've never seen it used,  
22 never seen it described, talked to my air pollution  
23 experts. They've never heard of it. They can't say  
24 how efficient it is. There's no description  
25 anywhere it's ever been used in the EIS. There's

**JW-04  
(contd.)**

1 another type of mercury control called carbon  
2 absorption. It's inline use.

3 It was suggested for this project when the  
4 project was originally going in Florida. The EIS  
5 looked at those two types of mercury control,  
6 discussed them both, presented evidence on which one  
7 would be most efficient and put that evidence out  
8 there for folks to read, because mercury -- control  
9 of mercury for this facility is going to be very  
10 important.

11 Another alternative design that should  
12 have been discussed is the issue of the flares. The  
13 flares that are proposed will be like a big flare,  
14 150, 300 feet in the air. This is an important  
15 issue, because my air quality consultant looked at  
16 this. He said that, contrary to the claims of the  
17 EIS, there will only be a little blue flame coming  
18 out of there, there's a project upset. You're going  
19 to have carbon monoxide gas flowing through those  
20 flares, and there will be visible flames that will  
21 be a significant impact.

22 Another problem with the design of the  
23 project is apparently my air quality expert says  
24 they don't have a backup facilities for handling  
25 removal of the sulphur from the plant, and if you

**JW-04  
(contd.)**

**JW-05**

**JW-06**

1 have a malfunction in your sulphur recovery plant,  
2 your sulfuric acid plant, you're going to end up  
3 sending high levels of sulphur gas through that  
4 flare. You could have 10,000 pounds of sulphur  
5 emitted during -- from that flare during a process  
6 upset.

7 So it's very important to look at  
8 alternative designs of that flare. My consultant  
9 suggests a -- a ground flare with an elevated  
10 refractory staff. Another type of technology, a  
11 dedicated gas thermal oxidizer, which is like a  
12 little incinerator would be dedicated to  
13 incinerating those fumes rather than using the  
14 flares as an alternative method.

15 MR. HARGIS: John, it's been about five  
16 minutes. Can you wrap up or do you want to come  
17 back?

18 MR. WILLIAMS: Can I have one more minute?

19 MR. HARGIS: Sure.

20 MR. WILLIAMS: Thank you very much. I  
21 appreciate your time. I appreciate the opportunity  
22 to speak and thank everyone for coming.

23 The last issue that was mentioned is that  
24 they might use open burning to deal with the  
25 materials that they have, the waste materials, the

**JW-06  
(contd.)**

**JW-07**

1 houses, the trees, the brush that are from the site  
 2 clearance, and I don't -- I think they should  
 3 consider an alternative to that and not use open  
 4 burning. Thank you very much.

5 MR. HARGIS: Thank you very much. Okay.  
 6 Louie Miller. Where are you? Number two.

7 MR. MILLER: Good evening. My name is  
 8 Louie Miller, L-O-U-I-E, M-I-L-L-E-R. I am the  
 9 State Director for the Mississippi Chapter of the  
 10 Sierra Club. I appreciate this opportunity to speak  
 11 to y'all tonight.

12 I came last October when I first got  
 13 involved in this project. There's been a lot that's  
 14 gone on, a lot of research that's been done, and  
 15 I've come to -- we've had a lot of experts. We've  
 16 intervened in the Public Service Commission  
 17 proceedings.

18 We are one of three intervenors, and a lot  
 19 of things have come to light. It's going to take  
 20 long for a southern boy. It's hard to get it in in  
 21 five minutes. I'll do my best. We'll submit our  
 22 final comments before the 21st, and that will go  
 23 into much more detail.

24 My biggest concern right now is one about  
 25 the process. And I'm going to focus on that to

**JW-07  
(contd.)**

1 begin with, because I think it's very important.  
 2 You've gone through what the National Environmental  
 3 Policy Act directs this agency to do under the  
 4 Environmental Impact Statement process.

5 Our biggest concern at this point is that  
 6 we have a letter that was submitted by DOE dated  
 7 October 1st, 2009. This letter was sent to the  
 8 Mississippi Public Service Commission, and Chase  
 9 Markowski was the author of this letter.

10 It was our understanding, I've been  
 11 through -- this is my 20th year with the club, and  
 12 I've been through about 20 of these EISs in various  
 13 projects. We won't get into all of that. But the  
 14 process is supposed to be an objective process that  
 15 does not reach a conclusion before the EIS is  
 16 finished.

17 In the Markowski letter, and I will quote  
 18 from this -- "The Kemper County integrative  
 19 gasification combined cycle project is of  
 20 significant importance to achieving DOE's goal of  
 21 demonstrating clean coal technologies in the United  
 22 States and it's demonstrated by DOE's significant  
 23 financial commitment," which is not supposed to  
 24 occur before the EIS process is finished, and it's  
 25 in actual violation of law, we strongly support its

**LM-01**

1 approval.

2 To me, this is very clear that that makes  
3 a mockery of this process, the DOE. Now, I don't  
4 know if the right hand doesn't know what the left  
5 hand is doing or how this works, Mr. Hargis, but  
6 that is certainly jumping to conclusions in a way  
7 that I think violates Federal law.

**LM-01  
(contd)**

8 It goes on to say that in this filing they  
9 will describe the financial support that they have  
10 awarded the project. It's also our understanding  
11 that financial support for this project cannot be  
12 given to Mississippi Power or Southern Company until  
13 this process is complete, and I see you shaking your  
14 head, so you're in agreement with me.

**LM-02**

15 My concern, and this will be in the  
16 record, leaves us no choice but to conclude that  
17 this is a done deal, so to speak, and leaves us in a  
18 position that we have no choice but to file suit in  
19 Federal Court once this process reaches the record  
20 of decision, which is the appropriate time at which  
21 to file.

22 And I just want to make the folks here  
23 from Kemper County under -- aware of what is taking  
24 place and that this letter was obviously sent to  
25 influence the Public Service Commission's decision,

1 and I think it was an unfortunate turn of events in  
2 the objectivity the DOE is supposed to abide by, and  
3 is required by Federal law. How much time do I  
4 have?

5 MR. HARGIS: I think you're -- you've been  
6 up about three or four minutes. I don't have an  
7 exact time.

8 MR. READY: He's been at it about three  
9 minutes.

10 MR. MILLER: The second thing that  
11 concerns me in a very -- looking at the process and  
12 procedure, is the fact that there is no discussion  
13 of alternatives. There's no variation here. The  
14 proposed plant is the only thing that DOE states and  
15 satisfies the need for coal -- clean coal power to  
16 supply the necessary energy in the U.S. What DOE  
17 fails to do is look at what is already available  
18 in -- in Mississippi and surrounding states in  
19 merchant power.

**LM-03**

20 In fact, there's over 8,000 megawatts of  
21 power versus the Kemper plant which is 585 megawatts  
22 that's available 85 percent of the time. If you  
23 expand that region to the three-state area, there's  
24 over 14,000 megawatts. So the idea that this plant  
25 is needed and necessary, I don't think is -- is an

1 accurate statement that has been promoted by  
2 Mississippi Power Company.

**LM-03  
(contd)**

3 We could go into a lot of detail on -- on  
4 other things that have happened through this  
5 process, whether it's important. I think two things  
6 that -- that are pending before the Corps of  
7 Engineer permits that the public needs to be aware  
8 of is that this impacts over 2,800 acres of  
9 wetlands.

**LM-04**

10 I'm hoping that your agency and the Corps  
11 of Engineers or another student attracts here, but I  
12 hope that you're taking into consideration and  
13 not -- that neither one of the agencies is going to  
14 make a premature call on this, but it also is going  
15 to destroy 40 -- over 40 miles of streams in the  
16 mine -- the footprint of the mine with no mitigation  
17 for 30 years, and I think that is wholly  
18 unacceptable on any level.

**LM-05**

19 And I know that John hit on a number of  
20 points. I would also like to hit on a point of  
21 mercury. This is something that I hope this agency  
22 is going to take into consideration that the  
23 department of environmental -- I'm sorry, the  
24 Environmental Protection Agency, the Federal agency  
25 is in the process of promulgating new mercury

**LSM-06**

1 emission rules that will apply to this facility, and  
2 I think this D -- this DEIS needs to take that into  
3 consideration when you look at the toxicity of that.

**LM-06  
(contd.)**

4 Kemper will emit 64.4 pounds of mercury  
5 annually. A lot of people go, including myself,  
6 when I first got in this line of work, what's a  
7 pound of mercury? It doesn't sound like much.  
8 That's after this plant was scrubbed. According to  
9 the Georgia Extension Service, one pound of mercury  
10 can contaminate up to 2 billion -- 2 million, I'm  
11 sorry, with an M, 2 million pounds of fish annually.  
12 That's a lot of pollution for a so-called clean coal  
13 plant. Thank you.

**LM-07**

14 MR. HARGIS: Thank you. Thank you,  
15 Mr. Miller. The next speaker is Steve McKenna.

16 MR. MCKENNA: My name is Steve McKenna,  
17 S-T-E-V-E, M-C-K-E-N-N-A, Sr. I am disturbed by  
18 this project, the process that Mississippi Power is  
19 going through. I own a small ranch in Clark County,  
20 Mississippi. They wish to cross about five miles of  
21 my land with a pipeline that is 36 inches in size  
22 to -- and I'd like everybody to know that this  
23 carbon monoxide that they're selling to Denbury Oil  
24 Company in Heidelberg is going to pay hundreds of  
25 thousands of dollars a month, millions of dollars a

1 year, and they're already raising the price of  
2 electricity to their customers to pay for building  
3 this plant.

4 I'm not happy about them taking 125 feet  
5 of my property for five miles and not paying a dime  
6 for the use of it, because the Public Service  
7 Commission says they can take it for the benefit of  
8 the State of Mississippi. That was a law passed in  
9 Washington four years ago that made them able to do  
10 this.

11 Now, there is a pipeline that was dug  
12 across my property seven years ago. That pipeline  
13 went from Heidelberg to Enterprise, Mississippi, and  
14 it has not been used in five years, because Duke  
15 Energy put a bolt together power house in  
16 Enterprise, Mississippi. They didn't make enough  
17 money because more people didn't want to use their  
18 electricity, so they went busted.

19 So they unbolted this power house and  
20 moved it to somewhere else, I think South America,  
21 but the pipeline is still there, and they could buy  
22 that pipeline, which is half the distance that they  
23 want -- they want to use, from Enterprise to  
24 Heidelberg is about 30 miles, and they're going to  
25 put in 60 miles of pipeline, so they could buy this

SM-01

SM-02

1 pipeline for about 25 percent of what it cost just  
2 for the pipe. I think they ought to look into it  
3 and use it.

4 What they told me was we don't want  
5 anything that's seven years old, even though it does  
6 last 50 or 60 years. I think that they want to put  
7 this new power line on the western side of my  
8 property from the existing power line, which I have  
9 asked them to put it on the east side of the  
10 existing pipeline, not to put me into the magnetic  
11 field where there is a possibility of catching some  
12 kind of disease from the magnetic field.

13 I really like these two fellows that's  
14 been up here, because they're on my side, and they  
15 talked and told us about a lot of what was going on.

16 Now, Mississippi Power Company is worth  
17 billions of dollars. Southern Company is worth  
18 hundreds of billions of dollars, because that's  
19 seven different states of power lines. It is an oil  
20 company, and they make great -- a great deal of  
21 money, but yet they want to stick to this process of  
22 going through the Public Service Commission and get  
23 the property for no money, and I'm against it.  
24 Thank you very much.

25 MR. HARGIS: Thank you. The next person

SM-02  
(contd)

SM-03

1 who requested to speak is Chris Collins.

2 MR. COLLINS: Chris Collins, C-H-R-I-S,  
3 C-O-L-L-I-N-S. I'm Board of Alderman, Toomsuba  
4 which is a railroad town, and it's going to be tons  
5 of equipment coming into the State of Mississippi,  
6 and I am a representative of the railroad town.

7 Some of that equipment and material be  
8 brought into maybe Toomsuba, unload it and truck to  
9 this area, and my other concern is the environmental  
10 impact that is say going to be doing a bench  
11 process, taking the topsoil out and bringing it and  
12 putting it over and bringing it back over.

13 Okay. But when you get through, are you  
14 going to be able to haul some more soil in and make  
15 everything back like it was? That's my main  
16 concern.

17 MR. HARGIS: The next speaker we have is  
18 Linda St. Martin.

19 MS. ST. MARTIN: My name is Linda St.  
20 Martin. I'm from Gulfport, Mississippi. That's  
21 L-I-N-D-A, S-T, M-A-R-T-I-N. Does anyone here  
22 remember the movie Erin Brockovich? It was a story  
23 of what happened when a power company in California  
24 was polluting a residential area, and the people  
25 were getting cancer and dying.

CC-01

CC-02

1 There's one scene in the movie where the  
2 title character visits a woman who's been previously  
3 diagnosed with uterine cancer, and she's had a  
4 hysterectomy, and in this particular scene, the  
5 woman's just found out she must now have a double  
6 mastectomy, and she asks Erin Brockovich, "If I  
7 don't have a uterus and I don't have breasts, am I  
8 still a woman?"

9 Well, Erin Brockovich, the title  
10 character, replies, you know, "In the spirit of  
11 loyalty and the highest tradition of the code of the  
12 sisterhood, why, yes, you are. In fact, it's even  
13 better, because now you don't have to worry about  
14 underwiring and Maxy pads."

15 That is what flashed in my mind, that  
16 scene from that movie when I was looking at the  
17 pictures a few minutes ago where they were showing a  
18 stream that had been changed and reformed. If that  
19 stream could talk right now, I wonder if that stream  
20 would consider itself improved.

21 A few minutes ago, Dave Newell was telling  
22 me he'd been to the deer woods already, what's in  
23 his freezer now, you know, his venison is stocked  
24 up. Probably some of you have already been hunting  
25 this year. You know that 3,100 acres they're

LSM-01

1 talking about is mostly deer woods and meadows, and  
 2 I'm wondering into what inappropriate habitat all  
 3 those deer will be forced if they build this plant  
 4 and this horrible mine.

**LSM-01  
(contd)**

5 My father grew up around here. I'm  
 6 related to the Brewtons, Alan Duke Brewton and Nancy  
 7 Brewton and Charles Brewton are my cousins. Zach  
 8 and Ruth Brewton were my aunt and uncle. My Uncle  
 9 Zach and Aunt Ruby sang in churches all over here.  
 10 I know that some of you have heard them, may have  
 11 been to your church years ago, and are probably  
 12 thinking about Uncle Zach right now with that big  
 13 guitar.

14 Yes, my father grew up here, and when I  
 15 was growing up, my father taught me the woods craft  
 16 that he had learned as a boy here in Kemper County,  
 17 and he taught me something that I do to this very  
 18 day, and that is put out your camp fire with some  
 19 dirt.

20 Did any of y'all ever do that? Did you  
 21 ever use dirt to put on your camp fire or maybe I'm  
 22 the last person in the world that still, you know,  
 23 camps that way in what people now call a primitive  
 24 manner, but I still do that.

25 So my question is this: If we use dirt to

1 put out fire, what's it going to take to make that  
 2 same fire burn? Lignite coal. Well, you know,  
 3 lignite coal, it's dirt. Have you ever gone and  
 4 really looked at it? It's dirt.

5 And what is the value -- what is the heat  
 6 value in burning dirt? It's not good, I'm sure, and  
 7 I'm sure it's very polluted. But suppose we do burn  
 8 this dirty lignite coal, and what are we going to  
 9 get? We're not going to get much heat value, and  
 10 we're going to get a lot of pollution.

**LSM-02**

11 Over at the Red Hills Mine they were  
 12 talking about a few minutes ago, they burn that  
 13 stuff, or at least they've been trying to. They've  
 14 been trying to for a long time, and they haven't  
 15 succeeded in actually burning it very well yet.  
 16 They haven't succeeded in getting the boilers to  
 17 work properly using this low quality poor heat value  
 18 lignite coal, but the pollution doesn't stop them.

**LM-03**

19 And how much is it going to cost us, by  
 20 the way? That's another thing. How much is this  
 21 plant going to cost and who is going to pay for it?

**LSM-04**

22 Investors, you know, we've got all these  
 23 gas-fired power plants around the State of  
 24 Mississippi. Investors have had enough confidence  
 25 in all of our gas-fired power plants to date to say

1 yes, this is a sound plan, it's a good project, and  
 2 I'll put my money there, and I'll put my people's  
 3 money there and my institution's money there. Yes,  
 4 we will invest in your gas-powered electric plant.

5 But you know, they also had a reasonable  
 6 idea when they were using investor money of what it  
 7 was going to cost and what the return would be. But  
 8 not this project. No, no, no, no, no, not this  
 9 project. Does that make you suspicious?

10 I, myself, can't help but wonder where are  
 11 the investors for this project and could this  
 12 project not withstand the scrutiny of sound  
 13 financial investigation in the bright light of the  
 14 professional financial world? No, no, they want the  
 15 ratepayers, you and me, to finance this project.  
 16 Yes, us. And they can't tell us for sure how much  
 17 we're going to be paying for it, how much is it  
 18 going to cost.

19 Now, we know when any big industrial  
 20 project gets started, they frequently go over budget  
 21 and over time, and the builder can go back to the  
 22 investors and raise more money. They do it all the  
 23 time, and even the best and most well thought out  
 24 projects do go over time and over budget.

25 What does this mean to us if they go over

**LSM-05**

**LM-06**

1 their \$2.4 billion shaky budget for something that  
 2 has never been done before. They want to build a  
 3 plant with a technology that has never been used  
 4 before, and they wanted to make us pay for it.

5 So if it's such a great project and it's  
 6 such a good idea, where are the investors? You and  
 7 me, we're the customers and the ratepayers, and we  
 8 will be given the bill, because this is a specially  
 9 financed project. I'm here tonight to tell you that  
 10 I can't afford it, and even if I could, I would  
 11 adamantly dislike forking over two to five times  
 12 what I am currently paying in electric bills with no  
 13 end in sight.

14 Let them find investors if this is such a  
 15 great idea. Don't put it on me and you. And by the  
 16 way, there's something else that riles me about this  
 17 whole thing, I mean, think about it. There's only  
 18 one other place in the world where they are  
 19 proposing a plant that uses this technology, and  
 20 that is in China. Get it? Mississippi, China.  
 21 China, Mississippi. Mississippi, China. Who do  
 22 they think they are and how do they think they can  
 23 treat us?

24 China, China where this past week farmers  
 25 connected to the bad health scandal were executed.

**LSM-06  
(contd)**

1 The farmers were executed, not those who tried to  
 2 cover it up, not the inspectors, but the locally  
 3 poor farmers, the lowest person on the totem pole,  
 4 you know, we paid for the whole thing. China from  
 5 whom we imported bad pet food, who had a bad  
 6 toothpaste scandal, a bad milk scandal, English  
 7 children died, and now sheetrock, bad Chinese  
 8 sheetrock.

9 On the coast down after Katrina, we're  
 10 seeing a lot of that bad Chinese sheetrock. So  
 11 we've got bad pet food, illness inducing toothpaste,  
 12 child killing milk, life destroying Chinese  
 13 sheetrock, and now a polluted power plant in China,  
 14 and they want us to have one just like it in Kemper  
 15 County.

16 The only other place in the world where  
 17 they're proposing to use this technology is in  
 18 China, the plant being built in China, and now they  
 19 want to put one of those things in Kemper County.

20 As for me, I do not believe I care to have  
 21 any Chinese pet food or any Chinese toothpaste or  
 22 any Chinese milk, and I certainly do not want any  
 23 Chinese sheetrock and -- and I do not care to have a  
 24 power plant using this technology built in my home  
 25 state of Mississippi.

1 MR. HARGIS: Thank you. The next card I  
 2 have is Rick Lambert.

3 MR. LAMBERT: My name is Rick Lambert,  
 4 R-I-C-K, Lambert, L-A-M-B-E-R-T. I'd like to thank  
 5 you for the opportunity to come up here and speak.  
 6 I am concerned about this technology proposed by  
 7 Kemper power plant, what will it wind up costing  
 8 Mississippi Power rate taxpayers.

RL-01

9 A few years ago in Nevada, the Nevada  
 10 utility tried a similar technology at Pine Power  
 11 plants, and it didn't work. The utility asked for  
 12 another \$150 million from their ratepayers for the  
 13 whole plant would cost \$240 million.

14 And right up the road, we've got Grand  
 15 Gulf Nuclear Plant which operates a clean, efficient  
 16 plant here, never had any problem, got plenty of  
 17 room to add another reactor. We've got plenty of  
 18 power plants around the state, that use that and the  
 19 coal burning, that's already in place and has plenty  
 20 of room, why not use them instead of taking this  
 21 man's property here and don't give him nothing for  
 22 it.

RL-02

23 That's a bunch of hog wash there. That's  
 24 not right, and these people deserve better than  
 25 that, and I don't appreciate it. I wish y'all would

1 reconsider this. I'm asking the Department of  
2 Energy, Mississippi Power, to use their own money of  
3 this project, using \$3 million of taxpayer's money  
4 on this big experiment that hadn't worked in the  
5 past. I appreciate it. Thank you.

**RL-03**

6 MR. HARGIS: Thank you. Lawrence David  
7 Everett.

8 MR. EVERETT: Thank you very much. My  
9 name is Laurence David Everett, L-A-U-R-E-N-C-E,  
10 D-A-V-I-D, E-V-E-R-E-T-T. I live in Lauderdale  
11 County, Mississippi, just off of Highway 495, one of  
12 the state highways that is in the transmission and  
13 gas line route. My property is open land, no  
14 timber, and the proposed transmission line comes  
15 right across the center of my property right next to  
16 my house, right in front of the neighbor's house,  
17 and right behind the second neighbor's house.

18 Since the beginning of this when I heard  
19 what this plan was, I have tried to communicate with  
20 Mississippi Power Company and the Public Service  
21 Commission. I've attended every hearing that's been  
22 held. I was here last October, also.

23 My purpose for being here tonight is to  
24 register, again, my concern about the location of  
25 the proposed transmission line and gas line so close

**LE-01**

1 to my house and to my neighbors.

2 I suggested that it be relocated 3,  
3 400 yards east of us across Highway 49 through a  
4 wooded area where there's an existing Tennessee  
5 pipeline that's been there 53 years, and there's  
6 been no houses or other developments alongside of  
7 that pipeline.

**LE-01  
(contd.)**

8 Another question I raised, and I want to  
9 again tonight is this: If people cannot build  
10 houses close to existing high powered transmission  
11 lines, how can utility companies like Mississippi  
12 Power and Southern Company locate new transmission  
13 lines next to existing houses? This seems like a  
14 very double standard to me and very, very unfair.

**LE-02**

15 This proposed location of the transmission  
16 and pipeline negatively affects my personal  
17 environment and that of my neighbors, and I think  
18 that we should be concerned not just about air,  
19 water and pollution and be concerned about plants  
20 and animals as we certainly should, but we need to  
21 also consider, you know, the people, the people who  
22 pay the bills, because all these other concerns,  
23 plants, animals, air, water, do not pay. It's the  
24 ratepayers. It's the property owners.

**LE-03**

25 And I'm here to not only request but to

LE-03  
(contd.)

1 demand that this power line be relocated away from  
2 our houses, and if it's not, I won't be able and I  
3 don't have the resources, I'm a retired educator  
4 from the State of Mississippi, to fight this in  
5 Court, because I'm fully aware of the eminent domain  
6 law, but I do plan and pledge to fight it in the  
7 Court of public opinion.

8 I will bring upon Mississippi Power  
9 Company, Public Service Commission and the dumb  
10 Senators of Mississippi who voted this law in, the  
11 most negative public relations campaign they've ever  
12 witnessed, and that's not a threat. It's a promise.  
13 Thank you.

14 MR. HARGIS: Thank you, Mr. Everett. The  
15 next comment card that I have is from Thomas L.  
16 Webb.

17 MR. WEBB: I'm Thomas Webb from Meridian,  
18 and Ginger can spell my name. She's done it a  
19 thousand times before. I'm a lawyer in Meridian,  
20 and I am in Lauderdale County, just outside of  
21 Meridian, and I have 32 acres of land, lived there  
22 for 25 years. I've turned it into a bit of a little  
23 game preserve. I've got lots of deer and turkeys,  
24 and I am very concerned about the air and the water  
25 and the game and the animals, but the young man

TW-01

1 right here hits a point for me.

2 I'm most concerned about the people. When  
3 I built my house, Chris Cole's son back here, he  
4 helped me with that. You know, people in the  
5 community around here help each other. We're  
6 concerned about our environment, emotionally. We  
7 get fired up about this because we've got a vested  
8 interest in living here. Our lives are important to  
9 our environment. We want y'all to consider how we  
10 live.

11 We want to continue to live this way. I  
12 don't want to sit in my back garden and listen to  
13 the hum of power line 75 feet from my house, and  
14 that's what they're proposing, and that's all up and  
15 down here, miles and miles of people being affected.

16 I'm concerned about you people and how you  
17 live and how you want to live and how you want to be  
18 left alone. Thank you.

19 MR. HARGIS: Thank you, Mr. Webb. The  
20 next card I have here is Raleigh Hoke.

21 (Exhibit 1 marked for identification.)

22 MR. HOKE: Good evening. My name is  
23 Raleigh Hoke, that's R-A-L-E-I-G-H, and Hoke,  
24 H-O-K-E, and I'm the Mississippi Organizer for the  
25 Gulf Restoration Network. Our organization works

1 with groups and individuals in each of the five Gulf  
2 States to protect our wetlands and water quality  
3 which may affect the health of the Gulf of Mexico.

4 First, I would like to address the  
5 standing of the Gulf Restoration Network and other  
6 individuals outside of the immediate area to comment  
7 on the Kemper IGCC draft of Environmental Impact  
8 Statement. The plant being funded by the Department  
9 of Energy federally existed by the Department of  
10 Energy and more importantly the Environmental  
11 Impacts of this project are going to affect  
12 nationally significant resources, such as the Lake  
13 Okatibbee Wildlife Management Area, the Pascagoula  
14 River Basin and also affect the water quality of  
15 downstream communities. As a result of the  
16 construction of the project is a national issue, and  
17 not merely a local one.

18 However, establishing or having  
19 established our standing to speak on behalf of Gulf  
20 Restoration Network and all of our members,  
21 including especially those in Mississippi, I'd like  
22 to state our unequivocal opposition to the Kemper  
23 IGCC coal plant and associated mining projects. The  
24 GRN has long advocated for the protection of  
25 Mississippi's water quality, endangered species and

**RH-01**

1 wetlands, and recently there are far less  
2 environmentally destructive and less costly energy  
3 production alternatives that would supply future  
4 demand expected in Mississippi.

5 I'd also like to address some specific  
6 issues in the draft EIS, the very first failure  
7 position addressed for analyzing the potential  
8 environmental impacts of this project.

9 First of all, a number of folks have  
10 mentioned wetland impacts. According to the draft  
11 Environmental Impact Statement, approximately  
12 3,000 acres of wetlands will be impacted by the  
13 Kemper power plant and associated mine.

14 The wetlands that would be impacted  
15 include those on federally owned or managed lands  
16 such as the Okatibbee Wildlife Management Area. The  
17 draft EIS also maintains that the function of the  
18 wetlands will be replaced. However, we question  
19 that any mitigation for loss wetlands can replace  
20 the function and values of those that are lost.

21 Part of the mining plan is to build levees  
22 to provide flood control while destroying wetlands  
23 to extract the lignite coal. This plan will only  
24 compound the flooding problem at the site and its  
25 surrounding community. Wetlands function as a

**RH-01  
(contd.)**

**RH-02**

**RH-03**

1 natural flood control by absorbing rainwater, the  
2 loss of which would cause more water to remain on  
3 the surface.

4 Further, the levees on-site will change  
5 the hydrology by cutting off the natural flow of  
6 water, it will cause problems in severe rain events.  
7 We also have serious doubt that any amount of  
8 mitigation offsite would be able to replace the  
9 function and values of the wetlands lost, including  
10 local flood location as well as loss of local flora  
11 and fauna.

12 The loss of wetland will not solely impact  
13 fish and wildlife. This loss of wetlands with a  
14 hydrologic connection to the Pascagoula River and  
15 could lead to additional degradation of water  
16 quality downstream from the Mississippi Sound.  
17 Wetlands remove and retain inorganic nutrients,  
18 process organic wastes and reduce suspended  
19 sediments from the surface runoff before the runoff  
20 reaches open water.

21 The Gulf of Mexico is a very important  
22 economic and environmental resource for the state  
23 and the whole nation. What impacts will this loss  
24 have on water quality in the streams being impacted?  
25 The Draft of Environmental Impact Statement claims

**RH-03  
(contd.)**

**RH-04**

**RH-05**

1 the University of Mississippi is monitoring the  
2 flow, but what about the toxics, the sediments and  
3 micro and macro fauna that will be affected?

4 Second, I would like to address the  
5 unproven technology that is involved in this. This  
6 is the test project to determine if the new carbon  
7 gasification technology will function the way theory  
8 predicts it will and if this technology will be  
9 commercially viable.

10 The justification for this test project is  
11 to demonstrate a cleaner way to use energy for coal.  
12 According to the draft EIS, "Because the planned CO2  
13 removal technology has not been commercially  
14 demonstrated at a facility like the proposed IGCC  
15 power plant and in light of the anticipated evolving  
16 regulatory treatment of CO2, short-term capture  
17 rates could vary from zero percent (for example, due  
18 to a malfunction of the CO2 compressor) up to the  
19 design of 67 percent."

20 In other words, the outcome of this test  
21 could result in zero carbon readings, yet the CO2  
22 pipeline required for this project will still impact  
23 the valuable wetlands, streams and other important  
24 habitats for wildlife and recreation.

25 And then the final point I want to make is

**RH-05  
(contd.)**

**RH-06**

1 the water quality impacts. The proposed power plant  
 2 site and mine area are located in Chunky  
 3 River-Okatibbee Creek hydrologic unit. If Chunky  
 4 River and Okatibbee Creek are headwater tributaries  
 5 of the Pascagoula River Basin which drains to the  
 6 Gulf of Mexico and the Mississippi Sound. The  
 7 Chunky River is a state scenic stream and should be  
 8 protected from further damage.

RH-07

9 The Okatibbee Lake, which is located at  
 10 Lauderdale County immediately south of the proposed  
 11 lignite mine supports numerous recreational  
 12 facilities which allow for swimming, for camping and  
 13 for fishing and for boating, hiking, hunting, all  
 14 kinds of other activity. Recreational amenities  
 15 include boat ramps, marina, beaches, campgrounds,  
 16 picnic areas, play grounds and hiking trails, and  
 17 the MDEQ has classified Okatibbee Lake a  
 18 recreational water supply.

19 There's a 6,883-acre Okatibbee Wildlife  
 20 Management Area that surrounds the lake to the north  
 21 along the Okatibbee Chickasawhay Creeks. The  
 22 proposed lignite mine directly abuts the Wildlife  
 23 Management Area's north boundary.

24 The Wildlife Management Area is created by  
 25 the Water Resources Development Act of 1986 and

1 enabled the Okatibbee Lake to become a key component  
 2 of the Tennessee Tombigbee Waterway Wildlife  
 3 Mitigation Project. The Army Corps of Engineers  
 4 mobile district web site claims "The bottomland  
 5 forests and numerous beaver flowages provide a  
 6 paradise for the bird watcher and nature enthusiast.  
 7 The endangered American Alligators are a permanent  
 8 resident."

9 The web site also states that "Public  
 10 hunting is a popular activity at Okatibbee during  
 11 the fall and winter. More than 6,000 acres of land  
 12 are licensed to the Mississippi Department of  
 13 Wildlife and Fisheries and parks for wildlife  
 14 management purposes." The draft EIS does not  
 15 sufficiently address the impacts a lignite surface  
 16 mine will have on recreation near Okatibbee Lake and  
 17 the Wildlife Management Area.

RH-08

18 Pilot IGCC plants have shown to be a  
 19 source of water pollution. IGCC plants use water to  
 20 clean the gas which causes contamination problems.  
 21 For example, coal gasification wastewater has an  
 22 average pH of 9.8, while pure water has a pH value  
 23 of 7.0. The Wabash River Plant, a similar facility  
 24 in Indiana, was out of compliance with its water  
 25 permit during 1998 to 2001, because it emitted

RH-09

1 arsenic, selenium and cyanide.

2 The Great Plains coal gasification plant  
3 in North Dakota generated 4.83 million metric tons  
4 of wastewater in 1988, 766,000 metric tons of  
5 contaminated "cooling tower blowdown" water, and  
6 245,000 metric tons of arsenic -- of gasifier ash.  
7 Ground water in the area has been contaminated with  
8 high pH values, sulfates, chlorine, arsenic and  
9 selenium.

10 The draft environmental impact statement  
11 quotes "The proposed project would discharge no  
12 process water effluent from the site." If this is  
13 true, the final EIS needs to discuss where the  
14 processed water is going to be stored and what the  
15 possible impacts of this decision will be.

16 And then rainwater runoff from coal piles  
17 adjacent to power plants can flush heavy metals such  
18 as arsenic and lead out of the coal and into surface  
19 and groundwater resources. The draft environmental  
20 impact statement claims that storm water collection  
21 channels --

22 So as I was saying, the DEIS claims the  
23 storm water collection channels will be built to  
24 "collect runoff from mined or disturbed areas, and  
25 route these flows into water treatment ponds

**RH-09  
(contd.)**

**RH-10**

1 designed to treat water to meet MDEQ effluent  
2 limitations, and flood protection levees intended to  
3 either contain runoff from the disturbed lands or  
4 protect active mining areas from flooding."

5 The final EIS also needs to address the  
6 following questions. Will the water treatment ponds  
7 receive a NPDES permit mine schedule, and what will  
8 its permit limits be?

9 Ash storage is also a big concern. In  
10 2008, Tennessee had an unprecedented spill of coal  
11 ash. So the final EIS should discuss what  
12 guarantees are being made by DOE that the same  
13 problem will not happen here in Mississippi. And  
14 other folks mentioned is also the concern about the  
15 large amount of water that's going to be used in  
16 this project.

17 In conclusion, the magnitude of the  
18 environmental impacts of the Kemper IGCC coal plant  
19 and coal mine far exceed the possibility of actual  
20 gains for the project. Mitigation would not  
21 sufficiently address these impacts. This project  
22 would not be economically justified given the  
23 significant final damage the State of Mississippi  
24 will sustain as a result. Thank you.

25 MR. HARGIS: The next comment card I have

**RH-10  
(contd.)**

**RH-11**

**RH-12**

**RH-13**

1 is from Barbara J. Correro.

2 MS. CORRERO: My name is Barbara J.  
3 Correro, B-A-R-B-A-R-A, J. Correro, C-O-R-R-E-R-O.  
4 I've read all of this information. I've been  
5 reading for two years now, and I was thinking what  
6 can I say? Everybody has said a lot. So this is my  
7 footprint. This is my new project.

8 And what is the carbon footprint going to  
9 be? I live 2.5 miles from the site. I have low  
10 lands. I have a pond, and during the month of  
11 October, it rained three weeks almost straight.

12 We had 12 to 16 inches of rain, and if it  
13 had not been for the low lands, the swampy area, my  
14 pond, and then a hole the beavers dug in my dam  
15 which leaks through, I thought my goodness, I would  
16 have to swim out of here.

17 So all of that, plus there is a stream way  
18 down in the bottom of my forest that picks up the  
19 rest of it and takes it off. So there are proposed  
20 things that are going to be shut off, and it has me  
21 quite worried, because I have a well, because I  
22 don't have water piped in.

23 When I moved here from Atlanta after being  
24 a cancer nurse at Emery University, and my husband  
25 and I moved here on this property, the local water

BC-01

BC-02

1 plant wanted to charge me \$8,000 to bring water to  
2 my mailbox, and that was just to my mailbox, because  
3 I live 3/10ths of a mile off the road.

4 So I have a well that I paid \$6,500 for,  
5 going into an aquifer. Well, what is going to  
6 happen to that? So I'm not concerned just about  
7 myself, and of course, I am concerned, having been a  
8 cancer nurse and seeing what environmental disarray  
9 can cause our health, but also about the animals and  
10 the flora and I'm an organic gardener, well, that  
11 will be gone. Organics, you know, you can't have  
12 arsenic and carbon and selenium, that's not organic.  
13 So those are my concerns. Thank you very much.

14 MR. HARGIS: Thank you. The last comment  
15 card I have is Julie O'Neal, and this doesn't mean  
16 we're done receiving comments. If anything you've  
17 heard anybody say prompts you to get up and say  
18 something, just raise your hand, and we'll have  
19 comments from you as well. Anyway, the next comment  
20 card is from Julia O'Neal.

21 O'Neal: It's Julia, J-U-L-I-A, O'Neal,  
22 O-N-E-A-L. I want to commend the Department of  
23 Energy and Secretary Chu for their emphasis on  
24 developing clean energy technologies, and as the  
25 speaker who talked about CCPI said, this project is

BC-03

BC-04

1 supposed to represent diversity. I think on a  
2 summary it says that it would enhance the fuel  
3 diversity and asset mix of Mississippi Power's  
4 generating fleet, and I understand their emphasis on  
5 the environmental impacts, and I think that the  
6 Department of Energy has been especially active in  
7 the last new year with renewables, and that's what I  
8 wanted to talk about.

9           The very beginning as to -- of the summary  
10 says that the DOE is doing this environmental impact  
11 study in order to decide whether or not to provide a  
12 loan guarantee for Mississippi Power, pursuant to  
13 the Energy Policy Act of 2005.

14           I have looked a lot at the Energy Policy  
15 Act of 2005, because I'm an advocate of net  
16 metering. There are five standards in the Energy  
17 Policy Act of 2005 that all the states were supposed  
18 to have met within three years by 2008.

19           Mississippi has chosen, at the urging of  
20 Mississippi Power, not to accept any of those  
21 standards. Therefore, the Southern Company,  
22 Mississippi Power's parent, is building a biomass  
23 plant in Texas. In Mississippi, they're building a  
24 coal plant, and the reason for that is that we did  
25 not -- Mississippi did not accept, at the urging of

1 Mississippi Power, did not accept a renewable energy  
2 portfolio which most of the other states in the  
3 United States did accept.

4           As a matter of fact, there are only two  
5 states and two territories that have no energy  
6 efficiency rules in place of any kind and no  
7 renewable rules, and those are Mississippi, Alabama,  
8 Palua and the North Marianna Islands.

9           I got this from your Department of  
10 Energy's IEEEDSIRE site. They have a chart of all  
11 the renewable and efficiency policies that are in  
12 effect in all the states. Mississippi has none at  
13 the urging of Mississippi Power.

14           Somebody earlier talked about big  
15 transmission lines. If we had the opportunity to  
16 have some renewables in this State, we might be able  
17 to cut down on the transmission lines. People could  
18 generate biomass or solar power in their local  
19 areas, use it locally, and it wouldn't need to be  
20 sent anywhere else. There's a lot of development  
21 going on right now in solar, and we could certainly  
22 use it.

23           However, Mississippi Power has told us  
24 all, in many letters, I believe the girl who writes  
25 the letters is here in the room, saying that

1 Mississippi does not have renewable resources like  
2 the other states.

3 Mississippi has no trees like Nevada and  
4 Arizona. Mississippi has no sun like Maine, Oregon,  
5 Wisconsin, Alaska, we just don't have any sun here,  
6 so we can't have solar, and we can't -- we can't  
7 possibly have biomass, because nothing grows here,  
8 as you see from the slides, you know, nothing grows  
9 here. We have no water.

10 Anyway, I just don't understand why the  
11 Department of Energy is considering guaranteeing a  
12 loan to Mississippi Power through, pursuant to, as  
13 you say, the 2005 Energy Policy Act, when  
14 Mississippi -- when Mississippi Power has forced the  
15 state, basically, I mean, as far as I can tell, the  
16 Public Service Commission, two to one against every  
17 one of those standards, no renewable portfolio, no  
18 kinds of renewable energy being used, no smart  
19 metering, no net metering, nothing.

20 Mississippi Power doesn't want to do that,  
21 so they're not going to do it, but then they have to  
22 have a coal plant. This may be diversity from  
23 Mississippi Power, but it's not diversity for  
24 Mississippi. That's my main point.

25 I just have a few other things which I'll

JO-01

1 write-up. Many of them have already been discussed,  
2 but one little thing I was thinking of in the strip  
3 mining is, you know, you can say how much CO2 is not  
4 going to be sent into the air because it's going to  
5 be sequestered, but what about all the CO2 that  
6 could have been sequestered by those trees, those  
7 12,000 acres of trees that are going to be totally  
8 destroyed? That's a little calculation that  
9 probably needs to be made, you know, 40 years of no  
10 trees on 12,000 acres, that's going to not clean up  
11 some carbon dioxide in the atmosphere.

12 I guess the only other thing I'd refer you  
13 to are -- there was a really interesting article in  
14 the New York Times magazine about three months ago,  
15 I've got the date on it, October -- let's see,  
16 September 12th, toxic waters, coal in the waters.  
17 People who live only 17 miles from Charleston, West  
18 Virginia, can't even touch the water that comes out  
19 of their tap without getting sores all over their  
20 body.

21 When you don't have the wetlands to filter  
22 the water and all that rain goes through is coal,  
23 your ground water is going to get bad like it is in  
24 West Virginia, and no coal company is going to come  
25 in and bring you some new water to come out of your

JO-02

JO-03

**JO-03  
(contd.)**

1 tap. Thank you.

2 MR. HARGIS: As I said, that's all the  
3 comments cards I have, but that's not necessarily  
4 all the comments that you have. So please, if  
5 anybody has anything they'd like to say, just raise  
6 your hand and either go to the mic or raise your  
7 hand, and we'll get a portable mic to you.

8 (Exhibit 1 marked for identification.)

9 MR. READY: I'm Bill Ready, Jr. I've been  
10 sitting here listening to some of the questions and  
11 comments that I have -- not having had the privilege  
12 of reviewing this preliminary, rather extensive  
13 report, based on some of the summary comments made  
14 tonight, are any of the people that are here with  
15 you tonight, any representatives that had comments,  
16 are they available for questioning on the record  
17 here tonight, or are you just here for comments?

18 MR. HARGIS: The purpose -- the purpose of  
19 the formal session and the reason we have a court  
20 reporter is to have a written record of the comments  
21 that you have, the public have on the draft EIS.  
22 The reason we have a written record is so that that  
23 can be reproduced in the final EIS, and we can  
24 provide responses to those comments.

25 We can, after the formal session is over,

1 we'll be more than happy to meet with you  
2 individually, if you have individual questions.  
3 That's what we had the informal session for.

4 MR. READY: And I appreciate that. I do  
5 have some questions for what I'm wanting to clarify  
6 for the record. People from Mississippi Power or  
7 the coal representatives, they are not here tonight  
8 to answer questions on the formal record; is that  
9 correct?

10 MR. HARGIS: No, I'm sorry.

11 MR. READY: That's what I thought. All  
12 right. There are three points or three or four  
13 points that came to mind just listening tonight,  
14 sir, from the very brief summary overview, the first  
15 thing that pops in my mind is what happens at the  
16 end of 40 years? I've heard nobody make any  
17 comments as to what's going to happen to this  
18 facility.

19 The way I am left understanding it at the  
20 end of 40 years when this 12,000 acres is mined out,  
21 then what's going to happen? We're just going to  
22 stop, just going to sit there, something else going  
23 to have to be done? I can't imagine a commercial  
24 enterprise abandoning a facility after 40 years or  
25 so. I think we need to be made aware of what's

**BR-01**

1 going to happen at that point.

2           Second, listening to the coal mining  
3 process, and I do have some experience with that  
4 from representing people involved in rebel mining or  
5 landowners where rebel mining was going on. As I  
6 understand, lignite coal is very much like gravel.

7           You'll have a certain amount of dirt or  
8 soil above the coal, you get down to the coal, and  
9 then you mine the coal out, and below the coal, some  
10 other structure comes into place. Then the mining  
11 stops. Well, we've got -- we have removed a volume  
12 of coal that has to be replaced.

13           I understand this sliding window that they  
14 have described in a very simplistic manner, but it  
15 concerns me, if you're moving -- if you're removing  
16 a certain volume of coal, then you've got to have  
17 something to replace that same volume of coal with  
18 at the end of the project when you're reclaiming so  
19 that your land is brought back up to the same  
20 surface height as it was before the mining took  
21 place.

22           I have not seen or heard any of those  
23 issues addressed, so I think the DOE needs to  
24 consider that very seriously. What's going to be  
25 done, and if there's going to be soil brought in

**BR-01  
(contd.)**

**BR-02  
(contd.)**

1 from some other location, what other area is going  
2 to suffer for the soil to be brought in from another  
3 location to replace the lignite coal that has now  
4 been removed?

5           The third point, again, just listening, in  
6 other words, no direct detail given, I'm  
7 understanding, apparently, there's going to be a  
8 four-year study period to determine whether this  
9 facility is commercially viable.

10           Well, I have concerns as a citizen that I  
11 don't want this to become a self-justifying  
12 existence of an operation where the government is  
13 going to say or DOE or Mississippi Power is going to  
14 say well, we've invested millions or billions of  
15 dollars, and it just is not economically feasible to  
16 shut it down now, even though it's not commercially  
17 viable.

18           Well, I would like the DOE and the people  
19 that are reviewing this to not get caught up in that  
20 situation, particularly as this gentleman here  
21 mentioned earlier, if this -- and I heard what he  
22 said, have some general familiarity with the  
23 regulations, and it does sound to me as if there's  
24 already been some determination made by DOE that  
25 this project is going to go through, and we're now

**BR-02  
(contd.)**

**BR-03**

1 getting the cart before the horse, and we -- I don't  
 2 want, from an economic standpoint, this government  
 3 and us, as ratepayers, to get caught up in the trap,  
 4 well, we've invested billions of dollars, there's  
 5 really no way to shut it down now. So now we've got  
 6 to keep it going, unless we find something else we  
 7 can do with it.

8 But if it turns out, sir, that the  
 9 determination is made at the end of four years that  
 10 this is not a commercially viable plant, and as I  
 11 appreciate, having heard some of the Public Service  
 12 hearing testimony and seen in the news media, what's  
 13 going to happen to us poor ratepayers who are having  
 14 to foot the bill up front if it is determined that  
 15 it is not commercially viable and it is shut down,  
 16 what guarantee is the DOE and the Federal government  
 17 going to make that we, as ratepayers, are going to  
 18 get our money back? That -- I would like for that  
 19 to be given consideration, also. Thank you, sir.

20 MR. HARGIS: Appreciate that. Anyone  
 21 else? Anything you'd like to say?

22 MR. COLLINS: I have worked in building  
 23 these Napco, Enron, and there's another impact that  
 24 people just haven't thought about, employee top peak  
 25 construction of these folks' land, a thousand

BR-04

CC-03

1 people, that would reduce the population of Kemper  
 2 County, all the thousands you see here in Kemper  
 3 County by 10 percent. There's going to be some high  
 4 paid people there in a rural area with nothing to  
 5 do.

6 I have worked all over the country with --  
 7 with these type people. They're going to find  
 8 something to do, drug use -- studies show drug use  
 9 goes up, crime goes up, property crime goes up, and  
 10 pray that we don't have any murders and rapes, but  
 11 that is a concern.

12 MR. HARGIS: Anybody else?

13 MR. MILLER: I just wanted to address the  
 14 comment that you made. I just wanted to address the  
 15 comment that you made. If you go to the Mississippi  
 16 Legislature's web site and go to Senate Bill 2793,  
 17 that is the Bill that Mississippi Power and Entergy  
 18 hired over 30 lobbyists in the '08 legislative  
 19 session to push through the Mississippi Legislature.  
 20 In effect, what that Bill says is that if any  
 21 stranded cost that you're talking about, any  
 22 stranded cost will be borne by the ratepayer.

23 You know, it's -- that Bill essentially  
 24 shifts all of the risk that's involved in building a  
 25 facility of this nature off of the Fortune 500

CC-03 (contd.)

1 company, which Southern Company is, and off of their  
2 stockholders, investment bankers, because it allows  
3 the ratepayer to pay for these facilities.  
4 Mississippi Power is already applied before the  
5 Public Service Commission for \$47 million in  
6 preplanning costs.  
7 To the credit of the PSC, they denied them  
8 that -- that motion, but they're already trying to  
9 recover what they have invested in this thing at  
10 this point.  
11 You know, I think the lady up front,  
12 St. Martin, said if you believe in your product so  
13 strongly, put your money where your mouth is, and  
14 that's what we told Mr. Topazi, that they've made  
15 certain this legislation will shift the entire risk  
16 off of their company and on to the ratepayer, even  
17 if the facility is never built, comes into  
18 production or generates one kilowatt of electricity,  
19 you will pay for whatever those costs are, and I  
20 just want these other folks here to know that. You  
21 can get that information. Don't take my word on it.  
22 Go to that web site and pull that. Thank you.  
23 MR. HARGIS: Thank you, Mr. Miller.  
24 Anyone else have comments? Hearing none, I'd just  
25 like to remind everybody that we'd like to get your

1 comments by December 21st. You can e-mail me, fax  
2 the comments to me, send them by regular mail. My  
3 contact information is up there. It's also in the  
4 draft EIS, and it's also in -- I have some business  
5 cards out there.  
6 There's any number of materials that have  
7 my contact information. Please take the time to  
8 send us comments. You don't have to read the whole  
9 document. Read the parts that are important to you.  
10 But please send them -- send me your comments. We  
11 look forward to receiving them. With that, we are  
12 adjourned. Thank you for coming.

13 (Time Noted: 8:49 p.m.)

1 CERTIFICATE OF COURT REPORTER

2 I, Ginger H. Brooks, Court Reporter and  
3 Notary Public, in and for the State of Mississippi,  
4 hereby certify that the foregoing contains a true  
5 and correct transcript of the proceedings, as taken  
6 by me in the aforementioned matter at the time and  
7 place heretofore stated, as taken by stenotype and  
8 later reduced to typewritten form under my  
9 supervision by means of computer-aided  
10 transcription.

11 I further certify that I am not in the  
12 employ of or related to any counsel or party in this  
13 matter and have no interest, monetary or otherwise,  
14 in the final outcome of this matter.

15 Witness my signature and seal this the 7th  
16 day of December, 2009.

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GINGER H. BROOKS  
CRR, RPR, CSR  
My Commission Expires:  
September 18, 2013

**JW-01:** I'm very concerned that this particular EIS is lacking in that capacity in terms of providing alternative designs and alternative looks at the way this project is going to be built and designed and run.

**Response:** Section 2.7 of the EIS addresses alternatives to a degree sufficient to meet DOE's requirements under NEPA. Please refer also to responses to JW-02, JW-13, and JW-16 through -30. Responses to Sierra Club's written comments, beginning with SC-15, address alternatives.

**JW-02:** First of all, the issue of air cooling instead of water cooling is an alternative. The projects is going to use 7 million gallons or 6 million gallons a day of water, and that's not really necessary, and there may be a day when you're going to need that water for houses, for agricultural, for other uses instead of to generate power.

Air cooling in the proposed Kemper facility would reduce the water use from 6 million gallons a day to only 600,000 gallons a day, and at that lower level of use, maybe the plant wouldn't even need that reclaimed water pipeline.

**Response:** Air cooling can be successfully used in applications where there is a low peak ambient temperature, and where the outlet process temperature (cooling water in this case) is high. This would provide for a greater "driving force" for the cooling and make the air cooled exchangers operate efficiently. Another obvious application is in arid regions where cooling water is unavailable or prohibitively expensive.

Air cooling was considered by the applicant as a potential alternative to water cooling. Although air cooling is a technically feasible alternative to water cooling, it is not economically justifiable in this case. As the commenter points out in his written comments, air cooling is less efficient than water cooling. Since air-cooled heat exchangers do not take advantage of evaporative cooling, the cooling water outlet temperature would be higher than conventional wet cooling systems. In the heat of the summer, this would limit the cooling water supply temperature to a minimum of 100 to 105 degrees Fahrenheit (°F), instead of 85°F in the case of evaporative cooling. This increase in cooling water temperature would increase the steam turbine condenser pressure above design. The cooling water is also used in compressor intercoolers, so an increase in the temperature would increase the power required for these compressors. The net effect is that there would be a decrease in power produced by the plant and an increase in power consumed by the plant.

Because it is best to have as low a cooling water temperature as possible (ideally less than the ambient air temperature), and because evaporative cooling is not available, the surface area of air-cooled heat exchangers would be tremendous. One supplier's software estimates that the *footprint* of the air-cooled exchangers used to handle the entire heat load of the Kemper IGCC plant would be roughly equivalent to 7.5 acres. The power for the fans was estimated at more than 23 MW, as compared to 3 MW for the fans on the wet cooling towers. In addition, air-cooled systems generate higher levels of noise than wet cooling towers.

**JW-03:** Second important issue is the emissions of the very fine particulate matter. This is dust that's so small it's invisible, known by the name PM<sub>2.5</sub>. It's a very dangerous pollutant.

The problem is the draft Environmental Impact Statement never really tried to do accurate calculations about how much that level of fine dust is going to be raised at ground level for the affected people.

And this is a very important issue, because for some reason, this vicinity has extremely high levels of fine particulate dust already, practically at what's considered the legal limit. Just a little more of that fine dust in the area, and it's going to be a very serious health risk.

- Response:** National ambient air quality standards (NAAQS) for fine particulate matter, or PM<sub>2.5</sub>, have been established by EPA. The Clean Air Act requires that these standards be set at levels to protect the public health with an adequate margin of safety. Subsection 4.2.1.2 provides the results of a comprehensive air quality assessment of the projected impacts of the facility, including an assessment of impacts on PM<sub>2.5</sub> levels in the area. Although the principal source of PM<sub>2.5</sub> emissions would be the combustion sources, all sources of PM<sub>2.5</sub> were considered in the impacts analysis presented in Chapter 4. The analysis explicitly considered the effect of background levels of PM<sub>2.5</sub> in the vicinity. By adding the highest estimated PM<sub>2.5</sub> impacts from the facility to the maximum background PM<sub>2.5</sub> concentration, the analysis demonstrated that ambient concentrations would remain below the NAAQS for PM<sub>2.5</sub>. DOE recognizes that the facility's impacts would cause ambient concentrations to increase and that the identified background levels of PM<sub>2.5</sub> are within 82 to 85 percent of the NAAQS. However, PM<sub>2.5</sub> levels would remain below those established by EPA as protective of public health.
- Nonetheless, Subsection 4.2.19.2 has been updated to include additional assessment of potential public health-related impacts that could result from the project's fine particulate emissions.
- JW-04:** Third issue is the threat Environmental Impact Statement failed to examine, alternative controls for the emissions of mercury. This is very important, because mercury is an extremely toxic substance.
- Now, the problem is is the suggested method of mercury control is a -- is a reactor that has a sulfide metal in it. I've never seen it used, never seen it described, talked to my air pollution experts. They've never heard of it. They can't say how efficient it is. There's no description anywhere it's ever been used in the EIS. There's another type of mercury control called carbon absorption. It's inline use.
- It was suggested for this project when the project was originally going in Florida. The EIS looked at those two types of mercury control, discussed them both, presented evidence on which one would be most efficient and put that evidence out there for folks to read, because mercury -- control of mercury for this facility is going to be very important.
- Response:** Sulfided activated metals are common in mercury removal applications. This method of mercury control involves dispersing a metal sulfide on a structural base of, for example alumina. The mercury reacts with the sulfur to form mercury sulfide (HgS), which is retained on the substrate. This process is essentially the same as carbon bed adsorption, which relies on sulfided carbon to form HgS. The Kemper County IGCC Project may use copper in a reduced state as the sulfide metal. The metal sulfide process would be designed to achieve removal efficiencies equivalent to a carbon bed. The text in Subsection 2.1.2.5 has been revised to note that either metal sulfide or carbon bed adsorption would be used for mercury removal.
- JW-05:** Another alternative design that should have been discussed is the issue of the flares. The flares that are proposed will be like a big flare, 150, 300 feet in the air. This is an important issue, because my air quality consultant looked at this. He said that, contrary to the claims of the EIS, there will only be a little blue flame coming out of there, there's a project upset. You're going to have carbon monoxide gas flowing through those flares, and there will be visible flames that will be a significant impact.
- Response:** There would be an aesthetic visual impact due to upset conditions. Subsections 2.1.2.8 and 4.2.16.2 of the EIS (regarding flaring during upset conditions and associated aesthetic impacts, respectively) have been revised for clarity.

The normal products of combustion, including CO, would be emitted during these events.

The flare emissions expected during normal operations were included in the air dispersion modeling impact analyses summarized in Subsection 4.2.1.2 of the EIS.

**JW-06:** Another problem with the design of the project is apparently my air quality expert says they don't have a backup facilities for handling removal of the sulphur from the plant, and if you have a malfunction in your sulphur recovery plant, your sulfuric acid plant, you're going to end up sending high levels of sulphur gas through that flare. You could have 10,000 pounds of sulphur emitted during -- from that flare during a process upset.

So it's very important to look at alternative designs of that flare. My consultant suggests a -- a ground flare with an elevated refractory stack. Another type of technology, a dedicated gas thermal oxidizer, which is like a little incinerator would be dedicated to incinerating those fumes rather than using the flares as an alternative method.

**Response:** There is no backup for the sulfur removal or recovery system. If it fails, then for a short period of time, subject to the air quality control rules of the state of Mississippi, the flare would operate as intended and SO<sub>2</sub> emissions from the flare would be high. Alternative designs of the flare would not affect SO<sub>2</sub> emission rates.

The project applicant investigated the possibility of using a ground flare. However, because hydrogen sulfide combusts readily, the conversion efficiency and emissions would be the same for any type of flare or thermal oxidizer. Instead, for safety and dispersion reasons, the applicant elected a derrick flare, which would have its emission point at a higher elevation. A refractory stack on an enclosed ground flare would have a large diameter and would be much more likely to create downdraft downwind of the stack. Therefore, the applicant determined it would be better for dispersion to use a conventional derrick flare. The flare would be designed to meet all federal, state, and local standards.

**JW-07:** The last issue that was mentioned is that they might use open burning to deal with the materials that they have, the waste materials, the houses, the trees, the brush that are from the site clearance, and I don't -- I think they should consider an alternative to that and not use open burning.

**Response:** As discussed in Subsection 2.6.3.2, solid (nonhazardous) wastes generated as a result of mine area clearing might be burned, disposed in mined-out pits, or hauled to a landfill.

Regulatory restrictions would apply to any open burning, if that option was selected. In accordance with Section 3.7 of Mississippi Commission of Environmental Quality Regulation APC-S-1 (Air Emission Regulations for the Prevention, Abatement, and Control of Air Contaminants), NACC would not conduct any open burning of residential, commercial, institutional, or industrial solid waste unless approval was obtained from MDEQ.

If burned, any burning of silvicultural wastes and land-clearing debris would be conducted in accordance with the conditions set forth in Section 3.7(b) of regulation APC-S-1:

“Open burning of land-clearing debris must not use starter or auxiliary fuels which cause excessive smoke (rubber tires, plastics, etc.); must not be performed if prohibited by local ordinances; must not cause a traffic hazard; must not take place where there is a High Fire Danger Alert declared by the Mississippi Forestry Commission or Emergency Air Pollution Episode Alert imposed by the Executive Director and must meet the following buffer zones.

(1) Open burning without a forced-draft air system must not occur within 500 yards of an occupied dwelling.

(2) Open burning utilizing a forced-draft air system on all fires to improve the combustion rate and reduce smoke may be done within 500 yards of but not within 50 yards of an occupied dwelling.”

**LM-01:** In the Markowski letter, and I will quote from this -- “The Kemper County integrative gasification combined cycle project is of significant importance to achieving DOE’s goal of demonstrating clean coal technologies in the United States and it’s demonstrated by DOE’s significant financial commitment,” which is not supposed to occur before the EIS process is finished, and it’s in actual violation of law, we strongly support its approval.

To me, this is very clear that that makes a mockery of this process, the DOE. Now, I don’t know if the right hand doesn’t know what the left hand is doing or how this works, Mr. Hargis, but that is certainly jumping to conclusions in a way that I think violates Federal law.

**Response:** DOE’s filing with the Mississippi PSC simply reflects DOE’s reasons for selecting this project from the applications submitted for this round of funding in the CCPI program. It should not be surprising that DOE selected a project it considers promising and that would, if successful, advance the deployment of the Transportation Integrated Gasification (TRIG™) technology. The filing relates DOE’s long-term involvement in the development of this technology and its belief that the project is worthy of support. Refer to detailed responses to Sierra Club’s written comments, beginning with SC-01.

**LM-02:** It goes on to say that in this filing they will describe the financial support that they have awarded the project. It’s also our understanding that financial support for this project cannot be given to Mississippi Power or Southern Company until this process is complete, and I see you shaking your head, so you’re in agreement with me.

**Response:** Consistent with NEPA regulations, the funding provided by DOE prior to completion of the NEPA process has not and will not have an impact on the environment or limit the range of reasonable alternatives. DOE has provided cost-shared funding for preliminary design for the project. Funding for detailed design, construction, and demonstration activities would not be provided until after the NEPA process has been completed. Refer to detailed responses to Sierra Club’s written comments, including SC-02, -12, -25, and -26.

**LM-03:** The second thing that concerns me in a very -- looking at the process and procedure, is the fact that there is no discussion of alternatives. There’s no variation here. The proposed plant is the only thing that DOE states and satisfies the need for coal -- clean coal power to supply the necessary energy in the U.S. What DOE fails to do is look at what is already available in -- in Mississippi and surrounding states in merchant power.

In fact, there’s over 8,000 megawatts of power versus the Kemper plant which is 585 megawatts that’s available 85 percent of the time. If you expand that region to the three-state area, there’s over 14,000 megawatts. So the idea that this plant is needed and necessary, I don’t think is -- is an accurate statement that has been promoted by Mississippi Power Company.

**Response:** Reasonable alternatives that meet DOE’s purpose and need are addressed in the EIS. The agency’s goal is not to address the need for power but rather to demonstrate the technology selected during a competitive solicitation. The Mississippi PSC appropriately has the jurisdiction over the determination of the need for power and the resources to meet that need. Please see the Mississippi PSC docket for more information. Refer to detailed responses to Sierra Club’s comments

regarding alternatives, beginning with SC-15. The need for power and the resources to meet that need are appropriately within the jurisdiction of the Mississippi PSC.

**LM-04:** I think two things that -- that are pending before the Corps of Engineer permits that the public needs to be aware of is that this impacts over 2,800 acres of wetlands.

**Response:** Comment noted. The EIS addresses potential impacts to wetlands.

**LM-05:** ...[I]t also is going to destroy 40 -- over 40 miles of streams in the mine -- the footprint of the mine with no mitigation for 30 years, and I think that is wholly unacceptable on any level.

**Response:** Stream impacts in the initial blocks through block B1 (see Figure 2.4-2b) would be mitigated offsite prior to any disturbance. The remaining stream mitigation would occur prior to disturbance throughout the 40-year term. The mitigation plan would be reviewed and approved by USACE once it meets all regulatory standards.

**LM-06:** I would also like to hit on a point of mercury. This is something that I hope this agency is going to take into consideration... the Environmental Protection Agency, the Federal agency is in the process of promulgating new mercury emission rules that will apply to this facility, and I think this D -- this DEIS needs to take that into consideration when you look at the toxicity of that.

**Response:** EPA is under a consent decree to propose mercury emission standards for coal- and oil-fired electric utility steam generating units by March 16, 2011, and finalize the standards by November 16, 2011. The Kemper County IGCC Project would be expected to comply with any applicable requirements. Appendix R has been revised to include an additional study addressing the fate and transport, including bioaccumulation, of mercury emissions from the IGCC facility.

**LM-07:** According to the Georgia Extension Service, one pound of mercury can contaminate up to 2 billion -- 2 million, I'm sorry, with an M, 2 million pounds of fish annually. That's a lot of pollution for a so-called clean coal plant.

**Response:** The illustration provided in this comment is based on a calculation that 1 pound of mercury distributed in 2 million pounds of fish would result in fish flesh mercury levels that would be considered contaminated, i.e., at 0.5 part per million of mercury. At this level, EPA currently recommends restricting intake to one 8-ounce serving of fish per month. There would be an incremental increase in mercury concentration in fish but much smaller than that suggested by the comment. The incremental increase in health risk associated with this increase in mercury concentration is addressed in the Final EIS (see Subsection 4.2.19.2 and Appendix R).

**SM-01:** I'm not happy about them taking 125 feet of my property for five miles and not paying a dime for the use of it, because the Public Service Commission says they can take it for the benefit of the State of Mississippi. That was a law passed in Washington four years ago that made them able to do this.

**Response:** Mississippi Power Company is required by the laws of Mississippi to compensate landowners for property rights acquired for use by the project or linear facilities. It is Mississippi Power Company's practice to negotiate in good faith with landowners to acquire all rights-of-way. In such negotiations, Mississippi Power states that it would use all reasonable efforts to acquire the rights-of-way in arms-length transactions. If a given transaction cannot be consummated, Mississippi Power may exercise its right of eminent domain arising under the Constitution and laws of the state of Mississippi. If property rights are acquired by eminent domain, the landowner is still compensated. The value of the acquired property rights to be paid a landowner would be determined by a jury in accordance with Mississippi law.

- SM-02:** ...[T]he pipeline is still there, and they could buy that pipeline, which is half the distance that they want -- they want to use, from Enterprise to Heidelberg is about 30 miles, and they're going to put in 60 miles of pipeline, so they could buy this pipeline for about 25 percent of what it cost just for the pipe.
- Response:** As explained in Subsection 2.2.5, the proposed CO<sub>2</sub> pipeline would operate at approximately 2,100 psi. This is at least 50 percent higher than the maximum operating pressure range of liquid and natural gas pipelines, which typically ranges from 200 to 1,500 psi. Most natural gas pipelines are built with American National Standards Institute (ANSI) 600 materials and are designed for pressures not exceeding 1,500 psi (many even less than this). Most CO<sub>2</sub> pipelines are built with ANSI 900 materials and can handle as much as 2,240 psi.
- SM-03:** I think that they want to put this new power line on the western side of my property from the existing power line, which I have asked them to put it on the east side of the existing pipeline, not to put me into the magnetic field where there is a possibility of catching some kind of disease from the magnetic field.
- Response:** As discussed in Subsection 4.2.19.2, impacts from magnetic fields generated by the new and upgraded transmission lines are expected to be small or negligible. Magnetic fields may be perturbed by induced currents in co-located pipelines. While this would likewise have little or no health effects, measures are typically incorporated into the final pipeline design to counteract the possibility of any induced current resulting from a pipeline's adjacency to the existing power line.
- CC-01:** ...[I]t's going to be tons of equipment coming into the State of Mississippi, and I am a representative of the railroad town. Some of that equipment and material be brought into maybe Toomsu-ba, unload it and truck to this area.
- Response:** Routes to be used during plant construction are described in Subsection 2.3.1 of the EIS. Potential impacts of construction traffic have been analyzed in Subsection 4.2.13.1.
- CC-02:** ...[And] my other concern is the environmental impact that is say going to be doing a bench process, taking the topsoil out and bringing it and putting it over and bringing it back over.
- Okay. But when you get through, are you going to be able to haul some more soil in and make everything back like it was?
- Response:** The benching program would use the soil and overburden material, minus the coal, to fill in the pit. This process is described in Subsections 2.4.2 and 2.4.2.2 in the EIS. The overburden material has a swell factor of approximately 15 percent, which is the percentage expansion of the in situ volume when removed from its natural state. Because the swell factor would effectively offset the thickness of the lignite extraction, the net result would be an achievement of approximate original contours and elevations.
- LSM-01:** You know that 3,100 [31,000] acres they're talking about is mostly deer woods and meadows, and I'm wondering into what inappropriate habitat all those deer will be forced if they build this plant and this horrible mine.
- Response:** Comment noted. Figure 3.12-1 shows the area around the project site and mine study area. This area is sparsely populated and heavily wooded and provides substantial habitat for wildlife. In addition, mining would impact smaller areas at any given time, and all mined areas would be reclaimed following completion of mining activities.

**LSM-02:** And what is the value -- what is the heat value in burning dirt? It's not good, I'm sure, and I'm sure it's very polluted. But suppose we do burn this dirty lignite coal, and what are we going to get? We're not going to get much heat value, and we're going to get a lot of pollution.

**Response:** Subsection 2.5.3 identifies the heating value of the lignite feed stock for the proposed IGCC facility. The proposed IGCC facility is designed to produce a synthesis gas fuel from this lignite. The environmental impacts of the facility are discussed in Chapter 4.

**LSM-03:** Over at the Red Hills Mine they were talking about a few minutes ago, they burn that stuff, or at least they've been trying to. They've been trying to for a long time, and they haven't succeeded in actually burning it very well yet. They haven't succeeded in getting the boilers to work properly using this low quality poor heat value lignite coal, but the pollution doesn't stop them.

**Response:** Available data do not support the commenter's claim that the power plant at Red Hills does not "work properly." According to information obtained on EPA's Clean Markets Web site, since the plant began operation in 2002 through the end of 2008, it has operated at a high rate of utilization of between 70 and 90 percent (based on hours of operation). Since 2003, the first year of full operation, both units have averaged more than 86-percent utilization.

**LSM-04:** And how much is it going to cost us, by the way? That's another thing. How much is this plant going to cost and who is going to pay for it?

**Response:** Mississippi Power Company would be responsible for the capital costs associated with the IGCC plant and the linear facilities. The following chart summarizes these costs:

Kemper County IGCC Project Capital Cost Summary

Area	Cost (million \$)
Land	\$29.5
Project development	\$55.3
Engineering, procurement, and construction	\$1,837.2
Fuel Handling	\$87.1
Transmission (excluding land and land rights)	\$111.3
Carbon capture	\$302.6
Pre-COD O&M capitalized	\$56.3
Startup	\$41.8
Project contingency	\$161.6
Ad valorem taxes	\$13.0
SUBTOTAL	\$2,695.7
Less incentives and benefits	(\$296.0)
<b>TOTAL</b>	<b>\$2,399.7</b>

Based on testimony provided in the Mississippi PSC's docket, the effect of this project on electricity rates depends on assumptions regarding the time period under consideration and other factors (see the discussion of customer electricity rates that has been added in Subsection 4.2.11.2).

**LSM-05:** I, myself, can't help but wonder where are the investors for this project and could this project not withstand the scrutiny of sound financial investigation in the bright light of the professional fi-

nancial world? No, no, they want the ratepayers, you and me, to finance this project. Yes, us. And they can't tell us for sure how much we're going to be paying for it, how much is it going to cost.

**Response:** As explained in the EIS, Mississippi Power has filed an application for, and been selected to negotiate for, DOE loan guarantees for the project under EPCA 2005. DOE has the ability to guarantee up to a maximum of 80 percent of project cost, excluding other federal incentives. The loan guarantee program is a competitive process in which Mississippi Power must compete with other projects for these limited federal loan guarantees. As part of the due diligence process, the DOE Loan Guarantee Program Office would conduct an independent evaluation of the proposed project costs before issuing a loan guarantee. Total capital costs are provided in response to the previous comment.

**LSM-06:** Now, we know when any big industrial project gets started, they frequently go over budget and over time, and the builder can go back to the investors and raise more money. They do it all the time, and even the best and most well thought out projects do go over time and over budget.

What does this mean to us if they go over their \$2.4 billion shaky budget for something that has never been done before. They want to build a plant with a technology that has never been used before, and they wanted to make us pay for it.

So if it's such a great project and it's such a good idea, where are the investors? You and me, we're the customers and the ratepayers, and we will be given the bill, because this is a specially financed project. I'm here tonight to tell you that I can't afford it, and even if I could, I would adamantly dislike forking over two to five times what I am currently paying in electric bills with no end in sight.

**Response:** The costs summarized previously in response to LSM-04 include estimates of potential escalations and contingencies. As the comment notes, large, complex, long-duration construction projects routinely encounter cost escalations and unforeseen conditions. To mitigate these risks, the cost estimate and economic evaluation of the project included approximately \$194 million of cost escalation and \$162 million of contingency. Inclusion of a contingency is a normal, prudent cost estimating practice, to account for unforeseen events such as weather delays, delays in equipment deliveries, labor turnover, etc. The contingency in Mississippi Power's project cost estimate is approximately 6 percent of the total project budget. Moreover, Southern Company Engineering and Construction Services has a proven record of being able to manage costs using techniques such as bulk procurement of commodity items such as steel and piping, optimizing the burn of startup fuel, and negotiating performance based contracts with general contractors.

**RL-01:** I am concerned about this technology proposed by Kemper power plant, what will it wind up costing Mississippi Power rate taxpayers.

**Response:** The Mississippi PSC has a docket to determine the appropriate rate increases associated with this project. A discussion of customer electricity rates has been added in Subsection 4.2.11.2. See also the response to SC-89, which notes that Mississippi power has estimated that rates could increase by approximately 2.9 percent per year.

**RL-02:** We've got plenty of power plants around the state, that use that and the coal burning, that's already in place and has plenty of room, why not use them instead of taking this man's property here and don't give him nothing for it.

**Response:** As described by Mr. Gary Rozier during his direct testimony to the Mississippi Public Service Commission in 2009 (Docket #2009-UA-014), when Mississippi Power identifies generating or

capacity resource needs, market participants are given opportunities to fill those needs. This includes the opportunity for owners and operators of existing generating resources to propose to fill those needs. On June 5, 2007, Mississippi Power issued an Invitation for Indicative Proposals of Solid Fuel-Fired Electric Generating Capacity Beginning in 2013 (2007 Invitation) seeking long-term proposals of 15 to 40 years in length and up to 650 MW of capacity. Mississippi Power sent the 2007 Invitation to 58 entities known to have an interest in the southeastern wholesale market. In addition, a press release announcing that Mississippi Power was seeking indicative long-term proposals was issued in Megawatt Daily, Power Markets Weekly, Electric Utility Week, and Power Engineering, which are well established industry trade publications.

As noted in Subsection 2.7.3.2 of the EIS, two of Mississippi Power's key strategic concerns are fuel diversity and long-term fuel price stability. Given the increased cost and volatility of natural gas, coupled with Mississippi Power's increased reliance on natural gas capacity, the goal of the generation screening process was to identify an economically competitive solid-fuel option. Bidders wishing to submit proposals to either build new generation resources, or to supply the identified needs from existing resources, would be considered. This includes meeting the needs from existing natural-gas resources; however, such bids were required to provide fuel price stability and reliability similar to that provided by a base-load coal resource and some financial security to assure such stability and reliability.

Mississippi Power received three proposals in response to the 2007 Invitation by the August 6, 2007, deadline. Two of the proposals were for meeting the needs from existing solid fuel-fired resources, and the other for meeting the need from existing gas-fired capacity. Shortly after receipt of the proposals, Mississippi Power contacted the bidder of the gas-fired proposal and informed the bidder that the proposal was non-conforming because fuel price stability and sufficient financial security were not provided. Mississippi Power's offer of an opportunity to cure the proposal with additional information was declined, and the bidder was informed that the proposal was a non-conforming bid and would not be evaluated further. The conforming proposals were compared to Mississippi Power's own IGCC alternative, and it was determined that the IGCC facility remained competitive and additional evaluation of the self-build alternative should continue. Location of the IGCC project at an existing facility would involve the transportation of lignite, which is prohibitively expensive. See also the response to JW-20 for a more detailed explanation.

**RL-03:** I'm asking the Department of Energy, Mississippi Power, to use their own money of this project, using \$3 million of taxpayer's money on this big experiment that hadn't worked in the past.

**Response:** DOE is considering cost-sharing under a CCPI cooperative agreement for the project. Fully funding the project is not a reasonable alternative for DOE. Mississippi Power is responsible for securing and providing the funding for the project costs beyond the DOE cost-share. DOE is also considering providing a loan guarantee for a portion of the private sector financing of the project.

**LE-01:** My purpose for being here tonight is to register, again, my concern about the location of the proposed transmission line and gas line so close to my house and to my neighbors.

I suggested that it be relocated 3,400 yards east of us across Highway 49 through a wooded area where there's an existing Tennessee pipeline that's been there 53 years, and there's been no houses or other developments alongside of that pipeline.

**Response:** The existing Tennessee pipeline corridor was considered during initial routing but would not meet the proposed needs of the project because it is too small and represents an indirect route.

Mississippi Power Company follows a transmission line routing and design procedure (see Subsection 2.7.2.2), which requires avoidance of houses, buildings, bridges, airports, cemeteries, landfills, irrigation systems, and other environmentally sensitive areas, if reasonably practical. Mississippi Power has stated that it is currently reviewing requests from the commenter to relocate the proposed transmission and CO<sub>2</sub> lines to the extent practicable. The precise location of the lines would not be determined until the final design phase of the project.

**LE-02:** If people cannot build houses close to existing high powered transmission lines, how can utility companies like Mississippi Power and Southern Company locate new transmission lines next to existing houses?

**Response:** As noted in the previous response, Mississippi Power follows a routing procedure that requires it to avoid houses and other sensitive areas, if reasonably practical. The proposed sizes of the rights-of-way outlined in the EIS incorporate safety and functional requirements as set forth by the National Electric Regulatory Council, Federal Energy Regulatory Commission, Mississippi Public Service Commission, and National Electric Safety Code, among others, to protect public safety and the operation of the line.

**LE-03:** This proposed location of the transmission and pipeline negatively affects my personal environment and that of my neighbors, and I think that we should be concerned not just about air, water and pollution and be concerned about plants and animals as we certainly should, but we need to also consider, you know, the people, the people who pay the bills, because all these other concerns, plants, animals, air, water, do not pay. It's the ratepayers. It's the property owners.

And I'm here to not only request but to demand that this power line be relocated away from our houses, and if it's not, I won't be able and I don't have the resources, I'm a retired educator from the State of Mississippi, to fight this in Court, because I'm fully aware of the eminent domain law, but I do plan and pledge to fight it in the Court of public opinion.

**Response:** Mississippi Power has stated it is currently reviewing requests from the commenter to relocate the proposed transmission and pipeline.

**TW-01:** I'm most concerned about the people. When I built my house, Chris Cole's son back here, he helped me with that. You know, people in the community around here help each other. We're concerned about our environment, emotionally. We get fired up about this because we've got a vested interest in living here. Our lives are important to our environment. We want y'all to consider how we live.

We want to continue to live this way. I don't want to sit in my back garden and listen to the hum of power line 75 feet from my house, and that's what they're proposing, and that's all up and down here, miles and miles of people being affected.

**Response:** As discussed for Linear Facilities in Subsection 4.2.18.2 of the EIS, the corona effect can produce some audible noise from high-voltage transmission lines. This sound, which could be described as a "hum," can vary according to weather conditions. Wet or humid weather would result in increased noise, while drier weather would produce less noise. However, for the new transmission lines proposed for the project, the maximum audible noises at the edges of the rights-of-way should be less than levels that would interfere with normal activities, including in residential areas. Subsection 4.2.18.2 states that "[f]or the new and reconducted transmission lines, maximum audible noise levels at the edges of the rights-of-way should be less than levels that might potentially result in interference of activity, including at the nearest residential areas."

Please refer also to [ftp://ftp.cpuc.ca.gov/gopher-data/envIRON/tehachapi\\_renewables/FS7.pdf](ftp://ftp.cpuc.ca.gov/gopher-data/envIRON/tehachapi_renewables/FS7.pdf) and <http://psc.wi.gov/thelibrary/publications/electric/electric10.pdf>.

**RH-01:** ...I'd like to state our unequivocal opposition to the Kemper IGCC coal plant and associated mining projects. The GRN has long advocated for the protection of Mississippi's water quality, dangerous species and wetlands, and recently there are far less environmentally destructive and less costly energy production alternatives that would supply future demand expected in Mississippi.

**Response:** Comment and opposition to the project noted. The EIS addresses the issues raised in the comment. The Mississippi PSC appropriately has the jurisdiction over the determination of the need for power and the resources to meet that need. The Mississippi PSC recently determined that there is a need for power. Please see the Mississippi PSC docket for more information.

**RH-02:** First of all, a number of folks have mentioned wetland impacts. According to the draft Environmental Impact Statement, approximately 3,000 acres of wetlands will be impacted by the Kemper power plant and associated mine.

The wetlands that would be impacted include those on federally owned or managed lands such as the Okatibbee Wildlife Management Area. The draft EIS also maintains that the function of the wetlands will be replaced. However, we question that any mitigation for loss wetlands can replace the function and values of those that are lost.

**Response:** Approximately 2,400 acres of wetlands would be impacted, in total, over the 40-year life of the project. There is no mining or mining-related disturbance proposed on the Okatibbee Wildlife Management Area (WMA). None of the wetlands associated with the Okatibbee WMA would be disturbed by mining or mining-related activities.

A review of the mitigation requirements is included in the EIS for disclosure of the applicant's proposal (see Chapter 7). Compensatory mitigation for impacts to aquatic resources is the sole decision of USACE. USACE will review the mitigation proposed for the project. If approved, the compensation for a loss of functions and values to the aquatic ecosystem would be held in accordance with the laws, rules and regulations associated with the USACE process. Recently, EPA issued a new rule for compensatory mitigation. The mitigation proposal for any impacts to aquatic resources shall be held in accordance to this rule. Final evaluation of the proposed mitigation for impacts to aquatic resources will be conducted as part of USACE's Section 404 permitting process.

**RH-03:** Part of the mining plan is to build levees to provide flood control while destroying wetlands to extract the lignite coal. This plan will only compound the flooding problem at the site and its surrounding community.

Further, the levees on-site will change the hydrology by cutting off the natural flow of water, it will cause problems in severe rain events. We also have serious doubt that any amount of mitigation offsite would be able to replace the function and values of the wetlands lost, including local flood location as well as loss of local flora and fauna.

**Response:** Flood control and the potential for flood impacts were evaluated in Subsection 4.2.8.2 of the Draft EIS and updated in the Final EIS based on comments received from FEMA. See also the responses to FEMA-01 and FEMA-02.

USACE will review the mitigation proposed for the project. If approved, the compensation for a loss of functions and values to the aquatic ecosystem would be held in accordance with the laws, rules and regulations associated with the USACE process. Recently, EPA issued a new rule for

compensatory mitigation. The mitigation proposal for any impacts to aquatic resources will be held in accordance to this rule. Final evaluation of the proposed mitigation for impacts to aquatic resources will be conducted as part of USACE's Section 404 permitting process.

The preferred alternative was directly coordinated with USACE and MDEQ regarding flooding and augmentation impacts to Lake Okatibbee. USACE found these impacts to be inconsequential. Final approval would be subject to the MDEQ permitting process for control of stormwater and mining activities.

**RH-04:** The loss of wetland will not solely impact fish and wildlife. This loss of wetlands with a hydrologic connection to the Pascagoula River and could lead to additional degradation of water quality downstream from the Mississippi Sound. Wetlands remove and retain inorganic nutrients, process organic wastes and reduce suspended sediments from the surface runoff before the runoff reaches open water.

**Response:** Downstream water quality, terrestrial ecology, and aquatic ecology were evaluated as part of the baseline work for the Draft EIS. Water quality would be required to meet all applicable state and federal limits prior to discharge from the surface mine sediment ponds (see Subsections 3.6.2, 3.8.3, 3.9.2, 3.9.3, and 4.2.4).

**RH-05:** The Gulf of Mexico is a very important economic and environmental resource for the state and the whole nation. What impacts will this loss have on water quality in the streams being impacted? The Draft of Environmental Impact Statement claims the University of Mississippi is monitoring the flow, but what about the toxics, the sediments and micro and macro fauna that will be affected?

**Response:** Subsection 4.2.4.2 presents the projected impacts on surface water quality within and downstream of the proposed surface lignite mine. As discussed therein, the principal impact is projected to be a moderate increase in the total dissolved solids (TDS) in the streams flowing through and from the mine; however, the increase will not cause TDS levels in streams or Okatibbee Lake to approach or exceed aquatic life criteria promulgated by MDEQ.

Insignificant, if measureable, changes in the pH, suspended solids (i.e., turbidity), dissolved oxygen, temperature, and nutrients would also occur; however, none of these projected changes would cause any stream or Okatibbee Lake to exceed water quality standards established by MDEQ. With respect to acid mine drainage (AMD) substantial evidence has been provided by NACC to demonstrate AMD formation is unlikely.

Tables 3.4-3, 4.2-9, and 4.2-23 present site-specific analyses of metals in lignite leachate tests and overburden analyses that demonstrate a low probability of elevated heavy metals concentrations or loadings resulting from the mine discharges. The only other sources of toxicity are fuels and chemicals imported to the site by NACC or Mississippi Power, which will be managed as described in Section 2.6 of the Draft EIS. Collectively, these data and management plans cause DOE to conclude the likelihood of toxicity to fish or aquatic life in the downstream waters is low.

The aquatic life effects downstream of the proposed lignite mine are expected to be similar to the effects measured at the Red Hills mine because the lignite proposed to be excavated from Kemper County is similar to that excavated at Red Hills. Subsection 4.2.7.2 and Appendix I of the Draft EIS present field assessments of the fish and aquatic macroinvertebrate populations on the proposed Kemper County mine study area and the operating Red Hills Mine. These data demonstrate that operation of the proposed Liberty Fuels Mine can maintain the biological integrity of the streams that flow through and from the proposed mine.

**RH-06:** I would like to address the unproven technology that is involved in this. This is the test project to determine if the new carbon gasification technology will function the way theory predicts it will and if this technology will be commercially viable.

The justification for this test project is to demonstrate a cleaner way to use energy for coal. According to the draft EIS, “Because the planned CO<sub>2</sub> removal technology has not been commercially demonstrated at a facility like the proposed IGCC power plant and in light of the anticipated evolving regulatory treatment of CO<sub>2</sub>, short-term capture rates could vary from zero percent (for example, due to a malfunction of the CO<sub>2</sub> compressor) up to the design of 67 percent.”

In other words, the outcome of this test could result in zero carbon readings, yet the CO<sub>2</sub> pipeline required for this project will still impact the valuable wetlands, streams and other important habitats for wildlife and recreation.

**Response:** Subsection 2.1.2 discusses the technology and its application to this project, including the extent to which the proposed technology has been previously demonstrated on a pilot scale and on a commercial scale in other industries. DOE’s purpose in proposing to provide cost-shared funding under CCPI is to demonstrate that this IGCC technology is feasible for widespread commercial operation as discussed in Subsection 1.5.1.

The text in the Draft EIS cited by the commenter refers to the possibility that capture rates could be significantly less than the design capture rate for a period of time due to equipment malfunction, process upsets, or pipeline availability. Since it is not expected that operation of the carbon capture equipment would be a condition of permits from regulatory authorities, the IGCC plant would continue to operate during such conditions. However, during normal operations, DOE expects that CO<sub>2</sub> would be captured and transported by the pipeline at the design rates. Accordingly, DOE expects that the pipeline would be used as intended.

Subsections 4.2.6.2, 4.2.7.2, 4.2.8.2, 4.2.9.2, and 4.2.15.2 discuss the impacts of the proposed CO<sub>2</sub> pipeline and other linear facilities on habitat and wetlands and floodplains resources as well as on recreation resources.

**RH-07:** The Chunky River is a state scenic stream and should be protected from further damage.

**Response:** Impacts to surface water resources including the Chunky River are addressed in the EIS. No impacts to the Chunky River requiring additional mitigation have been identified.

**RH-08:** The draft EIS does not sufficiently address the impacts a lignite surface mine will have on recreation near Okatibbee Lake and the Wildlife Management Area.

**Response:** Subsection 4.2.15 of the EIS addresses potential impacts to the nearby recreational areas.

**RH-09:** Pilot IGCC plants have shown to be a source of water pollution. IGCC plants use water to clean the gas which causes contamination problems.

The draft environmental impact statement quotes “The proposed project would discharge no process water effluent from the site.” If this is true, the final EIS needs to discuss where the processed water is going to be stored and what the possible impacts of this decision will be.

**Response:** As discussed in Chapter 2, the plant would employ a zero liquid discharge system. Most of the water used in the power plant would be used for cooling and would be evaporated (see Figure 2.5-2). The remainder would be recycled within the facility. Several wastewater sumps on the site would collect wastewater and pump it for further uses or treatment. Cooling tower blowdown and a few other waste streams would likely be contained onsite in a wastewater storage tank that

would act as a surge tank upstream of the wastewater treatment facility. A second surge tank would be provided downstream of the brine concentrator and before the crystallizer. Each of these tanks would provide surge capacity and equalization of waste flows prior to the wastewater treatment process. All wastewater recycled within the plant would be stored in enclosed tanks. No process wastewater would be held in an open pond.

**RH-10:** [T]he DEIS claims the storm water collection channels will be built to “collect runoff from mined or disturbed areas, and route these flows into water treatment ponds designed to treat water to meet MDEQ effluent limitations, and flood protection levees intended to either contain runoff from the disturbed lands or protect active mining areas from flooding.”

The final EIS also needs to address the following questions. Will the water treatment ponds receive a NPDES permit mine schedule, and what will its permit limits be?

**Response:** The sediment ponds, or water treatment ponds, would require an NPDES permit from the state of Mississippi. The permit limits would be determined by the state and would be in accordance with the Federal NPDES standards. The NPDES permit at the Red Hills Mine requires monitoring for total iron, total manganese, pH, TDS, and total dissolved solids. The permit limits for total iron are 3.0 mg/L (monthly average) and 6.0 mg/L (daily average). The limits for total manganese are 2.0 mg/L (monthly average) and 4.0 mg/L (daily maximum). The pH values must be between 6.0 and 9.0, while the total suspended solids must not exceed 35 mg/L (monthly average) or 70 mg/L daily maximum. The annual maximum and annual average values for total dissolved solids must be reported annually.

**RH-11:** Ash storage is also a big concern. In 2008, Tennessee had an unprecedented spill of coal ash. So the final EIS should discuss what guarantees are being made by DOE that the same problem will not happen here in Mississippi.

**Response:** Ash handling at the proposed power plant would differ from the TVA facility in Kingston, Tennessee, in that the Kemper facility would: (1) produce gasification ash as opposed to coal combustion ash, and (2) use a dry ash collection system. The dry collection system would use above-ground management units instead of a wet ash pond for long-term storage. These management units would be designed to meet all RCRA Subtitle D requirements for the storage of nonhazardous solid waste.

**RH-12:** And other folks mentioned is also the concern about the large amount of water that’s going to be used in this project.

**Response:** Comment noted. Most of the water used by the power plant would be treated municipal effluent. Reuse of municipal effluent is generally recognized as an effective means of reducing impacts to water resources in power generation.

**RH-13:** In conclusion, the magnitude of the environmental impacts of the Kemper IGCC coal plant and coal mine far exceed the possibility of actual gains for the project. Mitigation would not sufficiently address these impacts. This project would not be economically justified given the significant final damage the State of Mississippi will sustain as a result.

**Response:** Comment noted. DOE will consider the potential impacts addressed in the EIS before issuing a Record of Decision.

**BC-01** And what is the carbon footprint going to be?

**Response:** Greenhouse gas (GHG) emissions and effects on global climate change are addressed in the EIS.

- BC-02:** We had 12 to 16 inches of rain, and if it had not been for the low lands, the swampy area, my pond, and then a hole the beavers dug in my dam which leaks through, I thought my goodness, I would have to swim out of here.
- So all of that, plus there is a stream way down in the bottom of my forest that picks up the rest of it and takes it off. So there are proposed things that are going to be shut off, and it has me quite worried, because I have a well, because I don't have water piped in.
- Response:** Comment noted. Flood control and the potential for flood impacts were evaluated as part of the Draft EIS and updated in the Final EIS (see also the responses to FEMA-01 and FEMA-02). This information is contained in Subsection 4.2.8.2. The response to the next comment addresses water wells.
- BC-03:** So I have a well that I paid \$6,500 for, going into an aquifer. Well, what is going to happen to that?
- Response:** The Lower Wilcox aquifer is the principal water supply aquifer in Kemper County. Ground water availability from, or quality within, the Lower Wilcox aquifer is not expected to be adversely affected. As explained in Subsection 4.2.5 and illustrated in Figure 3.4-6, more than 150 ft of low permeability materials separate the deepest mining excavation from the top of the Lower Wilcox aquifer.
- BC-04:** So I'm not concerned just about myself, and of course, I am concerned, having been a cancer nurse and seeing what environmental disarray can cause our health, but also about the animals and the flora and I'm an organic gardener, well, that will be gone. Organics, you know, you can't have arsenic and carbon and selenium, that's not organic.
- Response:** Comment noted.
- JO-01:** Anyway, I just don't understand why the Department of Energy is considering guaranteeing a loan to Mississippi Power through, pursuant to, as you say, the 2005 Energy Policy Act, when Mississippi -- when Mississippi Power has forced the state, basically, I mean, as far as I can tell, the Public Service Commission, two to one against every one of those standards, no renewable portfolio, no kinds of renewable energy being used, no smart metering, no net metering, nothing.
- Response:** The Energy Policy Act of 2005 authorizes DOE to provide loan guarantees for projects that meet certain conditions. Mississippi Power Company has met the preliminary requirements and has submitted a loan guarantee application. DOE is considering the application under the terms specified in the Energy Policy Act of 2005. The commitment of Mississippi Power to renewable energy or conservation is not a condition of the loan guarantee.
- JO-02:** ...[B]ut one little thing I was thinking of in the strip mining is, you know, you can say how much CO2 is not going to be sent into the air because it's going to be sequestered, but what about all the CO2 that could have been sequestered by those trees, those 12,000 acres of trees that are going to be totally destroyed? That's a little calculation that probably needs to be made, you know, 40 years of no trees on 12,000 acres, that's going to not clean up some carbon dioxide in the atmosphere.
- Response:** An analysis of the sequestration potential lost due to mining has been added to Subsection 6.1.2 in the Final EIS. In summary, up to 790 metric tons of carbon sequestration potential would be lost per year of mining. However, within several years of beginning the mining operation, reclamation/reforestation of the land would begin. The total sequestration potential lost over the life-

of-mine period is estimated to be 86,000 tons. After mining is complete, the entire life-of-mine areas will have been reclaimed, and there would be no additional loss in sequestration potential.

**JO-03:** When you don't have the wetlands to filter the water and all that rain goes through is coal, your ground water is going to get bad like it is in West Virginia, and no coal company is going to come in and bring you some new water to come out of your tap.

**Response:** The ground water resources and potential impacts were evaluated in the Draft EIS (refer to Section 3.7 and Subsection 4.2.5). In the event of impacts to potable water quality or quantity by the surface mine, §2521 of the MDEQ regulations requires the coal company to provide alternative water sources.

**BR-01:** ...[W]hat happens at the end of 40 years? I've heard nobody make any comments as to what's going to happen to this facility.

The way I am left understanding it at the end of 40 years when this 12,000 acres is mined out, then what's going to happen? We're just going to stop, just going to sit there, something else going to have to be done? I can't imagine a commercial enterprise abandoning a facility after 40 years or so. I think we need to be made aware of what's going to happen at that point.

**Response:** A new Subsection 2.4.5, which describes the process of closure and decommissioning of the project, has been added to the Final EIS.

**BR-02:** Well, we've got -- we have removed a volume of coal that has to be replaced.

I understand this sliding window that they have described in a very simplistic manner, but it concerns me, if you're moving -- if you're removing a certain volume of coal, then you've got to have something to replace that same volume of coal with at the end of the project when you're reclaiming so that your land is brought back up to the same surface height as it was before the mining took place.

I have not seen or heard any of those issues addressed, so I think the DOE needs to consider that very seriously. What's going to be done, and if there's going to be soil brought in from some other location, what other area is going to suffer for the soil to be brought in from another location to replace the lignite coal that has now been removed?

**Response:** Please refer to response to CC-02.

**BR-03:** I have concerns as a citizen that I don't want this to become a self-justifying existence of an operation where the government is going to say or DOE or Mississippi Power is going to say well, we've invested millions or billions of dollars, and it just is not economically feasible to shut it down now, even though it's not commercially viable.

**Response:** Subsection 2.4.4 of the EIS addresses the potential outcome of an unsuccessful demonstration.

**BR-04:** But if it turns out, sir, that the determination is made at the end of four years that this is not a commercially viable plant, and as I appreciate, having heard some of the Public Service hearing testimony and seen in the news media, what's going to happen to us poor ratepayers who are having to foot the bill up front if it is determined that it is not commercially viable and it is shut down, what guarantee is the DOE and the Federal government going to make that we, as ratepayers, are going to get our money back? That -- I would like for that to be given consideration, also.

**Response:** DOE does not have the authority to reimburse ratepayers for any costs. That is the jurisdiction of the Mississippi PSC.

**CC-03:** ...[T]here's another impact that people just haven't thought about, employee top peak construction of these folks' land, a thousand people, that would reduce the population of Kemper County, all the thousands you see here in Kemper County by 10 percent. There's going to be some high paid people there in a rural area with nothing to do.

I have worked all over the country with -- with these type people. They're going to find something to do, drug use -- studies show drug use goes up, crime goes up, property crime goes up, and pray that we don't have any murders and rapes, but that is a concern.

**Response:** Subsection 4.2.11 notes that a boomtown effect is not anticipated, first, due to the likelihood that construction and operational employees would locate in Philadelphia and Meridian in order to take advantage of existing housing opportunities. These cities would not be overwhelmed by the relatively much smaller numbers of employees. Second, the majority of workers would likely be drawn from the nearby area.



U.S. Department of Energy

National Energy Technology Laboratory



**REGISTERED ATTENDANCE AT PUBLIC HEARING  
(VOLUNTARY)**

Name and Mailing Address: <i>Karl Worden 1024 Palmdale/PAIA RD DEKALB WAS</i>		Do you wish to make an oral statement at this meeting? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Phone: (601) <i>743-2853</i>		Do you wish to submit a written statement? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Name of Organization or Agency and your position:		Do you wish to receive a copy of the Final EIS? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Name of Organization or Agency and your position:		If yes, which media would you prefer: <input type="checkbox"/> Hard copy <input checked="" type="checkbox"/> CD	
Name of Organization or Agency and your position:		Whom are you representing? <input checked="" type="checkbox"/> Self <input type="checkbox"/> Federal, state, or local government agency	
Name of Organization or Agency and your position:		<input type="checkbox"/> Organization <input type="checkbox"/> Other	
Comments: <i>INFRASTRUCTURE IN RELATION TO COUNTY RESPONSIBILITY &amp; ASSOCIATED COST</i>			

RW-01



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**REGISTERED ATTENDANCE AT PUBLIC HEARING  
(VOLUNTARY)**

Name and Mailing Address: <i>JOE L. SORWELL 350 Lyndville Rd DEKALB MS 39228</i>		Do you wish to make an oral statement at this meeting? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Phone: (601) <i>450-0070</i>		Do you wish to submit a written statement? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Name of Organization or Agency and your position:		Do you wish to receive a copy of the Final EIS? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Name of Organization or Agency and your position:		If yes, which media would you prefer: <input type="checkbox"/> Hard copy <input type="checkbox"/> CD	
Name of Organization or Agency and your position:		Whom are you representing? <input checked="" type="checkbox"/> Self <input type="checkbox"/> Federal, state, or local government agency	
Name of Organization or Agency and your position:		<input type="checkbox"/> Organization <input type="checkbox"/> Other	
Comments: <i>POS FOR THE PLANT IN KEMPER CO.</i>			

JB-01



U.S. Department of Energy

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**REGISTERED ATTENDANCE AT PUBLIC HEARING  
(VOLUNTARY)**

Name and Mailing Address: <i>Ray Clarke 1905 Liberty 495 Rd. DEKALB, MS 39328</i>		Do you wish to make an oral statement at this meeting? <input type="checkbox"/> Yes <input type="checkbox"/> No	
Phone: ( ) - -		Do you wish to submit a written statement? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Name of Organization or Agency and your position:		Do you wish to receive a copy of the Final EIS? <input type="checkbox"/> Yes <input type="checkbox"/> No	
Name of Organization or Agency and your position:		If yes, which media would you prefer: <input type="checkbox"/> Hard copy <input type="checkbox"/> CD	
Name of Organization or Agency and your position:		Whom are you representing? <input checked="" type="checkbox"/> Self <input type="checkbox"/> Federal, state, or local government agency	
Name of Organization or Agency and your position:		<input type="checkbox"/> Organization <input type="checkbox"/> Other	
Comments: <i>this plant should be put some where else, where there are no families, animals and other wild life. There are so many families with medical problems and our on back they don't need all this dust and noise. These people that go up and down the road don't have no respect for anyone, they have two over mail boxes and turning around in drive ways where the land is posted. God help these money hungry people, that don't give a damn about anyone else, and how they feel. Just one question for the Mississippi power? How would you like this, if it was in your back yard?</i>			

RC-01



U.S. Department of Energy



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### REGISTERED ATTENDANCE AT PUBLIC HEARING (VOLUNTARY)

Name and Mailing Address: <u>Vanessa Clarke</u> <u>815 Liberty 455 Rd.</u> <u>DeKalb, Ms. 39328</u>		Do you wish to make an oral statement at this meeting? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Phone: <u>(601) 737-8551</u>		Do you wish to submit a written statement? <input type="checkbox"/> Yes <input type="checkbox"/> No
Name of Organization or Agency and your position:		Do you wish to receive a copy of the Final EIS? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Whom are you representing? <input checked="" type="checkbox"/> Self <input type="checkbox"/> Federal, state, or local government agency <input type="checkbox"/> Organization <input type="checkbox"/> Other		If yes, which media would you prefer: <input checked="" type="checkbox"/> Hard copy <input type="checkbox"/> CD
Comments: <u>This plant should be constructed</u> <u>someplace else, not in Kemper County.</u> <u>We do not need this type of plant in our</u> <u>Over</u>		

peaceful community where it will  
damage land, wildlife and people  
who live by it. We don't need the  
heavy equipment tearing up our  
tax paid roads and the trespassing  
on our private property!

VC-01



U.S. Department of Energy



National Energy Technology Laboratory

### REGISTERED ATTENDANCE AT PUBLIC HEARING (VOLUNTARY)

Name and Mailing Address: <u>TOMMY GUNN</u> <u>1288 Cotton Gin Road</u> <u>Meridian, Ms. 39325-8904</u>		Do you wish to make an oral statement at this meeting? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Phone: <u>601 1679-1246</u>		Do you wish to submit a written statement? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Name of Organization or Agency and your position:		Do you wish to receive a copy of the Final EIS? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Whom are you representing? <input checked="" type="checkbox"/> Self <input type="checkbox"/> Federal, state, or local government agency <input type="checkbox"/> Organization <input type="checkbox"/> Other		If yes, which media would you prefer: <input checked="" type="checkbox"/> Hard copy <input type="checkbox"/> CD
Comments: <u>our power refinery from here</u>		

TG-01



U.S. Department of Energy



National Energy Technology Laboratory

### REGISTERED ATTENDANCE AT PUBLIC HEARING (VOLUNTARY)

Name and Mailing Address: <u>HARLAN DAVIS</u> <u>1531 COTTON GIN RD</u> <u>MERIDIAN MS 39325</u>		Do you wish to make an oral statement at this meeting? <input type="checkbox"/> Yes <input type="checkbox"/> No
Phone: <u>601 1679-7957</u>		Do you wish to submit a written statement? <input type="checkbox"/> Yes <input type="checkbox"/> No
Name of Organization or Agency and your position:		Do you wish to receive a copy of the Final EIS? <input type="checkbox"/> Yes <input type="checkbox"/> No
Whom are you representing? <input checked="" type="checkbox"/> Self <input type="checkbox"/> Federal, state, or local government agency <input type="checkbox"/> Organization <input type="checkbox"/> Other		If yes, which media would you prefer: <input type="checkbox"/> Hard copy <input type="checkbox"/> CD
Comments: <u>LAND OWNER FOR POWER LINE ROW</u> <u>SISTER OWNS SUBSTATION LAND</u>		

HD-01



U.S. Department of Energy

National Energy Technology Laboratory



**REGISTERED ATTENDANCE AT PUBLIC HEARING  
(VOLUNTARY)**

Name and Mailing Address: <i>STEVE MCKENNA 741 County Rd 313 PACHTA, MS 39247</i>		Do you wish to make an oral statement at this meeting? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Phone: <i>(601) 97274926</i>		Do you wish to submit a written statement? <input type="checkbox"/> Yes <input type="checkbox"/> No
Name of Organization or Agency and your position: <i>MCKENNA RANCH - I AM AGAINST MISS POWER - TAKING MY LAND FOR FREE AND TRYING TO USE MY 5 ACRES</i>		Do you wish to receive a copy of the Final EIS? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Who are you representing? <input checked="" type="checkbox"/> Self <input type="checkbox"/> Federal, state, or local government agency <input type="checkbox"/> Organization <input type="checkbox"/> Other		If yes, which media would you prefer: <input checked="" type="checkbox"/> Hard copy <input type="checkbox"/> CD
Comments: <i>I don't want the line on my property - there is a pipe used for 1 year and the power company has destroyed my well water, I recommend they buy that pipeline that is near my well and only 1 year - I am against</i>		

SM-04



U.S. Department of Energy

National Energy Technology Laboratory



**REGISTERED ATTENDANCE AT PUBLIC HEARING  
(VOLUNTARY)**

Name and Mailing Address: <i>M. S. Winkle PO Box 246 DeKalb MS 39228</i>		Do you wish to make an oral statement at this meeting? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Phone: <i>(601) 743-2449</i>		Do you wish to submit a written statement? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Name of Organization or Agency and your position: <i>EC Servel Authority</i>		Do you wish to receive a copy of the Final EIS? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Who are you representing? <input checked="" type="checkbox"/> Self <input type="checkbox"/> Federal, state, or local government agency <input checked="" type="checkbox"/> Organization <input type="checkbox"/> Other		If yes, which media would you prefer: <input type="checkbox"/> Hard copy <input type="checkbox"/> CD
Comments: <i>I support the lignite plant</i>		

MW-01

Comments delivered during public hearing, December 1, 2009.

Record of Contacts and Communication Efforts with Mississippi Power Company

I have expressed my opposition to the proposed location of the MPC's Transmission Line across my property from the moment that I learned that was the company's plan. It is obvious that the proposed route was determined by laying a straight-edge on a map and drawing a line from point A to point B. No consideration was given to what may be near the proposed line (like houses). The company's attitude is "what's yours must be ours - that is too bad, but get out of the way! We are taking what we want!" Never mind that I bought the property, fenced the property, cleared the property, pay taxes on the property and MPC has done none of those things.

My little place is only twenty acres of open land. Highway 495 is my boundary on the entire East side. Brown Hooke Road is the boundary on the entire North side. EMEPA already has Power Lines on my property down both of these roads. MPC proposes to locate their Transmission Line over EMEPA's line on the Northeast of my property and run it diagonally across to the Southwest of my property. This would place the line very close to my house on Brown Hooke Road and just behind my neighbor's house on Highway 495. Another neighbor has a house across the road from me. Locating the line so close to these three houses would not only be an "eye-sore", but would destroy our property value! No one would want our now valuable property any more and we would be forced to stay next to the unsightly monstrosity.

I suggested that the Transmission Line be located across Highway 495 along the Tennessee Gas Line that has been there for more than fifty years. The gas line runs through to south Meridian and houses and development are not located real close to it. My question is: If houses cannot be built close to existing Transmissions Lines and Pipe Lines, why can new Transmissions Lines and Pipe Lines be Located close to existing houses? Why can't good common sense be used?

Apparently, no serious consideration has been given to rerouting the line away from our houses because I have not had a communication with MPC since September 25, 2008 (over a year) and two of my neighbors were contacted by MPC last week to negotiate a payment amount for putting the line on their land. It seems to me that MPC is putting the horse before the wagon by assuming that they already have your (Public Service Commission) approval.

LE-04

5-22-08 I received a letter from Harry A. Speaker (copy attached)

5-29-08 I called Dan Fleming (not available) talked with Valerie Alkezer (not sure of spelling). I said "Do Not want line on my property".

8-9-08 I talked with Dan Fleming. I said, "I do not want line on my property - will fight it- pass information on- reroute line."

8-16-08 I refused to let two men and two women on my property to "survey for line"

8-19-08 Wink Glover, attorney for MPC, called me. I explained that I refused to let the surveyors on my property to facilitate communication with MPC and that it worked. If I had let them do their work, Mr. Glover and I would not have talked. I told Mr. Glover that I did not want the Line on my property and asked him to report my feelings to the MPC's administration and board. He said that he would. I then told him that the surveyors could return and do their work. They Did after lunch.

8-20-08 I had a conference with Mr. Tommy Dulaney, MPC Board Member, to express my feelings and to Request his assistance.

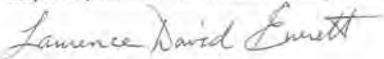
8-26-08 Harry Speaker and David Buckner came to see me and to see where the Transmission Line would Be located. I asked them to relocate the line across Highway 495 through a wooded area. Harry Speaker was rude and stated "nobody wants the line on their land". I told him that was not true Because one of my friends, who owns more land than I do, told me that he was pleased

That MPC was going to clear more pasture land for him and pay him for doing so. Because Harry Speaker was so rude, I told him that I was not intimidated by any one and that, because I am a Retired school superintendent, I know people all over the state.

- 9-9-08 A second survey team showed up on my property. I confronted them. I had received no information prior to their coming. I called David Buckner at 1:00 pm (no answer) I left a message. I then called Harry Speaker. He was rude and threatened me with "legal action" The surveyors gave me a copy of a letter dated June 9, 2008 and signed by John Templeton and addressed to "Property Owners (Kemper, Lauderdale, Clarke, & Jasper Counties). I had not received or read this letter. I told the survey team to go ahead and complete their work. The work was completed 9-10-08 in the morning (letter attached).
- 9-18-09 I attended a Public Hearing in DeKalb, MS. I spoke at the meeting in order that my opposition to the proposed route of the Transmission Line near my house and my neighbors' houses be recorded in the minutes of the hearing.
- 9-19-08 I talked with Anthony Topazi by telephone. He was extremely nice. After we talked, he said that he understood my feeling and that he would have Vice-President Don Horsely look into the possibility of a line change and that he would have Don Horsley contact me.
- 9-25-08 Don Horsley called me. He was very nice. Don said he would look into the possibility of relocating the line and that the "present route is preliminary". He said that there would be "no activity for about three weeks".

**I HAVE HAD NO CONTACT WITH MISSISSIPPI POWER COMPANY SINCE 9-25-08. THAT IS OVER A YEAR.**

Respectfully submitted for the record and for you information this date. October 9, 2009.



Laurence David Everett  
6351 Brown Hooke Road  
Meridian, MS 39305

**LE-04  
(contd.)**

- RW-01:** Infrastructure in relation to county responsibility and associated cost
- Response:** Comment noted. Subsection 4.2.11 discusses potential impacts to social and economic resources.
- JB-01:** Pos. for the plant in Kemper Co.
- Response:** Comment noted.
- RC-01** This plant should be put somewhere else, where there are no families, animals and other wildlife. There are so many families with medical problems and they don't need all this dust and noise. These people that go up and down the road don't have no respect for anyone, they have run over mail boxes and turning around in driveways where the land is posted. God help these money hungry people, that don't give a damn about anyone else, and how they feel. Just one question for the Mississippi Power? How would you like this, if it was in your back yard?
- Response:** Comment noted. The issues raised are addressed in the EIS. Impacts to social and economic resources are addressed in Subsection 4.2.11; impacts to terrestrial and aquatic ecology are addressed in Subsections 4.2.6 and 4.2.7, respectively.
- VC-01:** This plant should be constructed someplace else, not in Kemper County. We do not need this type of plant in our peaceful community where it will damage land, wildlife and people who live by it. We don't need the heavy equipment tearing up OUR TAX PAID ROADS and the trespassing on our PRIVATE PROPERTY!
- Response:** Comment noted. The issues raised are addressed in Chapter 4 of the EIS.
- TG-01:** Own proposed right-of-way power line
- Response:** Comment noted.
- HD-01:** Land owner for power line right-of-way; sister owns substation land
- Response:** Comment noted.
- SM-04:** I am against MS Power taking my land for free and trying to use my 56 miles of roads on my property. There is a pipeline used for 1 year and the power company in Enterprise, MS, went busted. I recommend they buy that pipeline that is new and used only 1 year. I am against!
- Response:** Comment noted. With regard to the pipeline, see the response to SM-02.
- MW-01:** I support the lignite plant
- Response:** Comment noted.
- LE-04** I have expressed my opposition to the proposed location of the MPC's Transmission Line across my property from the moment that I learned that was the company's plan. It is obvious that the proposed route was determined by laying a straight-edge on a map and drawing a line from point A to point B. No consideration was given to what may be near the proposed line (like houses). The company's attitude is "what's yours must be ours - that is too bad, but get out of the way! We are taking what we want!" Never mind that I bought the property, fenced the property, cleared the property, pay taxes on the property and MPC has done none of those things.

My little place is only twenty acres of open land. Highway 495 is my boundary on the entire East side. Brown Hooke Road is the boundary on the entire North side. EMEPA already has Power Lines on my property down both of these roads. MPC proposes to locate their Transmission Line over EMEPA's line on the Northeast of my property and run it diagonally across to the Southwest of my property. This would place the line very close to my house on Brown Hooke Road and just behind my neighbor's house on Highway 495. Another neighbor has a house across the road from me. Locating the line so close to these three houses would not only be an "eye-sore", but would destroy our property value! No one would want our now valuable property any more and we would be forced to stay next to the unsightly monstrosity.

I suggested that the Transmission Line be located across Highway 495 along the Tennessee Gas Line that has been there for more than fifty years. The gas line runs through to south Meridian and houses and development are not located real close to it. My question is: If houses cannot be built close to existing Transmissions Lines and Pipe Lines, why can new Transmissions Lines and Pipe Lines be Located close to existing houses? Why can't good common sense be used?

Apparently, no serious consideration has been given to rerouting the line away from our houses because I have not had a communication with MPC since September 25, 2008 (over a year) and two of my neighbors were contacted by MPC last week to negotiate a payment amount for putting the line on their land. It seems to me that MPC is putting the horse before the wagon by assuming that they already have your (Public Service Commission) approval.

5-22-08 I received a letter from Harry A. Speaker (copy attached)

5-29-08 I called Dan Fleming (not available) talked with Valerie Aikezer (not sure of spelling). I said "Do Not want line on my property".

8-9-08 I talked with Dan Fleming. I said, "I do not want line on my property - will fight it- pass Information on- reroute line.

8-16-08 I refused to let two men and two women on my property to "survey for line"

8-19-08 Wink Glover, attorney for MPC, called me. I explained that I refused to let the surveyors On my property to facilitate communication with MPC and that it worked. If I had let them do Their work , Mr. Glover and I would not have talked. I told Mr. Glover that I did not want the Line on my property and asked him to report my feelings to the MPC's administration and board. He said that he would. I then told him that the surveyors could return and do their work. They Did after lunch.

8-20-08 I had a conference with Mr. Tommy Dulaney, MPC Board Member, to express my feelings and to Request his assistance.

8-26-08 Harry Speaker and David Buckner came to see me and to see where the Transmission Line would Be located. I asked them to relocate the line across Highway 495 through a wooded area. Harry Speaker was rude and stated "nobody wants the line on their land". I told him that was not true Because one of my friends, who owns more land that I do, told me that he was pleased That MPC was going to clear more pasture land for him and pay him for doing so. Because Harry Speaker was so rude, I told him that I was not intimidated by any one and that, because I am a Retired school superintendent, I know people all over the state.

9-9-08 A second survey team showed up on my property. I confronted them. I had received no Information prior to their coming. I called David Buckner at 1:00 pm (no answer) I left A message. I then called Harry Speaker. He was rude and threatened me with "legal Ac-

tion” The surveyors gave me a copy of a letter dated June 9,2008 and signed by John Templeton and addressed to “Property Owners (Kemper, Lauderdale, Clarke, & Jasper Counties). I had not received or read this letter. I told the survey team to go ahead and Complete their work. The work was completed 9-10-08 in the morning (letter attached).

9-18-09 I attended a Public Hearing in DeKalb, MS, I spoke at the meeting in order that my Opposition to the proposed route of the Transmission Line near my house and my neighbors’ Houses be recorded in the minutes of the hearing.

9-19-08 I talked with Anthony Topazi by telephone. He was extremely nice. After we talked, he said that He understood my feeling and that he would have Vice-President Don Horsely look into the Possibility of a line change and that he would have Don Horsley contact me.

9-25-08 Don Horsley called me. He was very nice. Don said he would look into the possibility of Relocating the line and that the “present route is preliminary”. He said that there would be “no activity for about three weeks”.

I HAVE HAD NO CONTACT WITH MISSISSIPPI POWER COMPANY SINCE 9-25-08. THAT IS OVER A YEAR

**Response:**

Comments noted. As stated in the response to LE-02, Mississippi Power follows a routing procedure that requires it to avoid houses and other sensitive areas, if reasonably practical. The proposed sizes of the rights-of-way outlined in the EIS incorporate safety and functional requirements as set forth by the National Electric Regulatory Council, Federal Energy Regulatory Commission, Mississippi PSC, and National Electric Safety Code, among others, to protect public safety and the operation of the line. And, as stated in the response to LE-03, Mississippi Power is currently reviewing requests from the commenter to relocate the proposed transmission and pipeline.



U.S. Department of Homeland Security  
 Federal Emergency Management Agency R4  
 3003 Chamblee-Tucker Rd  
 Atlanta GA 30341-4112

**FEMA**

November 23, 2009

Richard A. Hargis, Jr.  
 NEPA Documents Manager  
 U.S. Department of Energy  
 National Energy Technology Laboratory  
 P.O. Box 10940  
 Pittsburgh, PA 15236

**RE:** Draft EIS for the Kemper County IGCC Project

Dear Mr. Hargis:

Thank you for the opportunity to comment on:

Kemper County IGCC Project Draft EIS

Section 2(a)(2) of EO 11988 allows an agency to permit activities in a floodplain only if there is no practicable alternative to locating in the floodplain. FEMA accepts that there is no practicable alternative in the case of functionally dependent uses such as roads and utility lines not parallel to the water body. Whenever a project must be located in the floodplain because there is no practicable alternative, section 2(a)(2) requires that the project be designed to minimize potential harm.

We understand *designed to minimize potential harm* to mean compliant with the following:

1. All new construction and substantial improvements-
  - (i) are designed (or modified) and adequately anchored to prevent flotation, collapse, or lateral movement of involved structures resulting from hydrodynamic and hydrostatic loads, including the effects of buoyancy,
  - (ii) are constructed with materials resistant to flood damage,
  - (iii) are constructed by methods and practices that minimize flood damages, and
  - (iv) are constructed with electrical, heating, ventilation, plumbing, and air conditioning equipment and other service facilities that are designed and/or located so as to prevent water from entering or accumulating within the components during conditions of flooding.
2. All utility lines are designed to minimize or eliminate infiltration of floodwaters into the utility line.
3. All utility lines that cross a watercourse do so in a manner that maintains the flood carrying capacity of the watercourse.
4. All construction that is to occur within the boundaries of a city or county that participates in the National Flood Insurance Program (NFIP) complies with any applicable ordinance promulgated locally to implement NFIP guidelines.

All projects that must be located in the floodplain should meet these criteria. EO 11988 appears to forbid issuance of a permit for any project in a floodplain that does not meet these criteria. Although the project types you describe probably would not notably change flood flows, they may still affect people's flood risks.

FEMA-01

Kemper County, MS  
 11-23-2009  
 Page 2

Please contact your Local Floodplain Administrator for additional information, help, and local floodplain management determination. If your projects comply with the Local floodplain management ordinance, then they will not need further FEMA review.

FEMA-02

Please contact me ([william\\_straw@dhs.gov](mailto:william_straw@dhs.gov) or 770-220-5432) if we can help further. Thank you again.

Sincerely,

William R. Straw, PhD  
 Regional Environmental Planning &  
 Historic Preservation Officer

WS:bb

**FEMA-01:** Section 2(a)(2) of EO 11988 allows an agency to permit activities in a floodplain only if there is no practicable alternative to locating in the floodplain. FEMA accepts that there is no practicable alternative in the case of functionally dependent uses such as roads and utility lines not parallel to the water body. Whenever a project must be located in the floodplain because there is no practicable alternative, Section 2(a)(2) requires that the project be designed to minimize potential harm.

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  - (ii) are constructed with materials resistant to flood damage,
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All projects that must be located in the floodplain should meet these criteria. EO 11988 appears to forbid issuance of a permit for any project in a floodplain that does not meet these criteria. Although the project types you describe probably would not notably change flood flows, they may still affect people's flood risks.

**Response:** Subsection 7.1.6 discusses DOE's responsibilities under EO 11988 and 10 CFR 1022 with regard to floodplain impacts. The EIS contains information that fulfills the floodplain assessment requirements of 10 CFR 1022.13. DOE will prepare a floodplain statement of findings separate from the Final EIS under 10 CFR 1022.14(c). DOE will consider the criteria specified in this document as a condition of the ROD.

**FEMA-02:** Please contact your Local Floodplain Administrator for additional information, help, and local floodplain management determination. If your projects comply with the Local floodplain management ordinance, then they will not need further FEMA review.

**Response:** Kemper County has adopted a National Flood Insurance Plan ordinance. DOE has corresponded with the Kemper County floodplain administrator, who advises that flooding conditions historically experienced in the vicinity of the Kemper County IGCC Project study area include 18 homes along the Houston Creek tributary to Okatibbee Creek immediately upstream of the mine. Several road bridges in the immediate upstream area also have been overtopped by flood-

waters. The most significant recent flood flows occurred in April 2003 when two 100-year storm events occurred. Applications to extract lignite from Mine Block E, including the construction of the currently proposed levee, are currently projected to be filed some 25+ years into the future (circa 2035). The potential adverse effects to offsite flooding conditions resulting from proposed construction of a levee adjacent to Mine Block E by NACC as described previously would be addressed by MDEQ when considering whether to permit extraction of lignite in Mine Block E and by USACE when evaluating whether to approve a levee in the riparian wetlands adjacent to Okatibbee Creek as part of a phased Section 404 permit approval. Since DOE's involvement in the project concludes at the end of the demonstration period, DOE would have no control over the implementation of the protections provided to offsite property owners and Kemper County by SMCRA and Clean Water Act (CWA) Section 404, but DOE believes these applicable regulations would result in avoidance, minimization, and mitigation of these potential adverse effects. See also new text in Subsection 4.2.8.2 for more information.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 4  
ATLANTA FEDERAL CENTER  
61 FORSYTH STREET  
ATLANTA, GEORGIA 30303-8960

December 18, 2009

Mr. Richard A. Hargis  
U.S. Department of Energy  
National Energy Technology Laboratory  
626 Cochrans Mill Road  
P.O. Box 10940  
Pittsburgh, PA 15236

RE: EPA Comments Regarding  
Draft Environmental Impact Statement (DEIS) for the  
Kemper County Integrated Gasification Combined-Cycle (IGCC) Project  
CEQ No. 20090374

Dear Mr. Hargis:

The U.S. Environmental Protection Agency (EPA), pursuant to Section 102(2)(C) of the National Environmental Policy Act (NEPA) and Section 309 of the Clean Air Act, reviewed the subject Draft Environmental Impact Statement (DEIS) for the proposed power plant and lignite mine. The project also includes new electrical power transmission lines and upgrades of some existing transmission lines, a natural gas supply pipeline, a reclaimed water supply pipeline, and a carbon dioxide (CO<sub>2</sub>) pipeline for offsite use in enhanced oil recovery (EOR). The purpose of this letter is to provide EPA's NEPA review comments on the DEIS regarding the proposed project.

The U.S. Department of Energy (DOE) proposes to provide cost-shared funding and a loan guarantee under the Clean Coal Power Initiative (CCPI) for the proposed Integrated Gasification Combined-Cycle (IGCC) Project. Development of this CCPI demonstration project will include the adjacent lignite mine, electrical generating station structure and facilities, including an intake and discharge structures, cooling towers, and roads. We note that DOE's proposed funding and loan guarantee do not include the lignite mine, although the DEIS evaluates the impact of permitting the mine as a related federal action for which US Army Corps of Engineers (USCOE) is the lead agency.

The emissions reduction advantages of an IGCC system include less SO<sub>2</sub>, NO<sub>x</sub>, Hg, and particulate emissions compared to other lignite coal-fired power plants. The facility would convert lignite into a synthesis gas (syngas) to fuel the plant's combustion turbine generating units. The DEIS notes that up to 99% of sulfur from the lignite will be removed and converted to a marketable product; up to 92% of the mercury will be removed; and up to 90% of carbon monoxide in the syngas will be converted to carbon dioxide. Up to 67% of carbon dioxide will be scrubbed from plant stack emissions and in the process of subsequent usage for offsite enhanced oil recovery, some portion of the injected carbon dioxide may be sequestered. Since the use of the captured carbon dioxide for enhanced oil recovery presents an opportunity to evaluate the efficacy of carbon sequestration at the injection site, we recommend that the applicant implement monitoring to determine the efficiency of the sequestration.

EPA-01

We agree with the emissions reduction advantages and the efficient use of the byproducts of the IGCC process. However, there are inherent environmental concerns regarding the direct and cumulative impacts of power stations and mining operations. Potential impacts of the proposed power plant and lignite mine include air quality, water resources, wetlands, waste, and floodplain impacts; ecological, construction, community, cultural and archaeological resources, and cumulative effects. Ash containment and spill prevention, post-mining stream and habitat reclamation, wetlands mitigation, and surface water/drainage pathways are of particular concern to EPA.

EPA is reviewing the impacts to wetlands and streams in response to the COE's public notices for the Clean Water Act Section 404 permit applications, and is currently preparing a separate letter in accordance with Section 404 coordination procedures. One issue that needs to be addressed in particular is appropriate use of site protection instruments, (such as conservation easements or other legal instruments for protecting a compensatory mitigation area in perpetuity), which will be required by the COE for any permittee-responsible mitigation for the mining area and the IGCC site. Permittee-responsible mitigation refers to the restoration, establishment, enhancement or preservation of wetlands or streams undertaken by a permittee in order to compensate for wetland or stream impacts resulting from the project.

EPA supports the selection of the IGCC technology as the preferred alternative. Based on EPA's review of the DEIS, the DOE's preferred alternative (cost-shared funding and a loan guarantee to support the startup of the IGCC power plant) received a rating of "EC-2." This means that some environmental concerns exist regarding aspects of the proposed project, and that further information is requested in the Final EIS (FEIS). (See the enclosed *Summary of Rating Definitions and Follow up Action.*)

The DEIS notes that the other power generation technologies considered in the DEIS were dismissed by DOE because they do not meet the CCPI program's purpose and need, nor do they meet those of the applicant. The EC-2 rating is based on the selection of the IGCC alternative along with the proposed mitigation commitments. However, should a different alternative ultimately be pursued that would result in increased impacts, then additional NEPA evaluation and interagency coordination could be expected by EPA.

Our detailed comments are enclosed. We appreciate the opportunity to provide these comments, and appreciate your early and continuing coordination with us. If you have questions, please coordinate them with Ramona McConney (404/562-9615).

Sincerely,

Heinz J. Mueller, Chief  
NEPA Program Office  
Office of Policy and Management

EPA-02

EPA-03

EPA-04

EPA-05

Enclosures: EPA review comments  
Summary of Rating Definitions and Follow up Action  
Cc: Skip Young, P.G., USACOE Mobile District

EPA Comments for  
Draft Environmental Impact Statement (DEIS)  
Kemper County IGCC and Lignite Mine

General

The Kemper County IGCC Project DEIS analyses and modeling appear to be in accordance with appropriate EPA regulations and guidance. Our specific comments identify areas where clarification or additional information is requested.

EPA-06

Alternatives

Alternative sites, mine plans, water supply sources, linear facility routes, transmission line routes, carbon dioxide sequestration, and power generation technologies were evaluated.

*Alternative sites:* While the Kemper County site is the preferred site for the proposed project, alternative sites were considered in the EIS, consistent with NEPA. Due to the CCPI program's purpose and need, and the specific requirements of the proposed IGCC plant and lignite mine, the alternative sites and power generation technologies were dismissed from consideration.

*Alternative technologies:* In addition to the IGCC Solid Feed Gasifier technology using lignite coal, alternative technologies using lignite and sub-bituminous coal were evaluated. These technologies included the IGCC Slurry Feed Gasifier, subcritical pulverized coal, supercritical pulverized coal and ultra supercritical pulverized coal. The DEIS notes that the alternative power generation technologies considered in the DEIS were dismissed by DOE because they do not meet the CCPI program's purpose and need, nor do they meet the purpose and need of the applicant. However, should a different alternative ultimately be pursued that would result in increased impacts, then additional NEPA evaluation and interagency coordination could be expected by EPA.

EPA-07

Air Quality

The Kemper County Integrated Gasification Combined-Cycle (IGCC) Project DEIS generally addresses the important issues related to air quality and human health impacts from inhalation of air emissions from the proposed IGCC facility. The air quality analyses and modeling appear to be in accordance with appropriate EPA regulations and guidance. However, there are a few areas where additional supplemental information is required.

EPA-08

*PSD Permitting:* The proposed project requires a Prevention of Significant Deterioration (PSD) permit from the Mississippi Department of Environmental Quality (MDEQ), which was issued on October 14, 2008. This PSD permit addresses the types of control methods to be included for each PSD pollutant and estimates pollutant impacts on PSD Class I and II areas.

However, the FEIS should include updated information due to the pending revision the PSD Permit by MDEQ. We understand that this revision results from a change in equipment availability. Section 4.2.1.2, pages 4-5 through 4-14 of the DEIS summarizes the air quality modeling and analysis conducted for the PSD permit application. In addition, the FEIS should provide updated

EPA-09

information, consistent with the modeling and analysis conducted for the final PSD permit, if there are any differences from the information currently presented in the DEIS.

Further, the FEIS should include a discussion of fly and combustion ash, such as possible uses and safeguards, in relation to the PSD Permit.

#### Air Toxics

Since the State of Mississippi has responsibility for submitting the State Plan encompassing all subject coal-fired facilities in the State, allocating emissions, and overseeing the monitoring program, the applicant will need to continue coordinating with MDEQ on these issues.

The DEIS lacks a discussion on the fate and transport of persistent, bioaccumulative, toxic (PBT) hazardous air pollutants (HAPs), such as mercury. Once deposited on soil and surface water, PBTs can cause significant ecological harm. Please include discussion of the fate and transport in wetlands, waterways, and biota in the FEIS. We recommend that you coordinate with the State of Mississippi regarding fish tissue data available for the area. Additionally, the current state of concentrations and how the facility is likely to affect these concentrations should be considered.

Sections 3.3.2 and 3.3.3, pages 3-2 through 3-10 of the DEIS provide a good summary of the affected environment for the six criteria air pollutants. However, there is only a brief reference to HAPs (or air toxics) on page 3-10. Additional information regarding the ambient levels and emissions of air toxics should be provided in this Section of the DEIS. Examples of data that could be provided include:

- Measured ambient air concentrations from air toxics monitors (according to the MDEQ website, there are 5 air toxics monitoring sites in Mississippi with the closest site being located in Jackson, Mississippi.) ([http://www.deq.state.ms.us/MDEQ.nsf/page/Air\\_MonitoringSites?OpenDocument](http://www.deq.state.ms.us/MDEQ.nsf/page/Air_MonitoringSites?OpenDocument))
- Sources and emission rates of air toxics contained in EPA's National Emissions Inventory (NEI) database. (<http://www.epa.gov/ttn/chieff/eeinformation.html>)
- Summarized results from the 2002 National Air Toxics Assessment (NATA) for Kemper County and how they compare with regional and national data. (<http://www.epa.gov/ttn/atw/nata2002/index.html>).

Section 4.2.19.2, pages 4-117 through 4-123 of the DEIS summarizes the HAPs Impact Analyses that were conducted for the project. It would be helpful to provide a reference to these analyses in Section 4.2.1 "Atmospheric Resources and Air Quality." It was not obvious from the title of Section 4.2.19 "Human Health and Safety" that this section would contain an analysis of the impacts from air toxics (HAPs). We suggest that these two sections be cross-referenced to help the reader locate all relevant information related to air impact analyses.

Section 4.2.19.2, page 4-118 discusses cancer and noncancerous risks. The DEIS indicates that the county-average risks from the IGCC project were added to Kemper County results from the 1999 NATA. The 2002 NATA is now available, and we recommend that the 1999 NATA data be

**EPA-09  
(contd.)**

**EPA-10**

**EPA-11**

**EPA-12**

**EPA-13**

**EPA-14**

**EPA-15**

replaced with the 2002 NATA data in the FEIS to reflect the most recent analysis. We also suggest revising Table 4.2-48 to reflect the 2002 NATA results.

The mercury deposition data presented in Section 4.2.19.2, Page 4-122 of the DEIS summarizes the mercury deposition modeling and analysis that was performed, and refers to Appendix R for more details. Appendix R provides a summary of the analyses that were conducted. The FEIS should cite the Clean Air Mercury Rule (CAMR) technical basis for focusing on mercury.

However, during our meeting on December 8, 2009, EPA recommended that the DOE evaluate the mercury deposition and risk analysis that were prepared as part of the EIS process for the Santee Cooper Pee Dee Generation Facility (a formerly proposed coal-fired power plant facility) located near Kingsburg, South Carolina. In an email dated December 10, 2009, EPA provided a copy of the Pee Dee "Mercury Deposition and Risk Assessment" to Mr. Joel Trouart and Ms. Rebecca Buell. We reiterate the recommendation that DOE consider supplementing the mercury deposition analysis for the Kemper County Project with relevant information and analyses from the Pee Dee analysis.

In the mercury deposition discussion in Section 4.2.19.2, page 4-122, the DEIS states that the analysis was done assuming 90% of the total mercury emissions from the CT/HRSG stack would be in the form of elemental mercury, 10% would be reactive gaseous mercury (RGM) also known as divalent mercury (Hg<sup>2+</sup>), and only trace amounts of particulate mercury. A reference should be provided for these mercury speciation assumptions. As the RGM fraction is the critical factor for the local impact deposition analysis, it is important that the speciation assumptions reflect the best information available for the proposed IGCC project.

The air quality cumulative effects analysis is briefly discussed in Section 6.1.1, Pages 6-1 through 6-2 of the DEIS. The discussion is limited to cumulative effects from criteria air pollutants. This DEIS section should be expanded to include a discussion of cumulative effects from air toxics as well. The risk analyses presented in Section 4.2.19.2 and Appendix R could be referenced in this discussion of cumulative effects from air toxics.

Appendix R of the DEIS summarizes the air dispersion and deposition modeling done for the screening level assessment of air toxics. Based on the summary discussion, it appears that the modeling procedures were appropriate. In order to verify that correct procedures and model input parameters were used, it would be helpful to have electronic copies of the input and output files from the modeling. EPA is requesting that copies of these files be provided on a CD or DVD to Mr. Rick Gillam in EPA Region 4's Air Quality Modeling and Transportation Section, so that a complete review of the modeling may be conducted. Mr. Gillam may be contacted at 404/562-9049 or [gillam.rick@epa.gov](mailto:gillam.rick@epa.gov).

#### Noise

All construction equipment should be equipped with factory mufflers and engine housings to minimize construction noise. All OSHA regulations relating to noise should be followed.

Blowdowns during plant operations are a concern to EPA, since the resulting noise is significant, and area residents will need to be notified in advance by the applicant. Provisions should be made to minimize noise impacts where feasible.

**EPA-15  
(contd.)**

**EPA-16**

**EPA-17**

**EPA-18**

**EPA-19**

**EPA-20**

According to the document, one residence will experience noise levels above EPA's threshold. Does this number include all residences/residents within the project area, or are buildings planned for sale or lease already excluded?

- How many residents will experience significant increases in the level of noise (doubling of noise levels or a +10dBA incremental increase) than they currently experience?
- Noise induced hearing loss is the most common occupational disease in the U.S., and can be severe in mining. For employee and residential health and safety, the FEIS should clarify the types of noise attenuating strategies that are proposed for the machinery and trucks that will be used onsite and on-road. Please review the NIOSH fact sheet on noise for recommendations.

#### Diesel Exhaust

NIOSH has determined that diesel exhaust is a potential human carcinogen, based on a combination of chemical, genotoxicity, and carcinogenicity data. In addition, acute exposures to diesel exhaust have been linked to health problems such as eye and nose irritation, headaches, nausea, and asthma.

Although every construction site is unique, common actions can reduce exposure to diesel exhaust. EPA recommends that the following actions be considered for construction and operating equipment:

- Using low-sulphur diesel fuel (less than 0.05% sulphur).
- Retrofit engines with an exhaust filtration device to capture DPM before it enters the workplace.
- Position the exhaust pipe so that diesel fumes are directed away from the operator and nearby workers, thereby reducing the fume concentration to which personnel are exposed.
- A catalytic converter reduces carbon monoxide, aldehydes, and hydrocarbons in diesel fumes. These devices must be used with low sulphur fuels.
- Ventilate wherever diesel equipment operates indoors. Roof vents, open doors and windows, roof fans, or other mechanical systems help move fresh air through work areas. As buildings under construction are gradually enclosed, remember that fumes from diesel equipment operating indoors can build up to dangerous levels without adequate ventilation.
- Attach a hose to the tailpipe of a diesel vehicle running indoors and exhaust the fumes outside, where they cannot reenter the workplace. Inspect hoses regularly for defects and damage.
- Use enclosed, climate-controlled cabs pressurized and equipped with high efficiency particulate air (HEPA) filters to reduce operators' exposure to diesel fumes. Pressurization ensures that air moves from inside to outside. HEPA filters ensure that any air coming in is filtered first.
- Regular maintenance of diesel engines is essential to keep exhaust emissions low. Follow the manufacturer's recommended maintenance schedule and procedures. Smoke color can signal the need for maintenance. For example, blue/black smoke indicates that an engine requires servicing or tuning.

EPA-21

EPA-22

- Work practices and training can help reduce exposure. For example, measures such as turning off engines when vehicles are stopped for more than a few minutes; training diesel-equipment operators to perform routine inspection and maintenance of filtration devices.
- When purchasing a new vehicle, ensure that it is equipped with the most advanced emission control systems available.
- With older vehicles, use electric starting aids such as block heaters to warm the engine, avoid difficulty starting, and thereby reduce diesel emissions.
- Respirators are only an interim measure to control exposure to diesel emissions. In most cases an N95 respirator is adequate. Respirators are for interim use only, until primary controls such as ventilation can be implemented. Workers must be trained and fit-tested before they wear respirators. Personnel familiar with the selection, care, and use of respirators must perform the fit testing. Respirators must bear a National Institute of Occupational Safety and Health (NIOSH) approval number. Never use paper masks or surgical masks without NIOSH approval numbers.

#### Surface Water Quality

Based on the DEIS and Clean Water Act Section 404 permit application, up to 32 miles of perennial stream channels and 24 miles of intermittent stream channels would temporarily be removed by construction and lignite extraction at the adjacent mine. In addition, three creeks would be diverted, and some intermittent streams would be intercepted by diversion channels and routed around active mining areas. Upon completion of all mining and reclamation, the pre-mining drainage patterns are proposed to be restored. EPA believes that it is important that creeks and streams be restored in a manner that maintains pre-mine stream flow rates and sinuosity.

The DEIS states that the diverted streams would provide similar habitat and support similar biological communities to the existing undisturbed streams. EPA recommends that the diverted streams be designed so that stream length and flow is at a rate similar to pre-mining, since a change in water velocity, although temporary, would create impacts. In addition, potential effects of stream diversions on the food chain for aquatic species should also be evaluated. Local air deposition of mercury should be discussed, along with plans for mitigation (see Air Toxics comments). This should be provided in the FEIS as well as the Section 404 permit application.

The Sowsashee Creek is on the impaired waters list and is a low-diversity habitat for aquatic species. Currently, effluent from publically owned treatment works (POTWs) is directed into Sowsashee Creek, but the IGCC project plans call for diverting effluent from the POTWs for use in the power plant's operations requiring cooling and non-potable water. This reclaimed water would be delivered to the site via pipelines. We note that the State of Mississippi's regulations require that new power generating facilities use nonpotable water. Therefore, Sowsashee Creek would receive less effluent from the POTWs, reducing the amount of fine particulate organics, ammonia, chlorine and biological oxygen demand in the creek.

Drainage from the area ultimately reaches Okatibbe Lake. The DEIS states that the total volume of water reaching this lake would not be appreciably altered, but that the timing and quality of flow would be altered during mining. Since Okatibbe Lake contains flood control structures subject to Section 408 of the River and Harbors Act, any alterations that would affect the structures would require further evaluation and compliance with the Section 408 regulations. We note that current

EPA-22  
(contd.)

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plans do not call for any impacts to Okatibbe Lake, however, if plans change, then Section 408 requirements will need to be met. This should be discussed in the FEIS.

*Recommendation:*

The diverted streams should be designed so that stream length and flow is at a rate similar to pre-mining. In addition, potential effects of stream diversions on the food chain for aquatic species should be evaluated. Local air deposition of mercury should be discussed, along with plans for mitigation. This should be provided in the FEIS as well as the Section 404 permit application.

**Groundwater Quality**

Current plans for water supply for the power plant cooling operations call for effluent usage from two City of Meridian POTWs, rather than from groundwater wells. The effluent should meet appropriate MDEQ water quality standards for nonpotable uses. However, the power plant could use up to 1 MGD of saline ground water from the Massive Sand aquifer if necessary. The lignite mine will require ongoing mine pit water control, which would cause drawdown in the shallow Middle Wilcox aquifer and could potentially adversely impact water supply of some local ground water wells.

Post-mining groundwater quality in the reclaimed mine area cannot be predicted with certainty, but it is likely that groundwater would contain a higher level of total dissolved solids (TDS).

*Recommendation:*

The FEIS should discuss drinking water sources in the area, the presence or absence of sole source aquifers, water quantity issues, and any other potential impacts to groundwater that might occur as the result of this project. Proposed groundwater monitoring and mitigation should also be discussed in the FEIS.

**Waters of the U.S.**

Per the DEIS, the Construction of the IGCC power plant would impact approximately 30 acres of wetlands and the lignite mine would impact approximately 2,374 acres of wetlands. The DEIS notes that many of the wetlands have already been impacted by conversion to pine plantations, and degraded by silt runoff as well. The IGCC plant and associated activities would also impact 3,632 linear feet (lf) of streams. The lignite mine would impact approximately 298,000 lf of streams, including perennial reaches.

Appendix P of the DEIS outlines the compensatory mitigation plans for these impacts and includes a monitoring schedule and success determination criteria. We note that this plan must be consistent with USACE's Mobile District's mitigation requirements pursuant to the Clean Water Act Section 404 permit for the project. We note that the compensatory mitigation plan needs to comply with the April 2008 Mitigation Rule. These impacts are being reviewed separately in response to the COE's public notices for the Section 404 permit applications, and EPA is preparing a letter in accordance with Section 404 coordination procedures. One issue to note is that appropriate use of site protection instruments will be required for any permittee-responsible mitigation.

**EPA-27  
(contd.)**

**EPA-28**

**EPA-29**

**EPA-30**

**EPA-31**

**NPDES Permitting**

Under the preferred alternative, no new process wastewater discharges are proposed for the power plant site, since the applicant will use reclaimed effluent for industrial cooling water supply. This would reduce flow in Sowashee Creek, an impaired water body.

However, an NPDES Permit will be required for storm water and for process water from the lignite mine. A pollution prevention plan will be required.

The DEIS needs to discuss in more detail all the proposed NPDES permit discharges and associated applicable effluent guidelines. The mining operations will be subject to 40 Code of Federal Regulations (C.F.R.) Part 434, which sets minimum guidelines for water discharged during active mining through post-mining operations from sedimentation basins, as well as effluent guidelines for coal preparation operations (e.g., coal cleaning). Point source discharges for the power plant (e.g., cooling tower blowdown, metals cleaning wastes, low volume wastes, etc.) will be subject to 40 C.F.R. 423.

In regard to the mining operations, recent studies by EPA Region 3 have highlighted the impacts of relatively high conductivity levels (or TDS concentrations) in coal mining effluent and the downstream aquatic life. The DEIS should discuss baseline biological and chemical conditions both upstream (if possible) and immediately downstream of NPDES-permitted sedimentation ponds. Sampling sites should include the following locations, and chemical and biological sampling should be done concurrently:

- One sampling point located upstream of the sediment pond.
- One in-stream monitoring site located immediately below the toe of a sedimentation pond outfall to be used for effluent monitoring requirements in this NPDES permit. The selected outfall must be representative of the composition effluent being discharged under worst case conditions (i.e. "representative outfall"). Therefore, the selected representative outfall must discharge to the receiving waterbody with the lowest 7-day consecutive flowrate with a 10-year frequency (i.e., 7Q10) on the mine site area which is currently undergoing the most mining disturbance, based on data/information submitted in the permit application.
- One sampling point located *the further* of 200 meters (656 feet) downstream of a NPDES-permitted sedimentation pond outfall or the furthest downstream location that is upstream of any intervening tributaries. The sampling point should be downstream of riprap and other disturbance and located within a relatively natural and intact riparian zone.
- One sampling point located downstream of the first intervening tributary.

Biological sampling should be implemented using the approved state protocols and methodology for benthic macroinvertebrates sampling. The suite of chemical parameters and test methods to be included in the discussion are as follows:

**EPA-32**

**EPA-33**

**EPA-34**

**List of Parameters of Concern for Coal Mines:**

Parameter	Test Method
Stream Flow, cubic feet per second	
Specific conductance, uS/cm	
TDS, mg/l	EPA Method 160.1
Sulfates, mg/l	EPA Method 300.0
Chlorides, mg/l	EPA Method 300.0
Bicarbonate Alkalinity, mg/l	
Total Dissolved Antimony, ug/l	EPA Method 200.8
Total Dissolved Arsenic, ug/l	EPA Method 200.8
Total Dissolved Beryllium, ug/l	EPA Method 200.8
Total Dissolved Cadmium, ug/l	EPA Method 200.8
Total Dissolved Chromium, ug/l	EPA Method 200.8
Total Dissolved Copper, ug/l	EPA Method 200.8
Total Dissolved Iron, ug/l	EPA Method 200.8
Total Dissolved Lead, ug/l	EPA Method 200.8
Total Dissolved Manganese, ug/l	EPA Method 200.8
Total Dissolved Mercury, ug/l	EPA Method 163.1E
Total Dissolved Nickel, ug/l	EPA Method 200.8
Total Dissolved Selenium, ug/l	EPA Method 200.8
Total Dissolved Silver, ug/l	EPA Method 200.8
Total Dissolved Thallium, ug/L	EPA Method 200.8
Total Dissolved Zinc, ug/l	EPA Method 200.8
Hardness, mg/l (as CaCO <sub>3</sub> )	SM 2340B
pH, Standard Units	
Total Calcium, ug/l	EPA Method 200.7
Total Magnesium, ug/l	EPA Method 200.7
Total Sodium, ug/l	
Total Potassium, ug/l	

The relatively high conductivity that results from coal mining correlates with the contact time of water with crushed rock. Therefore, the FEIS should also contain a more robust discussion of the best management practices (BMPs) that will be used to address ways to:

- Avoid and minimize the contact between storm water and overburden and mining areas, i.e., managing water through grading and water diversions to reduce the level of pollutants in discharges.
- Avoid and minimize infiltration and percolation of storm water through overburden and mining areas by hauling or conveying coal mine waste in a controlled manner and compact in each lift and use compact fill construction.
- Use weathered overburden materials (e.g., brown sandstones) as topsoil substitution where topsoil cannot be stockpiled for redistribution (these weathered overburden materials have reduced potential to leach pollution-related ions to discharge water).

**EPA-35**

- Implement the Forest Reclamation Approach to increase evapotranspiration and reduce runoff and restore vegetation.

**EPA-35  
(contd.)**

**Waste**

Wastes from mining operations and coal-fired power plants are of concern, particularly since spills and airborne particles from ash can potentially transport metals and hazardous components offsite. It is important that all wastes be handled in a manner to prevent hazards to onsite workers, as well to prevent hazards to offsite populations. We note that dry ash waste from plant operations will be stored on the IGCC site.

**EPA-36**

Coordination with the MDEQ or EPA is advised regarding hazardous waste issues. If any hazardous waste is discovered on the selected construction site, this should be reported promptly to appropriate agencies and appropriately addressed prior to site clearing and plant construction. We appreciate your commitment, as stated in the DEIS, to implement waste reduction, recycling, and reuse to the extent practicable during the construction and operation of the mine and power plant.

**EPA-37**

**Environmental Justice (EJ)**

The IGCC plant and lignite mine will be located in an identified EJ area, since Kemper County has a higher percentage of minorities and population below the poverty level, in comparison to other Mississippi counties and the U.S. in general. Therefore, DOE assessed the potential for disproportionately high and adverse health and environmental effects on EJ populations, per Executive Order 12898.

**EPA-38**

DOE determined that the project would not place high and adverse impacts on an EJ community. According to the DEIS, the project will not displace local residents and businesses, but landowners within the boundaries of the future mine site will be compensated for the use of their land through negotiated agreements with the mine owner. It is unclear about the exact number of affected landowners, and of the percentage of landowners, residents or businesses that are low-income or minority. The FEIS should clarify this information.

Based on our review, air quality, water quality and noise and health impacts would not exceed regulatory standards. However, while the area's air quality would remain within the National Ambient Air Quality Standards (NAAQS increase from 2%-12%) and comply with the PSD regulations (8% to 71%), there will be a large increase in some air pollutants from the current baseline anticipated as a result of the proposed project. Some of these pollutants, such as SO<sub>2</sub> and Nox, can potentially travel over distances. The FEIS EJ section should summarize these and other key pollutants that may be transported outside the counties within the project area (i.e., counties adjacent to Kemper County with significant EJ populations), and identify any potential environmental health impacts that may accrue to communities.

**EPA-39**

Page S-19 of the DEIS states that up to 80 trucks per day (16-hours per day), will transport materials from Choctaw to Kemper County during the initial six months of operation startup. However, page 4-13 indicates that approximately 50-60 trucks per day will deliver lignite to the plant for a period of six months, over the course of 70 miles. The latter values appear to have been

**EPA-40**

used to calculate potential emissions. The FEIS should ensure that the estimated number of trucks that will be used to transport lignite from Choctaw to Kemper County are consistent throughout the document, and accurately reflect the assumptions used to calculate projected emissions, and that every effort is made to minimize further air emissions (e.g., using low sulfur diesel fuel) and routes avoiding residential areas.

**EPA-40  
(contd.)**

According to the DEIS, local roads surrounding the power plant and mine will be affected by the increased traffic. The DEIS also indicates that accidents are currently the third leading cause of death on the local streets in the area. To what extent will this project exacerbate these issues both during construction and during the initial 6-month startup period when lignite is being transported to the plant? We recommend that commitments to minimize and mitigate any of the anticipated impacts within the EJ community should be discussed in the FEIS.

**EPA-41**

According to the DEIS, transportation, housing availability, and aesthetic impacts to the EJ population would be the same as for the general population. However, the effect of the impact may be disparate. In addition, job creation from the project is expected to promote economic development. Sharing of economic benefits by all should be encouraged. The project is projected to employ 105 employees full time for the demonstration period, and 90 employees during long-term operation, with 500 to 1,500 construction employees.

**EPA-42**

The DEIS notes that Mississippi Power and North American Coal Corporation (NACC) have voiced their commitment to affirmative action hiring practices, and NACC's history of hiring workers in the local area for their mining operations, when qualified individuals are located in the local area. The DEIS concludes that minorities would be well represented in the workforce for both the power plant and the mining operation. The DEIS cites the Red Hills Mine as an example of the NACC's hiring practices. The mine includes a population that is 8% women and 18% minority. Red Hills Mine employees are 82% Caucasian, while the State of Mississippi is 60.1% Caucasian. We encourage the applicants to continue to pursue a strategy of providing employment opportunities for the local EJ community so that they benefit equitably from the project development.

**EPA-43**

The socioeconomics section of the DEIS addressed the positive impacts of the project from taxes, payroll and jobs. The only potential adverse impact discussed was housing availability. There is no discussion related to increases to the power customers that may result from the Baseload Act that was passed by the State of Mississippi in 2008, which allows Mississippi Power to raise customer rates to help pay for the plant prior to construction. How are these rates going to affect area residents that are low income or minorities? Will the entire service area pay for these costs? Is this effect going to place a disproportionate burden on these communities? The FEIS should further explain these issues.

**EPA-44**

According to the DEIS, noise levels along MS 493 would alter the quiet environment that currently exists. What is the projected change in noise level and how many residential units would be affected? The proportion of these residents from EJ populations should be clarified. These issues should be further addressed in the FEIS.

Schools

The DEIS states that area wide community services are adequate (e.g., schools and hospitals). However, two of the three schools that were mentioned in the DEIS within Kemper County, i.e., Kemper County High and West Kemper Elementary, are listed as underperforming schools. In addition, the growth requirements were not met for either of these schools. Schools in the Meridian Public School District where many students will also attend received mostly low ratings. To assist with revitalization of the area, and to ensure adequate and appropriate education of future facility employees and their families, we would encourage the applicants to partner with these schools to improve the educational opportunities in the immediate area. In the Lauderdale County School District, most schools performed well.

**EPA-45**

Endangered Species

EPA will defer to the U.S. Fish and Wildlife Service (FWS) regarding potential project impacts to federally-protected species. The DEIS states DOE's preliminary determination that "the project may affect, but would not likely adversely affect, threatened or endangered species." The DEIS notes that continuing coordination between DOE and the FWS is planned. Updated information regarding consultations with the FWS and updated aquatic sampling results should be included in the FEIS.

**EPA-46**

Historic Preservation

Construction activities would impact one onsite historic house. Coordination with the SHPO should be ongoing and documented as the project progresses. The DEIS states that the evaluation and resource recovery would be guided by plans and protocols approved by the SHPO in consultation with Native American tribes. The FEIS should include an update of these coordination activities.

**EPA-47**

**EPA-48**

## SUMMARY OF RATING DEFINITIONS AND FOLLOW UP ACTION<sup>4</sup>

### Environmental Impact of the Action

#### LO-Lack of Objections

The EPA review has not identified any potential environmental impacts requiring substantive changes to the proposal. The review may have disclosed opportunities for application of mitigation measures that could be accomplished with no more than minor changes to the proposal.

#### EC-Environmental Concerns

The EPA review has identified environmental impacts that should be avoided in order to fully protect the environment. Corrective measures may require changes to the preferred alternative or application of mitigation measures that can reduce the environmental impacts. EPA would like to work with the lead agency to reduce these impacts.

#### EO-Environmental Objections

The EPA review has identified significant environmental impacts that must be avoided in order to provide adequate protection for the environment. Corrective measures may require substantial changes to the preferred alternative or consideration of some other project alternative (including the no action alternative or a new alternative). EPA intends to work with the lead agency to reduce these impacts.

#### EU-Environmentally Unsatisfactory

The EPA review has identified adverse environmental impacts that are of sufficient magnitude that they are unsatisfactory from the standpoint of public health or welfare or environmental quality. EPA intends to work with the lead agency to reduce these impacts. If the potential unsatisfactory impacts are not corrected at the final EIS site, this proposal will be recommended for referral to the CEQ.

### Adequacy of the Impact Statement

#### Category 1-Adequate

The EPA believes the DEIS adequately sets forth the environmental impact(s) of the preferred alternative and those of the alternatives reasonably available to the project or action. No further analysis or data collecting is necessary, but the reviewer may suggest the addition of clarifying language or information.

#### Category 2-Insufficient Information

The DEIS does not contain sufficient information for the EPA to fully assess the environmental impacts that should be avoided in order to fully protect the environment, or the EPA reviewer has identified new reasonably available alternatives that are within the spectrum of alternatives analyzed in the DEIS, which could reduce the environmental impacts of the action. The identified additional information, data, analyses, or discussion should be included in the final EIS.

#### Category 3-Inadequate

EPA does not believe that the DEIS adequately assesses potentially significant environmental impacts of the action, or the EPA reviewer has identified new, reasonably available alternatives that are outside of the spectrum of alternatives analyzed in the DEIS, which should be analyzed in order to reduce the potentially significant environmental impacts. EPA believes that the identified additional information, data analyses, or discussions are of such a magnitude that they should have full public review at a draft stage. EPA does not believe that the DEIS is adequate for the purposes of the NEPA and/or Section 309 review, and thus should be formally revised and made available for public comment in a supplemental or revised DEIS. On the basis of the potential significant impacts involved, this proposal could be a candidate for referral to the CEQ.

<sup>4</sup>From EPA Manual 1640 Policy and Procedures for the Review of the Federal Actions Impacting the Environment

**EPA-01:** Up to 67% of carbon dioxide will be scrubbed from plant stack emissions and in the process of subsequent usage for offsite enhanced oil recovery, some portion of the injected carbon dioxide may be sequestered. Since the use of the captured carbon dioxide for enhanced oil recovery presents an opportunity to evaluate the efficacy of carbon sequestration at the injection site, we recommend that the applicant implement monitoring to determine the efficiency of the sequestration.

**Response:** The project proposed by Mississippi Power Company would sell captured and compressed CO<sub>2</sub> for use in enhanced oil recovery (EOR).

DOE agrees that information regarding the efficiency of carbon storage via EOR could be developed as a result of this business relationship and encourages the applicant to work with its business partners to develop information on this issue for public use. However, DOE did not require applicants for funding under Round 2 of the Clean Coal Power Initiative (CCPI) to capture, sequester, or monitor the injection of CO<sub>2</sub>—the purpose of Round 2 projects was to demonstrate advanced coal-based power generation technology. The two technology priorities for Round 2 projects were IGCC systems and mercury control technology.

DOE did require projects applying for funding under Round 3 of the CCPI program to conduct CO<sub>2</sub> capture, sequestration, and monitoring to qualify for funding and has other research and financial assistance projects that are investigating and demonstrating monitoring of CO<sub>2</sub> injected into oil fields and other geologic formations. Thus, while DOE encouraged the applicant to make carbon capture and geologic storage a feature of its proposed project, DOE did not require projects seeking funding under CCPI Round 2 to capture, inject or monitor CO<sub>2</sub>. Similarly, DOE's Loan Guarantee Program did not require specific sequestration targets or monitoring as to this project.

While monitoring of the efficacy of sequestration via EOR would not be required under current regulations, reporting of GHG emissions from the project would be required. Subection 6.1.2 of the EIS has been updated to address the reporting requirements under the Mandatory Reporting of Greenhouse Gases Rule, as well as recent regulatory developments regarding emissions of GHGs.

**EPA-02:** We agree with the emissions reduction advantages and the efficient use of the byproducts of the IGCC process. However, there are inherent environmental concerns regarding the direct and cumulative impacts of power stations and mining operations. Potential impacts of the proposed power plant and lignite mine include air quality, water resources, wetlands, waste, and floodplain impacts; ecological, construction, community, cultural and archaeological resources, and cumulative effects.

**Response:** Comment noted. DOE agrees that there are inherent environmental concerns involved in a project of this nature and believes the direct and cumulative impacts of the power plant and mine have been addressed in this EIS.

**EPA-03:** Ash containment and spill prevention, post-mining stream and habitat reclamation, wetlands mitigation, and surface water/drainage pathways are of particular concern to EPA.

**Response:** Comment noted. DOE recognizes EPA's concerns and believes that these potential impacts are appropriately addressed in the EIS. It is also noted that USACE and EPA are currently cooperating in accordance with the EPA-USACE Memorandum of Agreement for field level review procedures.

**EPA-04:** EPA is reviewing the impacts to wetlands and streams in response to the COE's public notices for the Clean Water Act Section 404 permit applications, and is currently preparing a separate letter in accordance with Section 404 coordination procedures. One issue that needs to be addressed in particular is appropriate use of site protection instruments, (such as conservation easements or other legal instruments for protecting a compensatory mitigation area in perpetuity), which will be required by the COE for any permittee-responsible mitigation for the mining area and the IGCC site. Permittee-responsible mitigation refers to the restoration, establishment, enhancement or preservation of wetlands or streams undertaken by a permittee in order to compensate for wetland or stream impacts resulting from the project.

**Response:** DOE and USACE concur that the CWA Section 404 permit applications are actions being evaluated separately by USACE, such that DOE and USACE will each issue separate RODs upon conclusion of the EIS process for DOE and permit evaluation process for USACE. Subsections 2.2.1, 2.4.2.2, 4.2.9.1, and 4.2.9.2 state that USACE will be implementing its CWA 404 regulations, including the 2008 Mitigation Rule adopted by USACE and EPA in March 2008 as Title 33 of the Code of Federal Regulations (CFR), Part 332, as well as 33 CFR 325 (Processing of Department of the Army Permits).

Federal regulations (33 CFR 332.7[a]) require "... the aquatic habitats, riparian areas, buffers, and uplands that comprise the overall compensatory mitigation project must be provided long-term protection through real estate instruments..." that "...must be approved by the District Engineer in advance of, or concurrent with, the activity causing the impacts." Therefore, it is anticipated that USACE implementation of its regulations through the CWA 404 permit application evaluation process will result in the use of site protection instruments to protect mitigation areas (i.e., wetlands and streams).

**EPA-05:** EPA supports the selection of the IGCC technology as the preferred alternative. Based on EPA's review of the DEIS, the DOE's preferred alternative (cost-shared funding and a loan guarantee to support the startup of the IGCC power plant) received a rating of "EC-2." This means that some environmental concerns exist regarding aspects of the proposed project, and that further information is requested in the Final EIS (FEIS). (See the enclosed *Summary of Rating Definitions and Follow up Action*.)

The DEIS notes that the other power generation technologies considered in the DEIS were dismissed by DOE because they do not meet the CCPI program's purpose and need, nor do they meet those of the applicant. The EC-2 rating is based on the selection of the IGCC alternative along with the proposed mitigation commitments. However, should a different alternative ultimately be pursued that would result in increased impacts, then additional NEPA evaluation and interagency coordination could be expected by EPA.

**Response:** Comments noted. Should any significant changes to the selected IGCC technology occur, DOE would assess the need for further NEPA evaluation, including further interagency coordination.

**EPA-06:** The Kemper County IGCC Project DEIS analyses and modeling appear to be in accordance with appropriate EPA regulations and guidance.

**Response:** Comment noted.

**EPA-07:** *Alternative technologies:* In addition to the IGCC Solid Feed Gasifier technology using lignite coal, alternative technologies using lignite and sub-bituminous coal were evaluated. These technologies included the IGCC Slurry Feed Gasifier, subcritical pulverized coal, supercritical pulverized coal and ultra supercritical pulverized coal. The DEIS notes that the alternative power generation technologies considered in the DEIS were dismissed by DOE because they do not meet

the CCPI program's purpose and need, nor do they meet the purpose and need of the applicant. However, should a different alternative ultimately be pursued that would result in increased impacts, then additional NEPA evaluation and interagency coordination could be expected by EPA.

**Response:** Comments noted. Should any significant changes to the selected IGCC technology occur, DOE would assess the need for further NEPA evaluation, including further interagency coordination.

**EPA-08:** **Air Quality**

The Kemper County Integrated Gasification Combined-Cycle (IGCC) Project DEIS generally addresses the important issues related to air quality and human health impacts from inhalation of air emissions from the proposed IGCC facility. The air quality analyses and modeling appear to be in accordance with appropriate EPA regulations and guidance.

**Response:** Comment noted.

**EPA-09:** ***PSD Permitting:*** The proposed project requires a Prevention of Significant Deterioration (PSD) permit from the Mississippi Department of Environmental Quality (MDEQ), which was issued on October 14, 2008. This PSD permit addresses the types of control methods to be included for each PSD pollutant and estimates pollutant impacts on PSD Class I and II areas.

However, the FEIS should include updated information due to the pending revision the PSD Permit by MDEQ. We understand that this revision results from a change in equipment availability. Section 4.2.1.2, pages 4-5 through 4-14 of the DEIS summarizes the air quality modeling and analysis conducted for the PSD permit application. In addition, the FEIS should provide updated information, consistent with the modeling and analysis conducted for the final PSD permit, if there are any differences from the information currently presented in the DEIS.

**Response:** The modification of the permit was approved on March 9, 2010, and the public hearing for the permit modification took place on January 19, 2010. The Final EIS has been updated to reflect the changes made to the design, emissions, and modeling results in support of the permit revisions. The design changes include changes in the wet gas sulfuric acid process stack parameters; the option to consolidate the two flare derricks into a single flare derrick; various plant layout changes have been made; and ability to vent the acid gas removal process vents to the IGCC stacks, e.g., during trips of CO<sub>2</sub> compressors, and pipeline malfunction. The changes to emissions and modeling results are minor and are addressed in the Final EIS.

**EPA-10:** Further, the FEIS should include a discussion of fly and combustion ash, such as possible uses and safeguards, in relation to the PSD Permit.

**Response:** The proposed IGCC facility would not generate either fly ash or combustion ash, as are generated in traditional pulverized coal fired units. The gasification process would produce gasification ash as a by-product. The management of gasification ash, including possible uses, is addressed in Subsections 2.6.3.2 and 4.2.14.2. The PSD permit application accounted for fugitive emissions from ash handling and management systems, and the PSD permit issued by MDEQ will include particulate matter emission limits.

**EPA-11:** **Air Toxics**

Since the State of Mississippi has responsibility for submitting the State Plan encompassing all subject coal-fired facilities in the State, allocating emissions, and overseeing the monitoring program, the applicant will need to continue coordinating with MDEQ on these issues.

**Response:** Comment noted.

**EPA-12:** The DEIS lacks a discussion on the fate and transport of persistent, bioaccumulative, toxic (PBT) hazardous air pollutants (HAPs), such as mercury. Once deposited on soil and surface water, PBTs can cause significant ecological harm. Please include discussion of the fate and transport in wetlands, waterways, and biota in the FEIS. We recommend that you coordinate with the State of Mississippi regarding fish tissue data available for the area. Additionally, the current state of concentrations and how the facility is likely to affect these concentrations should be considered.

**Response:** Mercury is the only pollutant being emitted by the facility in amounts sufficient to warrant analysis of persistent bio-accumulative toxic effects. Discussion on the fate and transport of mercury in the vicinity of the project has been added to the Final EIS (see Subsection 4.2.19.2). Fish tissue data from Okatibbee Lake contained in the EPA database (National Survey of Mercury Concentrations in Fish [1990 – 1995]) were used in the analysis.

**EPA-13:** Sections 3.3.2 and 3.3.3, pages 3-2 through 3-10 of the DEIS provide a good summary of the affected environment for the six criteria air pollutants. However, there is only a brief reference to HAPs (or air toxics) on page 3-10. Additional information regarding the ambient levels and emissions of air toxics should be provided in this Section of the DEIS. Examples of data that could be provided include:

- Measured ambient air concentrations from air toxics monitors (according to the MDEQ website, there are 5 air toxics monitoring sites in Mississippi with the closest site being located in Jackson, Mississippi.) ([http://www.deq.state.ms.us/MDEO.nsf/page/Air\\_MonitoringSites?OpenDocument](http://www.deq.state.ms.us/MDEO.nsf/page/Air_MonitoringSites?OpenDocument))
- Sources and emission rates of air toxics contained in EPA's National Emissions Inventory (NEI) database. (<http://www.epa.gov/ttn/chief/eiinformation.html>)
- Summarized results from the 2002 National Air Toxics Assessment (NATA) for Kemper County and how they compare with regional and national data. (<http://www.epa.gov/ttn/atw/nata2002/index.html>)

**Response:** Available information on ambient levels of air toxics monitored at sites operated by MDEQ has been added to Subsection 3.3.2. In addition, the 2002 NATA results for Kemper County have been included for comparison to the 2002 ambient levels measured in the state.

Emissions of air toxics for Kemper County and Mississippi have been added in Subsection 3.3.3. Also, the air toxics being emitted from other industrial facilities located in Kemper County are summarized.

**EPA-14:** Section 4.2.19.2, pages 4-1 17 through 4-123 of the DEIS summarizes the HAPs Impact Analyses that were conducted for the project. It would be helpful to provide a reference to these analyses in Section 4.2.1 "Atmospheric Resources and Air Quality." It was not obvious from the title of Section 4.2.19 "Human Health and Safety" that this section would contain an analysis of the impacts from air toxics (HAPs). We suggest that these two sections be cross-referenced to help the reader locate all relevant information related to air impact analyses.

**Response:** Subsection 4.2.1 has been revised to more fully explain where the various air impact analyses can be found.

**EPA-15:** Section 4.2.19.2, page 4-118 discusses cancer and noncancerous risks. The DEIS indicates that the county-average risks from the IGCC project were added to Kemper County results from the 1999 NATA. The 2002 NATA is now available, and we recommend that the 1999 NATA data be

replaced with the 2002 NATA data in the FEIS to reflect the most recent analysis. We also suggest revising Table 4.2-48 to reflect the 2002 NATA results.

**Response:** The 2002 NATA results have been added to Table 4.2-48.

**EPA-16:** The mercury deposition data presented in Section 4.2.19.2, Page 4-122 of the DEIS summarizes the mercury deposition modeling and analysis that was performed, and refers to Appendix R for more details. Appendix R provides a summary of the analyses that were conducted. The FEIS should cite the Clean Air Mercury Rule (CAMR) technical basis for focusing on mercury. However, during our meeting on December 8, 2009, EPA recommended that the DOE evaluate the mercury deposition and risk analysis that were prepared as part of the EIS process for the Santee Cooper Pee Dee Generation Facility (a formerly proposed coal-fired power plant facility) located near Kingsburg, South Carolina. In an email dated December 10, 2009, EPA provided a copy of the Pee Dee “Mercury Deposition and Risk Assessment” to Mr. Joel Trouart and Ms. Rebecca Buell. We reiterate the recommendation that DOE consider supplementing the mercury deposition analysis for the Kemper County Project with relevant information and analyses from the Pee Dee analysis.

In the mercury deposition discussion in Section 4.2.19.2, page 4-122, the DEIS states that the analysis was done assuming 90% of the total mercury emissions from the CT/HRSG stack would be in the form of elemental mercury, 10% would be reactive gaseous mercury (RGM) also known as divalent mercury ( $H^{+2}$ ), and only trace amounts of particulate mercury. A reference should be provided for these mercury speciation assumptions. As the RGM fraction is the critical factor for the local impact deposition analysis, it is important that the speciation assumptions reflect the best information available for the proposed IGCC project.

**Response:** Appendix R has been updated to address the potential human health risk associated with inhalation of hazardous air pollutant (HAP) emissions associated with the proposed Kemper County IGCC facility. Risk associated with direct inhalation of HAPs emitted from the facility was addressed by applying EPA’s Human Exposure Model, Version 3 (HEM-3) with the AERMOD model dispersion option. This method implements EPA’s facility-specific risk assessment guidance (EPA, 2004a). In addition, mercury associated with coal combustion is among the priority persistent bioaccumulative and toxic (PBT) air pollutants (EPA, 2001). To evaluate the fate, transport, and human health risk associated with mercury emissions from the proposed facility, MMREM, a screening mercury risk assessment methodology for combustion sources developed by the Minnesota Pollution Control Agency (MPCA) (2006) was applied. (All references cited can be found in the report added to Appendix R.) The MMREM methodology was selected for use in this evaluation because it is considered to be more advanced than the approach used for assessing mercury deposition of the Santee Cooper Pee Dee Generation Facility.

A citation to the technical basis for the CAMR focus on mercury has also been added to the Final EIS.

Mercury from the IGCC process would be emitted in three forms: elemental mercury vapor, reactive gaseous mercury (RGM), and particulate mercury. The reducing conditions of the gasification process would limit the amount of oxidized mercury (RGM) to the small amount that could be formed during the short time the mercury passes through the combustion turbine. Based on test results from existing gasification plants, it is estimated that more than 90 percent of the mercury in the IGCC exhaust gas would be elemental mercury, with the remaining 10 percent being emitted as RGM. The reference for this 2003 EPRI study is contained in Appendix R of the Final EIS.

**EPA-17:** The air quality cumulative effects analysis is briefly discussed in Section 6.1.1, Pages 6-1 through 6-2 of the DEIS. The discussion is limited to cumulative effects from criteria air pollutants. This DEIS section should be expanded to include a discussion of cumulative effects from air toxics as well. The risk analyses presented in Section 4.2.19.2 and Appendix R could be referenced in this discussion of cumulative effects from air toxics.

**Response:** A discussion of the cumulative effects of the toxic air pollutants has been added to Subsection 6.1.1.

**EPA-18:** Appendix R of the DEIS summarizes the air dispersion and deposition modeling done for the screening level assessment of air toxics. Based on the summary discussion, it appears that the modeling procedures were appropriate. In order to verify that correct procedures and model input parameters were used, it would be helpful to have electronic copies of the input and output files from the modeling. EPA is requesting that copies of these files be provided on a CD or DVD to Mr. Rick Gillam in EPA Region 4's Air Quality Modeling and Transportation Section, so that a complete review of the modeling may be conducted. Mr. Gillam may be contacted at 404/562-9049 or gillam.rick@epa.gov.

**Response:** Copies of the modeling files were provided to EPA as requested.

**EPA-19:** Noise

All construction equipment should be equipped with factory mufflers and engine housings to minimize construction noise. All OSHA regulations relating to noise should be followed.

**Response:** Subsection 7.1.9 indicates the regulations developed by the Occupational Safety and Health Administration (OSHA) would apply to construction and operation of the various project components. Subsection 7.1.10 indicates the regulations developed by the Mine Safety and Health Administration (MSHA) would apply to the surface lignite mine. Both OSHA and MSHA have developed quantitative numerical sound level exposure standards as well as qualitative rules concerning maintenance and modification of factory-installed equipment. The project would comply with all federal requirements to address construction equipment noise.

**EPA-20:** Blowdowns during plant operations are a concern to EPA, since the resulting noise is significant, and area residents will need to be notified in advance by the applicant. Provisions should be made to minimize noise impacts where feasible.

**Response:** Steam blows of piping would be necessary for a few days prior to power plant startup. Area residents would be notified in advance and provisions would be made to minimize noise impacts, as noted in Table 5.0-1. As noted in the response to EPA-21, the applicant either has acquired or is pursuing the acquisition of all of these close-by residences. DOE will consider notification of residents as a condition in the ROD to the extent that the nearby residences were still occupied at the time of the steam blows.

**EPA-21:** According to the document, one residence will experience noise levels above EPA's threshold. Does this number include all residences/residents within the project area, or are buildings planned for sale or lease already excluded?

- How many residents will experience significant increases in the level of noise (doubling of noise levels or a +10dBA incremental increase) than they currently experience?
- Noise induced hearing loss is the most common occupational disease in the U.S., and can be severe in mining. For employee and residential health and safety, the FEIS should clarify the types of noise attenuating strategies that are proposed for the machinery and

trucks that will be used onsite and on-road. Please review the NIOSH fact sheet on noise for recommendations.

**Response:** Figure 4.2-9 in the Draft EIS (4.2-10 in the Final EIS) shows all of the residences or sensitive receptors irrespective of ownership. Based on a comparison of predicted plant sound level impacts (Table 4.2-45) with ambient conditions (Table 3.19-5), plant operations would likely be noticeable outdoors at each of these properties, especially absent other significant sources of sound such as roadway traffic.

Future sound levels would be typical for a suburban area and would remain below 55 L<sub>dn</sub> at all but one residence (identified as “Residence 6” on Figure 4.2-9 in the Draft EIS, Figure 4.2-10 in the Final EIS). At that one property, sound levels would slightly exceed EPA guidelines but would still be acceptable as measured by the HUD residential noise guidelines.

The applicant is pursuing the acquisition of all of these residences. Notably, the applicant has already acquired the property associated with “Residence 1” and has entered into an option to purchase the property associated with “Residence 6.” Subsection 2.1.1 of the Final EIS has been updated, and new Figure 2.1-4 added to reflect updates in Mississippi Power’s efforts to acquire most of the properties north and east of the current plant site as buffer area.

Noise attenuation equipment would be included in the design of the IGCC facility.

With regard to the surface mine, Mine Safety Health Administration regulations 30 CFR 62, Occupational Noise Exposure requires standards to prevent the occurrence and reduce the progression of occupational noise-induced hearing loss among miners. The mine operator must establish a system of monitoring that evaluates each miner’s noise exposure sufficiently to determine continuing compliance with this regulation. If, during any work shift, a miner’s noise exposure equals or exceeds the action level, the mine operator must enroll the miner in a hearing conservation program. The conservation program must comply with the MSHA regulations and must provide hearing protection, training, limiting noise exposure, and continuing monitoring of the work area noise level and the hearing level of each miner. This program and the implementation of the program are carefully monitored by the mine company and MSHA.

**EPA-22:** **Diesel Exhaust**

NIOSH has determined that diesel exhaust is a potential human carcinogen, based on a combination of chemical, genotoxicity, and carcinogenicity data. In addition, acute exposures to diesel exhaust have been linked to health problems such as eye and nose irritation, headaches, nausea, and asthma.

Although every construction site is unique, common actions can reduce exposure to diesel exhaust. EPA recommends that the following actions be considered for construction and operating equipment:

- Using low-sulphur diesel fuel (less than 0.05% sulphur).
- Retrofit engines with an exhaust filtration device to capture DPM before it enters the workplace.
- Position the exhaust pipe so diesel fumes are directed away from the operator and nearby workers, thereby reducing the fume concentration to which personnel are exposed.

- A catalytic converter reduces carbon monoxide, aldehydes, and hydrocarbons in diesel fumes. These devices must be used with low sulphur fuels.
- Ventilate wherever diesel equipment operates indoors. Roof vents, open doors and windows, roof fans, or other mechanical systems help move fresh air through work areas. As buildings under construction are gradually enclosed, remember that fumes from diesel equipment operating indoors can build up to dangerous levels without adequate ventilation.
- Attach a hose to the tailpipe of a diesel vehicle running indoors and exhaust the fumes outside, where they cannot reenter the workplace. Inspect hoses regularly for defects and damage.
- Use enclosed, climate-controlled cabs pressurized and equipped with high efficiency particulate air (HEPA) filters to reduce operators' exposure to diesel fumes. Pressurization ensures that air moves from inside to outside. HEPA filters ensure that any air coming in is filtered first.
- Regular maintenance of diesel engines is essential to keep exhaust emissions low. Follow the manufacturer's recommended maintenance schedule and procedures. Smoke color can signal the need for maintenance. For example, blue/black smoke indicates that an engine requires servicing or tuning.
- Work practices and training can help reduce exposure. For example, measures such as turning off engines when vehicles are stopped for more than a few minutes; training diesel-equipment operators to perform routine inspection and maintenance of filtration devices.
- When purchasing a new vehicle, ensure that it is equipped with the most advanced emission control systems available.
- With older vehicles, use electric starting aids such as block heaters to warm the engine, avoid difficulty starting, and thereby reduce diesel emissions.
- Respirators are only an interim measure to control exposure to diesel emissions. In most cases an N95 respirator is adequate. Respirators are for interim use only, until primary controls such as ventilation can be implemented. Workers must be trained and fit-tested before they wear respirators. Personnel familiar with the selection, care, and use of respirators must perform the fit testing. Respirators must bear a National Institute of Occupational Safety and Health (NIOSH) approval number. Never use paper masks or surgical masks without NIOSH approval numbers.

**Response:** DOE will encourage Mississippi Power and NACC to consider EPA's recommendations related to diesel construction and operating equipment. DOE will also consider such mitigation as a condition of the ROD.

NACC has indicated to DOE that it would endeavor to comply with all applicable diesel recommendations. The new equipment purchased would most likely be the Tier 4 standard equipment. The used equipment utilized would comply, to the extent practical, with the recommendations provided in the comment. All equipment and work areas (including enclosed buildings and shops) would comply with all MSHA standards and regulations.

**EPA-23:**      **Surface Water Quality**

Based on the DEIS and Clean Water Act Section 404 permit application, up to 32 miles of perennial stream channels and 24 miles of intermittent stream channels would temporarily be removed by construction and lignite extraction at the adjacent mine. In addition, three creeks would be diverted, and some intermittent streams would be intercepted by diversion channels and routed around active mining areas. Upon completion of all mining and reclamation, the pre-mining drainage patterns are proposed to be restored. EPA believes that it is important that creeks and streams be restored in a manner that maintains pre-mine stream flow rates and sinuosity.

**Response:** Stream restoration would be designed in accordance with the U.S. Army Corps of Engineers Mobile District 2009 Compensatory Stream Mitigation Standard Operation Procedures and Guidelines. NACC has prepared an updated Wetland and Stream Mitigation Plan for the USACE Section 404 permit that would ensure that streams would be restored in a manner that maintains pre-mining flow rates and sinuosity.

**EPA-24:** The DEIS states that the diverted streams would provide similar habitat and support similar biological communities to the existing undisturbed streams. EPA recommends that the diverted streams be designed so that stream length and flow is at a rate similar to premining, since a change in water velocity, although temporary, would create impacts. In addition, potential effects of stream diversions on the food chain for aquatic species should also be evaluated.

**Response:** Diversion streams at other surface coal mines have been demonstrated as able to support aquatic communities and normal ecological functions, including intact food chains. The diversion streams are connected to the original stream channel downstream. Therefore, upstream and downstream migration of aquatic species would be expected to occur.

Furthermore, the diversion streams would be constructed along the periphery of mining areas where they are in close proximity to natural undisturbed habitats. Consequently, they would be available to other wildlife.

With respect to stream channel design, stream diversions and reestablished channels would be designed using a reference reach approach. If suitable reference reaches are not available, the channels would be designed so that the stream establishes a stable pattern, profile, and dimension. Application of these principles would result in stream lengths and sinuosities representative of natural conditions and velocities that would be neither erosive nor accretive, as recommended by EPA. Stream design packages would be submitted for approval by USACE and MDEQ prior to construction and would comply with the surface mining design and performance criteria set forth in SMCRA.

**EPA-25:** Local air deposition of mercury should be discussed, along with plans for mitigation (see Air Toxics comments). This should be provided in the FEIS as well as the Section 404 permit application.

**Response** An evaluation of local mercury deposition is documented in the new Appendix R and is summarized in Subsection 4.2.19.2 of the Final EIS. Mercury controls proposed by the applicant would represent state-of-the-art in reducing mercury emissions. Based on the small incremental health risk associated with mercury deposition from the project, no additional mitigation is being considered by DOE or USACE.

**EPA-26:** The Sowashee Creek is on the impaired waters list and is a low-diversity habitat for aquatic species. Currently, effluent from publically owned treatment works (POTWs) is directed into Sowashee Creek, but the IGCC project plans call for diverting effluent from the POTWs for use in the

power plant's operations requiring cooling and non-potable water. This reclaimed water would be delivered to the site via pipelines. We note that the State of Mississippi's regulations require that new power generating facilities use nonpotable water. Therefore, Sowashee Creek would receive less effluent from the POTWs, reducing the amount of fine particulate organics, ammonia, chlorine and biological oxygen demand in the creek.

**Response:** DOE concurs with EPA's comments. Reducing POTW effluent discharges into Sowashee Creek would reduce pollutant loading, improve water quality, and improve the integrity of the aquatic communities as stated in Subsection 4.2.4.2 of the EIS. The effects of POTW effluent on aquatic communities of streams are well documented in the scientific literature.

**EPA-27:** Drainage from the area ultimately reaches Okatibbe Lake. The DEIS states that the total volume of water reaching this lake would not be appreciably altered, but that the timing and quality of flow would be altered during mining. Since Okatibbe Lake contains flood control structures subject to Section 408 of the River and Harbors Act, any alterations that would affect the structures would require further evaluation and compliance with the Section 408 regulations. We note that current plans do not call for any impacts to Okatibbe Lake, however, if plans change, then Section 408 requirements will need to be met. This should be discussed in the FEIS.

**Response:** Section 408, Title 33 of the United States Code (U.S.C.) (originally Section 14 of the Rivers and Harbors Appropriation Act of 1899) makes it unlawful "to take possession of or make use of for any purpose, or build upon, alter, deface, destroy, move, injure, obstruct by fastening vessels thereto or otherwise, or in any manner whatever impair the usefulness of any sea wall, bulkhead, jetty, dike, levee, wharf, pier, or other work built by the United States." A 1985 amendment (Pub. L. 99-88) authorized the Secretary of the Army to authorize occupation or alteration of such structures "[p]rovided, that the Secretary of the Army may, on the recommendation of the Chief of Engineers, grant permission for the temporary occupation or use of any of the aforementioned public works when in his judgment such occupation or use will not be injurious to the public interest. Provided further, that the Secretary may, on the recommendation of the Chief of Engineers, grant permission for the alteration or permanent occupation or use of any of the aforementioned public works when in the judgment of the Secretary such occupation or use will not be injurious to the public interest and will not impair the usefulness of such work."

DOE's preferred alternative proposes no occupation, alterations, or impacts to the Okatibbe Lake flood control structures constructed by USACE. In the event the project did propose or resulted in occupation, alterations, or impacts to the Okatibbe Lake flood control structures, DOE acknowledges that authorization would be required from the Secretary of the Army under 33 U.S.C. 408. This acknowledgement and the previous language have been included in the Final EIS under Subsection 4.2.4 (Environmental Consequences, Surface Waters).

**EPA-28:** *Recommendation:* The diverted streams should be designed so that stream length and flow is at a rate similar to premining. In addition, potential effects of stream diversions on the food chain for aquatic species should be evaluated.

**Response:** Diverted streams and stream restoration would be designed in accordance with the USACE Mobile District 2009 Compensatory Stream Mitigation Standard Operation Procedures and Guidelines.

**EPA-29** Local air deposition of mercury should be discussed, along with plans for mitigation. This should be provided in the FEIS as well as the Section 404 permit application.

**Response:** Please refer to the response to EPA-25.

**EPA-30: Groundwater Quality**

Current plans for water supply for the power plant cooling operations call for effluent usage from two City of Meridian POTWs, rather than from groundwater wells. The effluent should meet appropriate MDEQ water quality standards for nonpotable uses. However, the power plant could use up to 1 MGD of saline ground water from the Massive Sand aquifer if necessary. The lignite mine will require ongoing mine pit water control, which would cause drawdown in the shallow Middle Wilcox aquifer and could potentially adversely impact water supply of some local ground water wells.

Post-mining groundwater quality in the reclaimed mine area cannot be predicted with certainty, but it is likely that groundwater would contain a higher level of total dissolved solids (TDS).

*Recommendation:* The FEIS should discuss drinking water sources in the area, the presence or absence of sole source aquifers, water quantity issues, and any other potential impacts to groundwater that might occur as the result of this project. Proposed groundwater monitoring and mitigation should also be discussed in the FEIS.

**Response:** Public water supplies originate principally from the Lower Wilcox aquifer. A competent confining bed separates the aquifer from the lignite seams. The Lower Wilcox aquifer has not been designated a sole source aquifer. See, especially, Subsection 4.2.5 on potential impacts to ground water resources from both power plant and mine construction and operation. This discussion notes that any impacts to existing water wells resulting from mining would require mitigation per SMCRA regulations. DOE would consider additional monitoring to confirm that there are no impacts to drinking water sources as a condition of the ROD.

**EPA-31: Waters of the U.S.**

Per the DEIS, the Construction of the IGCC power plant would impact approximately 30 acres of wetlands and the lignite mine would impact approximately 2,374 acres of wetlands. The DEIS notes that many of the wetlands have already been impacted by conversion to pine plantations, and degraded by silt runoff as well. The IGCC plant and associated activities would also impact 3,632 linear feet (lf) of streams. The lignite mine would impact approximately 298,000 lf of streams, including perennial reaches.

Appendix P of the DEIS outlines the compensatory mitigation plans for these impacts and includes a monitoring schedule and success determination criteria. We note that this plan must be consistent with USACE's Mobile District's mitigation requirements pursuant to the Clean Water Act Section 404 permit for the project. We note that the compensatory mitigation plan needs to comply with the April 2008 Mitigation Rule. These impacts are being reviewed separately in response to the COE's public notices for the Section 404 permit applications, and EPA is preparing a letter in accordance with Section 404 coordination procedures. One issue to note is that appropriate use of site protection instruments will be required for any permittee-responsible mitigation.

**Response:** CWA 404 permit applications are being evaluated separately by USACE. Subsections 2.2.1, 2.4.2.2, 4.2.9.1, and 4.2.9.2 state that USACE will be implementing its CWA 404 regulations, including the 2008 Mitigation Rule adopted by USACE and EPA in March 2008 as 33 CFR 332, as well as 33 CR 325 (Processing of Department of the Army Permits).

DOE and USACE note that 33 CFR 332.7(a) requires "... the aquatic habitats, riparian areas, buffers, and uplands that comprise the overall compensatory mitigation project must be provided long-term protection through real estate instruments..." that "...must be approved by the District Engineer in advance of, or concurrent with, the activity causing the impacts." Therefore, USACE

implementation of its regulations through the CWA 404 permit application evaluation process would result in the use of site protection instruments to protect mitigation areas (i.e., wetlands and streams) to the extent USACE authorizes wetlands impacts and imposes mitigation requirements upon the applicants Mississippi Power and NACC.

**EPA-32:** NPDES Permitting

Under the preferred alternative, no new process wastewater discharges are proposed for the power plant site, since the applicant will use reclaimed effluent for industrial cooling water supply. This would reduce flow in Sowashee Creek, an impaired water body.

However, an NPDES Permit will be required for storm water and for process water from the lignite mine. A pollution prevention plan will be required.

**Response:** Comments noted. The permit requirements are included in Chapter 7 of the EIS.

**EPA-33:** The DEIS needs to discuss in more detail all the proposed NPDES permit discharges and associated applicable effluent guidelines. The mining operations will be subject to 40 Code of Federal Regulations (C.F.R.) Part 434, which sets minimum guidelines for water discharged during active mining through post-mining operations from sedimentation basins, as well as effluent guidelines for coal preparation operations (e.g., coal cleaning). Point source discharges for the power plant (e.g., cooling tower blowdown, metals cleaning wastes, low volume wastes, etc.) will be subject to 40 C.F.R. 423.

**Response:** Subsections 2.6.2 and 4.2.4.2 in the EIS state that all mine discharges would be subject to the performance standards imposed by the MDEQ SMCRA regulations. Section 5315 of these regulations states that “[d]ischarges of water from areas disturbed by surface mining activities shall be made in compliance with all applicable state and federal water quality laws and regulations and with the effluent limitations for coal mining promulgated by the U.S. Environmental Protection Agency set forth in 40 CFR Part 434.” Thus, the MDEQ SMCRA regulations clearly apply the applicable effluent guidelines.

The IGCC facility would be a zero liquid discharge facility; therefore, no process wastewater would be discharged. Only a stormwater discharge permit would be applicable to the plant site.

**EPA-34:** In regard to the mining operations, recent studies by EPA Region 3 have highlighted the impacts of relatively high conductivity levels (or TDS concentrations) in coal mining effluent and the downstream aquatic life. The DEIS should discuss baseline biological and chemical conditions both upstream (if possible) and immediately downstream of NPDES-permitted sedimentation ponds. Sampling sites should include the following locations, and chemical and biological sampling should be done concurrently:

- One sampling point located upstream of the sediment pond. One in-stream monitoring site located immediately below the toe of a sedimentation pond outfall to be used for effluent monitoring requirements in this NPDES permit. The selected outfall must be representative of the composition effluent being discharged under worst case conditions (i.e., “representative outfall”). Therefore, the selected representative outfall must discharge to the receiving waterbody with the lowest 7-day consecutive flowrate with a 10-year frequency (i.e., 7410) on the mine site area which is currently undergoing the most mining disturbance, based on data/information submitted in the permit application.
- One sampling point located *the further* of 200 meters (656 feet) downstream of a NPDES-permitted sedimentation pond outfall or the furthest downstream location that is upstream of any intervening tributaries. The sampling point should be downstream of ri-

prap and other disturbance and located within a relatively natural and intact riparian zone.

- One sampling point located downstream of the first intervening tributary.

Biological sampling should be implemented using the approved state protocols and methodology for benthic macroinvertebrates sampling. The suite of chemical parameters and test methods to be included in the discussion are as follows: **List of Parameters of Concern for Coal Mines**.

**Response:**

DOE agrees that relatively high levels of total dissolved solids (TDS) (also measured using surrogate conductivity values) can be contained in coal mining effluent. However, DOE also notes that a wide variability occurs in coal seams across the United States due to the geochemistry of the coal deposits. It is for this reason DOE placed emphasis on water chemistry, and resulting aquatic ecology, in the EIS.

The EIS baseline sections provide a characterization of current water chemistry and aquatic ecology conditions across the entire 31,000-acre mine study area, which encompasses stream segments located upstream and downstream of all areas proposed to be disturbed by mining. Comparison of the mine development sequence maps shown in Figure 2.4-2 and the baseline water quality and aquatic ecology monitoring maps shown in Figures 3.6-2 and 3.9-1 demonstrates the upstream and downstream baseline characterization spatially. Tables 3.9-2 and 3.9-4, as well as the data presented in Appendices D, I, and J, present the baseline water chemistry and aquatic ecology data supporting the written characterization.

With respect to impacts, Tables 3.4-2, 4.2-9, 4.2-23, as well as Appendix I, provide quantitative evidence that the levels of conductivity in downstream segments would increase, but not to the levels in the studies by EPA Region 3. Table 4.2-9 documents low levels of pyritic sulfur in the overburden, and Table 3.4-3 documents comparatively low levels of heavy metals in the overburden. The analysis presented in Subsection 4.2.4.2 documents how the levels of TDS could increase. The analysis presented in Subsection 4.2.7.2 discusses the potential effects of TDS increases. The data collected and presented in Appendix I documents that mining and reclamation at the Red Hills Mine has not resulted in adverse impacts of the types experienced in the studies by EPA Region 3. Further, the data in Appendix I suggest that the stream diversions proposed for the Liberty Fuels Mine in Kemper County would maintain biological conditions similar to existing conditions during mine operation if the diversions are constructed and maintained in a fashion similar to that of the Red Hills Mine.

DOE also notes that NACC would not be allowed to construct or operate the Liberty Fuels Mine without first obtaining MDEQ SMCRA mine operating and NPDES permits. As noted in a previous response, MDEQ SMCRA regulations are integrated with the state's federally delegated NPDES permit program. MDEQ therefore, with EPA oversight, would have the authority to ensure discharges from the Liberty Fuels Mine do not cause downstream TDS levels to increase to the point that the aquatic resources are adversely impacted through the Total Mass Daily Loading Program.

It is not feasible to conduct the sampling and monitoring recommended by EPA and present the results in this EIS. However, DOE expects that EPA's recommendations on sampling and monitoring would be considered by MDEQ and USACE in the permitting process for the mine.

**EPA-35:**

The relatively high conductivity that results from coal mining correlates with the contact time of water with crushed rock. Therefore, the FEIS should also contain a more robust discussion of the best management practices (BMPs) that will be used to address ways to:

- Avoid and minimize the contact between storm water and overburden and mining areas, i.e., managing water through grading and water diversions to reduce the level of pollutants in discharges.
- Avoid and minimize infiltration and percolation of storm water through overburden and mining areas by hauling or conveying coal mine waste in a controlled manner and compact in each lift and use compact fill construction.
- Use weathered overburden materials (e.g., brown sandstones) as topsoil substitution where topsoil cannot be stockpiled for redistribution (these weathered overburden materials have reduced potential to leach pollution-related ions to discharge water).

Implement the Forest Reclamation Approach to increase evapotranspiration and reduce runoff and restore vegetation.

**Response:** Discussion of BMPs has been added to Table 5.0-1 in Chapter 5.0 of the Final EIS.

The data presented in the EIS suggest key differences in the geochemistry of the overburden and lignite deposits in Mississippi as compared to anthracite and bituminous coal deposits in Appalachia. The data and analysis suggest elevated conductivity levels would not cause a diminution of aquatic resources based upon similar geochemistry at the Red Hills Mine.

Water would be diverted around the pit area of the mine to reduce contact between storm water and mining areas. In addition, all storm water that would come in contact with mining would be diverted to a sediment pond for treatment to meet NPDES and MDEQ water quality limits. These would include physical as well as chemical parameters. Oxidized (i.e., *weathered*) material would be used as topsoil substitution material (see EIS Subsections 2.4.2.2, 3.5.2 and 4.2.3).

Further, Subsection 4.2.3.2 of the EIS presents data to support the use of *oxidized overburden* as a substitute for topsoil and subsoil replacement in the uppermost 4 feet of the reclaimed lithology. DOE notes this proposed practice is consistent with the EPA Region 3 recommendations. Figure 2.4-2 illustrates the mine operator plans to divert or reroute all significant streams in advance of mining disturbance, which is also consistent with the EPA Region 3 recommendations. As noted in Subsection 4.2.6.2, postreclamation land uses would largely be controlled by the property owners.

**EPA-36:** Waste

Wastes from mining operations and coal-fired power plants are of concern, particularly since spills and airborne particles from ash can potentially transport metals and hazardous components offsite. It is important that all wastes be handled in a manner to prevent hazards to onsite workers, as well to prevent hazards to offsite populations. We note that dry ash waste from plant operations will be stored on the IGCC site.

**Response:** Comment noted. Descriptions of operational wastes and the planned waste management techniques are discussed in Subsection 2.6.3.

**EPA-37:** Coordination with the MDEQ or EPA is advised regarding hazardous waste issues. If any hazardous waste is discovered on the selected construction site, this should be reported promptly to appropriate agencies and appropriately addressed prior to site clearing and plant construction. We appreciate your commitment, as stated in the DEIS, to implement waste reduction, recycling, and reuse to the extent practicable during the construction and operation of the mine and power plant.

**Response:** Comment noted. Discovery of any hazardous waste would be coordinated with MDEQ and EPA, as appropriate.

**EPA-38:** **Environmental Justice (EJ)**

The IGCC plant and lignite mine will be located in an identified EJ area, since Kemper County has a higher percentage of minorities and population below the poverty level, in comparison to other Mississippi counties and the U.S in general. Therefore, DOE assessed the potential for disproportionately high and adverse health and environmental effects on EJ populations, per Executive Order 12898.

DOE determined that the project would not place high and adverse impacts on an EJ community. According to the DEIS, the project will not displace local residents and businesses, but landowners within the boundaries of the future mine site will be compensated for the use of their land through negotiated agreements with the mine owner. It is unclear about the exact number of affected landowners, and of the percentage of landowners, residents or businesses that are low-income or minority. The FEIS should clarify this information.

**Response:** As noted in Subsection 4.2.10, selling or leasing land for mining would be at the option of each landowner. Thus, the actual number of residents in the full mine area that would opt for selling or leasing their land is unknown. At this time, no further clarification of the affected population is available. Populations at the block and subdivision level (smaller than census tracts) also indicate minority percentages above state levels. It should be noted that landowners who choose not to sell their land and continue to live within the mine boundaries would likely experience greater effects from noise and fugitive dust than landowners living outside the mine boundary. However, these effects would not be expected to be *disproportionately* high or adverse.

**EPA-39:** Based on our review, air quality, water quality and noise and health impacts would not exceed regulatory standards. However, while the area's air quality would remain within the National Ambient Air Quality Standards (NAAQS increase from 2%-12%) and comply with the PSD regulations (8% to 71 %), there will be a large increase in some air pollutants from the current baseline anticipated as a result of the proposed project. Some of these pollutants, such as SO<sub>2</sub> and NO<sub>x</sub>, can potentially travel over distances. The FEIS EJ section should summarize these and other key pollutants that may be transported outside the counties within the project area (i.e., counties adjacent to Kemper County with significant EJ populations), and identify any potential environmental health impacts that may accrue to communities.

**Response:** A review of the PSD application indicates that significant impacts associated with SO<sub>x</sub>, NO<sub>x</sub>, and PM<sub>10</sub> would not be expected at distances beyond 5 km from the plant site. The boundaries of the adjacent counties are more than 5 km from the plant site. No potential air quality-related environmental health impacts are expected to accrue to EJ populations in the surrounding counties.

**EPA-40:** Page S-19 of the DEIS states that up to 80 trucks per day (16-hours per day), will transport materials from Choctaw to Kemper County during the initial six months of operation startup. However, page 4-13 indicates that approximately 50-60 trucks per day will deliver lignite to the plant for a period of six months, over the course of 70 miles. The latter values appear to have been used to calculate potential emissions. The FEIS should ensure that the estimated number of trucks that will be used to transport lignite from Choctaw to Kemper County are consistent throughout the document, and accurately reflect the assumptions used to calculate projected emissions, and that every effort is made to minimize further air emissions (e.g., using low sulfur diesel fuel) and routes avoiding residential areas.

- Response:** Subsection 2.4.1 notes that an average of 50 to 60 trucks per day would be expected to make the round trip from the Red Hills Mine. Estimated annual emissions were based on the average number of trucks per day. For the traffic analysis of coal deliveries from the Red Hills Mine, the maximum value of up to 80 trucks per day was used (see Subsection 4.2.13.2 of the EIS).
- EPA-41:** According to the DEIS, local roads surrounding the power plant and mine will be affected by the increased traffic. The DEIS also indicates that accidents are currently the third leading cause of death on the local streets in the area. To what extent will this project exacerbate these issues both during construction and during the initial 6-month startup period when lignite is being transported to the plant? We recommend that commitments to minimize and mitigate any of the anticipated impacts within the EJ community should be discussed in the FEIS.
- Response:** The potential increase in traffic accidents during construction is addressed in Subsection 4.2.19.1. Mitigation measures such as park and ride facilities for construction employees would be implemented.
- Subsection 4.2.13.2 analyzed the potential roadway impacts of up to 80 trucks per day during the initial lignite coal delivery period. The deliveries would be evenly spaced over a 16-hour day. The haul route would use major roadways for most of its length (see Figure 4.2-8 in the Draft EIS, Figure 4.2-9 in the Final EIS) to avoid residential areas to the extent possible. The initial 6-month startup period would add up to a maximum of 10 trucks per hour to the traffic flow (based on round trips) (the average would be 6 or 7). DOE would consider additional mitigation to the extent practicable to minimize traffic impacts as condition of the ROD.
- EPA-42:** According to the DEIS, transportation, housing availability, and aesthetic impacts to the EJ population would be the same as for the general population. However, the effect of the impact may be disparate. In addition, job creation from the project is expected to promote economic development. Sharing of economic benefits by all should be encouraged. The project is projected to employ 105 employees full time for the demonstration period, and 90 employees during long-term operation, with 500 to 1,500 construction employees.
- The DEIS notes that Mississippi Power and North American Coal Corporation (NACC) have voiced their commitment to affirmative action hiring practices, and NACC's history of hiring workers in the local area for their mining operations, when qualified individuals are located in the local area. The DEIS concludes that minorities would be well represented in the workforce for both the power plant and the mining operation. The DEIS cites the Red Hills Mine as an example of the NACC's hiring practices. The mine includes a population that is 8% women and 18% minority. Red Hills Mine employees are 82% Caucasian, while the State of Mississippi is 60.1% Caucasian. We encourage the applicants to continue to pursue a strategy of providing employment opportunities for the local EJ community so that they benefit equitably from the project development.
- Response:** Subsection 4.2.12.2 of the Final EIS has been updated to include additional information describing Mississippi Power's various project-specific Kemper County community involvement and outreach plans.
- EPA-43:** The socioeconomics section of the DEIS addressed the positive impacts of the project from taxes, payroll and jobs. The only potential adverse impact discussed was housing availability. There is no discussion related to increases to the power customers that may result from the Baseload Act that was passed by the State of Mississippi in 2008, which allows Mississippi Power to raise customer rates to help pay for the plant prior to construction. How are these rates going to affect area residents that are low income or minorities? Will the entire service area pay for these costs? Is

this effect going to place a disproportionate burden on these communities? The FEIS should further explain these issues.

**Response:** Subsection 4.2.11.2 of the Final EIS provides new information that responds to the comment. Mississippi Power's analysis presented in testimony to the Mississippi PSC compared the rate impact differential between the Kemper County Project IGCC and a natural gas alternative under a variety of scenarios. That analysis concluded that an additional base-load fuel alternative—Mississippi lignite—would create energy cost savings to customers, such that, over its life, the energy savings would more than offset the project's capacity cost.

Another analysis by the Mississippi PSC's independent evaluator reviewed proposals from others to provide power from existing natural gas-fired plants. The study concluded that the PSC's determination as to the best choice depends on factors such as time horizon, strategic preferences, and credibility of competing offers. Subsection 4.2.11.2 has been updated to include a summary of the independent evaluator's report, which can be accessed on the PSC's Web site.

On April 29, 2010, the Mississippi PSC issued its Phase II order (accessible at <http://www.psc.state.ms.us/executive/pdfs/2009-UA-14%20Proposed%20Order.pdf>). The PSC found that the proposed Kemper County IGCC Project "contains too many uncertainties to justify the ratepayers bearing the risk of all these uncertainties in full." However, the PSC provided guidance, in the form of conditions, on how to make the project "consistent with the public convenience and necessity, as required by" statute. The conditions relate to: (1) risk mitigation for construction and operating costs, (2) government incentives, (3) environmental permits, and (4) Mississippi Power's continuing obligation to ensure the project is in the public interest. The PSC gave Mississippi Power 30 days to respond to its order.

**EPA-44:** According to the DEIS, noise levels along MS 493 would alter the quiet environment that currently exists. What is the projected change in noise level and how many residential units would be affected? The proportion of these residents from EJ populations should be clarified. These issues should be further addressed in the FEIS.

**Response:** Refer to the response to EPA-21. The EJ status of these residences is unknown (data are not available at this scale). As noted in the response to EPA-21, the applicant either has acquired or is pursuing the acquisition of these close-by residences.

**EPA-45:** Schools

The DEIS states that area wide community services are adequate (e.g., schools and hospitals). However, two of the three schools that were mentioned in the DEIS within Kemper County, i.e., Kemper County High and West Kemper Elementary, are listed as underperforming schools. In addition, the growth requirements were not met for either of these schools. Schools in the Meridian Public School District where many students will also attend received mostly low ratings. To assist with revitalization of the area, and to ensure adequate and appropriate education of future facility employees and their families, we would encourage the applicants to partner with these schools to improve the educational opportunities in the immediate area. In the Lauderdale County School District, most schools performed well.

**Response:** Subsection 4.2.12.2 has been updated to include additional information describing Mississippi Power's various project-specific Kemper County community involvement and outreach plans.

**EPA-46:** Endangered Species

EPA will defer to the U.S. Fish and Wildlife Service (FWS) regarding potential project impacts to federally-protected species. The DEIS states DOE'S preliminary determination that "the

*project may affect, but would not likely adversely affect, threatened or endangered species.”* The DEIS notes that continuing coordination between DOE and the FWS is planned. Updated information regarding consultations with the FWS and updated aquatic sampling results should be included in the FEIS.

**Response:** Comments noted. In a letter dated December 21, 2009, the Department of the Interior concurred with DOE’s finding of may affect, but would not likely adversely affect, any federally listed species. Updated information on the consultations is included in Subsection 7.1.7 of the Final EIS.

**EPA-47:** **Historic Preservation**

Construction activities would impact one onsite historic house. Coordination with the SHPO should be ongoing and documented as the project progresses.

**Response:** Comment noted. Mississippi Power would adhere to the MDAH (SHPO) directives provided in the letter dated October 24, 2008 (refer to Appendix M, first letter).

**EPA-48:** The DEIS states that the evaluation and resource recovery would be guided by plans and protocols approved by the SHPO in consultation with Native American tribes. The FEIS should include an update of these coordination activities.

**Response:** Evaluation and resource recovery would be consistent with the terms and conditions of a programmatic agreement being developed for signature by DOE, USACE, Mississippi Power, NACC, and Native American tribes. The Final EIS includes an update of the status of this agreement.



## United States Department of the Interior

OFFICE OF THE SECRETARY  
Office of Environmental Policy and Compliance  
Richard B. Russell Federal Building  
75 Spring Street, S.W.  
Atlanta, Georgia 30303



December 21, 2009

Richard A. Hargis, Jr., NEPA  
Document Manager  
U.S. Department of Energy  
National Energy Technology  
Laboratory, M/S 922-M217  
P.O. Box 10940  
Pittsburgh, PA 15236

Subject: Comments and Recommendations – Review of a Draft Environmental Impact Statement (DEIS) for the Kemper County Integrated Gasification Combined-Cycle (IGCC) Project, Kemper County, Mississippi; [IGCC Project (DOE/EIS-0409D)] (ER09/1141)

Dear Mr. Hargis:

The United States Department of the Interior (Department) has reviewed the subject notice. In this regard, the following comments and recommendations are hereby filed and provided in accordance with provisions of the National Environmental Policy Act (NEPA) of 1969 (83 Stat. 852; 42 U.S.C. 4321 et seq.), the Endangered Species Act (ESA) of 1973 (87 Stat. 884, as amended; 16 U.S.C. 1531 et seq.), the Bald and Golden Eagle Protection Act (BGEPA) (54 Stat. 250, as amended; 16 U.S.C. 668a-d), the Migratory Bird Treaty Act (MBTA) (40 Stat. 755, as amended; 16 U.S.C. 703 et seq.), and the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. 661 et seq.).

The Mobile District Corps of Engineers' has issued two Public Notices for the proposed project:

Mississippi Power Company (PN SAM-2009-01149-DMY) proposes to construct and operate an Integrated Gasification Combined-Cycle lignite coal power facility, hereafter referred to as the "power plant."

North American Coal Corporation (PN SAM-2008-01759-DMY) proposes to construct and operate a surface lignite coal mine, hereafter referred to as the "coal mine."

These projects are co-located and intended to operate in unison. Also, both are evaluated in the subject DEIS. Therefore, this correspondence will provide the Department comments on both proposed projects.

We will also provide these comments to the Corps prior to the closing of the PN comment periods.

### Power plant

#### *Description*

The power plant project is located on an undeveloped 1,650-acre site southwest of the Town of De Kalb and north of the City of Meridian. Construction would include two lignite coal gasifiers, syngas cleanup systems, a cooling tower, two gas combustion turbines, two heat recovery steam generators, a single steam turbine, a separate cooling tower, and associated support facilities. At full design capacity, the two coal gasifiers are expected to use approximately 13,800 tons per day of lignite to produce syngas.

Reclaimed water from Meridian's municipal system would provide the main water supply required for cooling water makeup, steam cycle makeup, and other processes. One or more onsite deep wells would provide a maximum of 1 million gallons per day of non-potable ground water at times when supplies of reclaimed water were insufficient.

New transmission lines, existing transmission and distribution line upgrades, a natural gas pipeline, a reclaimed water pipeline, and a CO<sub>2</sub> pipeline would be constructed in connection with the power plant. The run of these linear projects and their ending termini are not included in this review and consequently will be addressed in future correspondence.

#### *Onsite Resources*

The power plant site is located in Kemper County within the Flatwoods and the North Central Hills Units of the Gulf Coastal Plain. Topography ranges from predominately flat lowlands to rugged uplands. The eastern portion of the site is in the Tombigbee River basin and drains into Sucarnoochee Creek and its tributaries. The western portion of the site is within the Pascagoula River watershed and is drained by Chickasawhay Creek. The major land uses of the area are livestock and timber production (USDA 1999.)

The power plant site contains approximately 880 acres of woody upland vegetation, 178 acres of pastureland, and 38 acres of cleared development. There are 443 acres of jurisdictional wetlands and 3,632 linear feet of stream.

#### *Onsite Impacts*

Construction of the power plant would permanently impact 30 acres of wetlands and 3,632 linear feet of stream within the Chickasawhay Creek watershed.

#### *Proposed Avoidance and Minimization of Impacts*

Due to the efficiency of locating the power plant adjacent to the proposed coal mine, no alternative locations for construction of the plant were deemed practicable.

Mississippi Power Company proposes to replace all lost wetland and riparian functions and values resulting from construction and operation of the power plant, by debit of appropriate credits from an established mitigation area or bank.

#### Coal Mine

##### Description

North American Coal Corporation proposes to construct and operate a surface lignite coal mine in Kemper and Lauderdale Counties, Mississippi. The 31,000-acre project area is located in the headwaters of the Chickasawhay River and the Tombigbee River watershed. The coal mine would be adjacent to the proposed power plant, and all mined coal would be supplied to the power plant under the terms of a sales contract.

Mining would result in two types of landscape disturbance: actual mining including the uncovering and extraction of lignite, and the installation of facilities and structures to support the operation.

Excavation of coal would take place within only one designated mine block at a time. Each block is approximately 195-375 acres. As each block is exhausted of coal, a new block would be started. Excavation would occur yearly for up to 40 years and would impact up to 11,250 acres.

The second type of landscape disturbance would result from the installation of support facilities and structures supporting the mining operation. Facilities would include lignite handling facilities, office, warehouse, mobile equipment maintenance shop, fuel farm complex, dragline assembly area, entrance and internal mine haul roads, employee and equipment parking areas, and electrical substations and distribution lines. Support structures would also include constructed diversion channels to reroute rainfall runoff from undisturbed areas and existing streams away from and around active mining areas; storm water collection channels; water treatment ponds; and flood protection levees. Up to 800 acres would be required for the mine support structures, with another 320 acres required for the mine support facilities for a total of 12,370 acres of disturbance resulting from all mining activities.

##### Onsite Resources

The coal mine site is located in Kemper and Lauderdale Counties within the Flatwoods and the North Central Hills Units of the Gulf Coastal Plain. Topography ranges from predominately flat lowlands to rugged uplands. Five perennial streams flow across the study area including Okatibbee Creek, Panders Creek, Chickasawhay Creek, Tompeat Creek, and Bales Creek. Construction and operation of the proposed North American Coal mine would impact 230,080 linear feet of stream channel, including both top banks, in the Chickasawhay Creek watershed. Also, approximately 2,374 acres of jurisdictional, vegetated wetlands associated with these streams will be removed by the project activities.

##### Onsite Impacts

Construction of the power plant would permanently impact 2,373 acres of wetlands and 230,080 linear feet of stream within the Chickasawhay Creek watershed.

##### Proposed avoidance and minimization of impacts

Due to the finite location of suitable lignite coal, no alternative locations for construction of the coal mine were deemed practicable.

North American Coal Corporation proposes to restore lost riparian functions and values by restoration of onsite streams with post-mining reclamation actions. These actions include excavation and stabilization of stream channels in their pre-mining locations. Also, undisturbed onsite wetlands would be preserved or enhanced at the conclusion of mining in that block.

#### COMMENTS

##### Endangered Species

In correspondence dated October 23, 2008, the Department provided the U.S. Department of Energy (DOE) information regarding federally listed species or their habitats that could be found on or near the project sites:

These species could be found on the proposed power plant site:

- threatened plant Price's potato bean (*Apios priceana*)
- Lagniappe crayfish (*Procambarus lagniappe*)

These species could be found on the proposed coal mine site:

- threatened plant Price's potato bean (*Apios priceana*)
- bald eagle (*Haliaeetus leucocephalus*)

These species could be found on several of the power plant linear support facilities located in Clarke, Jasper, and Lauderdale Counties:

- threatened yellow-blotched map turtle (*Graptemys flavimaculata*)
- threatened Gulf sturgeon (*Acipenser oxyrinchus desotoi*)
- threatened gopher tortoise (*Gopherus polyphemus*)
- pearl darter (*Percina aurora*) Candidate Species
- black pine snake (*Pituophis melanoleucus* ssp. *Lodingi*) Candidate species

Vittor and Associates conducted surveys for Price's potato bean on the power plant and coal mine sites in May-December 2008. No evidence of the plant and very little suitable habitat were observed.

It was also determined that no bald eagle nests were found within the power plant or coal mine project areas.

Surveys for the gopher tortoise and black pine snake were conducted on currently identified linear project areas, and no individuals or burrows were identified. Proposed construction

techniques at river crossings would prevent impacts to the aquatic species pearl darter, yellow-blotched map turtle, and gulf sturgeon.

No surveys for the Lagniappe crayfish (*Procambarus lagniappe*) were conducted. Its designation as a Species of Concern does not provide it protection under the Endangered Species Act (ESA). However, future reassessment of its status may become necessary.

The DOE made a preliminary determination in the DEIS that the proposed projects may affect, but would not likely adversely affect, any federally listed species that might be found on the proposed power plant or coal mine sites, or any linear support facility sites. A letter to the Department dated September 22, 2009, confirmed that determination.

Based on those survey results, the Department concurs with DOE's findings. However, if during any phase of the proposed project it is determined that a federally listed species might be adversely impacted, the Corps and/or DOE should initiate further consultation with this office in accordance with the requirements of the ESA (87 Stat. 884, as amended; 16 U.S.C. 1531 et seq.).

*Aquatic Resources and Wetlands*

Riparian ecosystems are plant communities with more hydric or growth habits than adjacent upland communities. These floodplain forests include streambeds, emergent wetlands, scrub-shrub wetlands, and forested wetlands (Cowardin 1979). They provide year-round habitats for many fish and wildlife species due to in part to a diversity of vegetation. Flooded bottomland forests often support an extensive and diverse faunal group. Submerged vegetation can provide critical habitat features for many species of aquatic organisms. Many wildlife species are dependent on riparian habitats for some critical life cycle need such as food, cover, or breeding habitat. Some species spend their entire life cycles in the same stretch of stream (Hirschland and Seigelquist 1978.)

Surface mining affects water quality by increasing sediment and heavy metals, and altering pH. Riparian vegetation provides a buffer zone between potentially degrading upland runoff and the adjacent waterbody by filtering sediments and other pollutants and prohibiting them from entering the stream (Miss. Dept. of Environmental Quality 2001). Also, removal of shading vegetation can have a strong effect on water temperature.

Insect larvae and submerged aquatic insect populations are greatly decreased downstream of coal mines. Long-term alteration of aquatic and connected habitats (riparian/floodplain) can be anticipated causing impacts to terrestrial species as well (Paetzold and other 2001).

**RECOMMENDATIONS**

It is the Department's opinion that the morphology of the power plant site would be altered permanently with a total loss of functions.

The morphology of the coal mine site would be altered for the life of the project (a minimum of 40 years) due to temporary onsite relocation or removal of water bodies and wetlands. Surface

**DOI-01  
(contd.)**

**DOI-02**

**DOI-03**

vegetation would be lost immediately, and although revegetation is possible, a lengthy temporal loss of woody vegetation would occur. Also, existing, onsite topography would be permanently changed. These changes include altered soil and subsurface geologic structure and surface and subsurface hydrologic regimes (Starnes and Gasper 1995). This would promote a loss of existing instream flora that could have a long-term negative effect on fisheries, amphibians, wading birds, and migratory songbird populations.

On both sites, reduction of shallowly flooded herbaceous vegetation and a removal of spring flooding events could disrupt opportunities for fisheries spawning or reproduction within the Chickasawhay Creek and Suckanoochee watersheds. Another potential result of this habitat degradation could be the alteration of the existing aquatic community into one of species with tolerance of low water quality.

We question the possibility of restoring any jurisdictional wetlands post-construction. Although many sections of Chickasawhay Creek and Suckanoochee Creek watershed have experienced some type of significant degradation such as channel alterations, floodplain encroachment, and groundwater withdrawal, they do provide vital habitats for aquatic micro-populations. There have not been sufficient surveys to identify the existing, onsite aquatic communities, and there is little data available on successful methods of restoration. Although there is an anticipated return of water flow to some onsite channels, the suitability of vegetation used by wildlife species in these areas would be reduced or eliminated for decades. Also, the fragmentation of any undisturbed onsite wetlands would greatly reduce their fish and wildlife habitat quality.

In addition, offsite impacts to stream channels can be anticipated due to temporary increases in water turbidity and suspended solids due to excavation of the upper channel. Downstream temperatures could increase due to reduction of bank shading, with subsequent decreases in the water's dissolved oxygen content.

It is the Department's opinion that the proposed compensatory wetland mitigation for the North American Coal Corporation coal mine is inadequate with respect to the long-term or permanent loss of wetland functions and values within the Chickasawhay Creek and Suckanoochee Creek watersheds. To mitigate for lost resources, we recommend that all lost wetland functions and values be mitigated on a suitable, offsite area within the Chickasawhay River watershed.

Mitigation banks or areas have numerous advantages over traditional compensatory mitigation because of the ability of mitigation banking programs to reduce uncertainty over whether the compensatory mitigation will be successful in offsetting project impacts; assemble and apply extensive financial resources, planning, and scientific expertise not always available to landowners; and enable the efficient review and compliance monitoring of compensatory mitigation projects because of consolidation. Also, mitigation banks/areas are more likely than traditional compensatory mitigation to achieve desired long-term outcomes and to create mitigation sites that are protected in perpetuity to resource conservation.

At such time that an offsite mitigation site is identified, the Department requests a copy of the mitigation plans including the following twelve elements: objectives, site selection criteria, site protection instruments, baseline information, credit determination methodology, mitigation work

**DOI-03  
(contd.)**

plan, maintenance plan, ecological performance standards, monitoring requirements, long-term management plan, adaptive management plan, and financial assurances.

**DOI-03  
(contd.)**

We appreciate the opportunity to review this application and provide these comments and recommendations. If you have questions or concerns, please contact Steve Ricks, Field Supervisor on (601) 321-1132. I can be reached on (404) 331-4524 or by email at [gregory\\_hogue@ios.doi.gov](mailto:gregory_hogue@ios.doi.gov).

Sincerely,



Gregory Hogue  
Regional Environmental Officer

cc:  
Jerry Ziewitz, FWS – Region 4  
Brenda Johnson, USGS - Reston  
OEPC - WASH

Citations

Cowardin, Lewis M. 1979. Classification of wetlands and deepwater habitats of the United States. Office of Biological Services, U.S. Fish and Wildlife Service, Washington, DC, 101 pp.

Hirschland, Allan and Charles A. Segelquist. 1978. Protection and Management of Riparian Ecosystems: Activities and Views of the U.S. Fish and Wildlife Service. National Symposium on Strategies for Protection and Management of Floodplain Wetlands and other Riparian Ecosystems, Callaway Gardens, Georgia, 6 pp.

Mississippi Department of Environmental Quality. 2001. Pascagoula River Basin Status Report 2001. Pascagoula River Basin Team. Jackson, MS. 24pp.

Paetzold, Achim, P.H. Warren, and Lorraine L. Maltby. 2009. Long-term effects of altered aquatic-terrestrial subsidies. Ecological Society of America 94<sup>th</sup> Annual Meeting, Albuquerque, New Mexico.

Starnes, Lynn B. and Don C. Gasper. 1995. Effects of surface mining on aquatic resources in North America. Position statement of the American Fisheries Society. May 1995. Bethesda, Maryland, 7pp.

USDA. 1999. Soil survey of Kemper County, Mississippi. Natural Resources Conservation Service, 198 pp.

**DOI-01:** *Endangered Species*

In correspondence dated October 23, 2008, the Department provided the U.S. Department of Energy (DOE) information regarding federally listed species or their habitats that could be found on or near the project sites:

These species could be found on the proposed power plant site:

- threatened plant Price's potato bean (*Apios priceana*)
- Lagniappe crayfish (*Procambarus lagniappe*)

These species could be found on the proposed coal mine site:

- threatened plant Price's potato bean (*Apios priceana*)
- bald eagle (*Haliaeetus leucocephalus*)

These species could be found on several of the power plant linear support facilities located in Clarke, Jasper, and Lauderdale Counties:

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- black pine snake (*Pituophis melanoleucus ssp. Lodingi*) Candidate species

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No surveys for the Lagniappe crayfish (*Procambarus lagniappe*) were conducted. Its designation as a Species of Concern does not provide it protection under the Endangered Species Act (ESA). However, future reassessment of its status may become necessary.

The DOE made a preliminary determination in the DEIS that the proposed projects may affect, but would not likely adversely affect, any federally listed species that might be found on the proposed power plant or coal mine sites, or any linear support facility sites. A letter to the Department dated September 22, 2009, confirmed that determination.

Based on those survey results, the Department concurs with DOE's findings. However, if during any phase of the proposed project it is determined that a federally listed species might be adversely impacted, the Corps and/or DOE should initiate further consultation with this office in accordance with the requirements of the ESA (87 Stat. 884, as amended; 16 U.S.C. 1531 et seq.).

**Response:** Comments noted. DOE and/or USACE would initiate further consultation if during any phase of the proposed project it is determined that a federally listed species might be adversely impacted.

**DOI-02:** *Aquatic Resources and Wetlands*

Riparian ecosystems are plant communities with more hydric or growth habits than adjacent upland communities. These floodplain forests include streambeds, emergent wetlands, scrub-shrub wetlands, and forested wetlands (Cowardin 1979). They provide year-round habitats for many fish and wildlife species due to in part to a diversity of vegetation. Flooded bottomland forests often support an extensive and diverse faunal group. Submerged vegetation can provide critical habitat features for many species of aquatic organisms. Many wildlife species are dependent on riparian habitats for some critical life cycle need such as food, cover, or breeding habitat. Some species spend their entire life cycles in the same stretch of stream (Hirsch and Segelquist 1978.)

Surface mining affects water quality by increasing sediment and heavy metals, and altering pH. Riparian vegetation provides a buffer zone between potentially degrading upland runoff and the adjacent waterbody by filtering sediments and other pollutants and prohibiting them from entering the stream (Miss. Dept. of Environmental Quality 2001). Also, removal of shading vegetation can have a strong effect on water temperature.

Insect larvae and submerged aquatic insect populations are greatly decreased downstream of coal mines. Long-term alteration of aquatic and connected habitats (riparian/floodplain) can be anticipated causing impacts to terrestrial species as well (Paetzold and other 2001).

**Response:** DOE agrees that surface mining has historically affected water quality by increasing sediment and heavy metals and altering pH. However, DOE also notes the federal SMCRA regulatory program has proven effective in preventing, minimizing, and mitigating water quality impacts caused by surface coal mining. Also, DOE has documented in the EIS the geochemistry of the Kemper County overburden and lignite deposits. Based on the data presented in Tables 3.4-3, 4.2-9, and 4.2-33, as well as the analyses presented in Subsections 4.2.4.2 and 4.2.7.2, DOE concludes that adverse downstream water quality impacts of the types listed in this comment can be avoided through implementation of the MDEQ SMCRA and NPDES permit programs.

DOE agrees that insect larvae and submerged aquatic insect populations decreases have been documented in the literature downstream from certain surface coal mines. It is for this reason that DOE requested a comparison of the macroinvertebrate and fish communities present at the Kemper County mine study area and upstream, within, and downstream of the operating Red Hills Mine be conducted. The data presented in Appendix I suggest the decreases reported in the literature at other mines would not occur at the proposed Liberty Fuels Mine.

**DOI-03:** **RECOMMENDATIONS**

It is the Department's opinion that the morphology of the power plant site would be altered permanently with a total loss of functions.

The morphology of the coal mine site would be altered for the life of the project (a minimum of 40 years) due to temporary onsite relocation or removal of water bodies and wetlands. Surface vegetation would be lost immediately, and although revegetation is possible, a lengthy temporal

loss of woody vegetation would occur. Also, existing, onsite topography would be permanently changed. These changes include altered soil and subsurface geologic structure and surface and subsurface hydrologic regimes (Starnes and Gasper 1995). This would promote a loss of existing instream flora that could have a long-term negative effect on fisheries, amphibians, wading birds, and migratory songbird populations.

On both sites, reduction of shallowly flooded herbaceous vegetation and a removal of spring flooding events could disrupt opportunities for fisheries spawning or reproduction within the Chickasawhay Creek and Surcarnoochee watersheds. Another potential result of this habitat degradation could be the alteration of the existing aquatic community into one of species with tolerance of low water quality.

We question the possibility of restoring any jurisdictional wetlands post-construction. Although many sections of Chickasawhay Creek and Sucarnoochee Creek watershed have experienced some type of significant degradation such as channel alterations, floodplain encroachment, and groundwater withdrawal, they do provide vital habitats for aquatic micro-populations. There have not been sufficient surveys to identify the existing, onsite aquatic communities, and there is little data available on successful methods of restoration. Although there is an anticipated return of water flow to some onsite channels, the suitability of vegetation used by wildlife species in these areas would be reduced or eliminated for decades. Also, the fragmentation of any undisturbed onsite wetlands would greatly reduce their fish and wildlife habitat quality.

In addition, offsite impacts to stream channels can be anticipated due to temporary increases in water turbidity and suspended solids due to excavation of the upper channel. Downstream temperatures could increase due to reduction of bank shading, with subsequent decreases in the water's dissolved oxygen content.

It is the Department's opinion that the proposed compensatory wetland mitigation for the North American Coal Corporation coal mine is inadequate with respect to the long-term or permanent loss of wetland functions and values within the Chickasawhay Creek and Sucarnoochee Creek watersheds. To mitigate for lost resources, we recommend that all lost wetland functions and values be mitigated on a suitable, offsite area within the Chickasawhay River watershed.

Mitigation banks or areas have numerous advantages over traditional compensatory mitigation because of the ability of mitigation banking programs to reduce uncertainty over whether the compensatory mitigation will be successful in offsetting project impacts; assemble and apply extensive financial resources, planning, and scientific expertise not always available to landowners; and enable the efficient review and compliance monitoring of compensatory mitigation projects because of consolidation. Also, mitigation banks/areas are more likely than traditional compensatory mitigation to achieve desired long-term outcomes and to create mitigation sites that are protected in perpetuity to resource conservation.

At such time that an offsite mitigation site is identified, the Department requests a copy of the mitigation plans including the following twelve elements: objectives, site selection criteria, site protection instruments, baseline information, credit determination methodology, mitigation work plan, maintenance plan, ecological performance standards, monitoring requirements, long-term management plan, adaptive management plan, and financial assurances.

**Response:** DOE agrees that, absent regulation, the morphology of the lignite mine study area could change in a manner that would result in a loss of existing instream flora. However, the CWA 404 permit program administered by USACE requires the applicant to incorporate site plan and other mitigative measures into the overall project plan to minimize or mitigate these potential impacts. In the EIS, USACE has made clear its intentions to fully enforce its regulations in terms of minimiza-

tion and mitigation of wetland and stream impacts. The CWA 404 permit process and USACE's ongoing evaluation of NACC's application is the process by which such minimization and mitigation measures would be developed to maintain or improve the physical, chemical, and biologic conditions of Waters of the United States within and downstream of the mine study area. The data and analyses presented in Appendix I suggest instream flora could be maintained, as could the macroinvertebrate and fish populations.

The EIS in Subsections 2.2.1 and 2.4.2 summarizes the relationship between DOE NEPA requirements and the USACE CWA 404 permit program. The concerns expressed by DOI in this paragraph relate to USACE's application of its CWA 404 regulations during its evaluation of NACC's application. USACE will develop its ROD based, in part, upon these comments.

DOE disagrees that offsite impacts to downstream channels would result in increased turbidity and suspended solids (TSS). The use of the sedimentation ponds and diversion channels illustrated on Figure 2.4-2, together with the numerical TSS effluent limitations that would be imposed by the MDEQ permit, cause DOE to project no increase, and perhaps a modest decrease, in downstream TSS levels. DOE concurs that a minor, localized, onsite increase in water temperature could occur; however, DOE notes the immediate downstream location of Okatibbee Lake would equalize the water temperature in downstream waters.

A copy of the final mitigation plans will be provided to DOI when available, including the following twelve elements: objectives, site selection criteria, site protection instruments, baseline information, credit determination methodology, mitigation work plan, maintenance plan, ecological performance standards, monitoring requirements, long-term management plan, adaptive management plan, and financial assurances.

USACE agrees with DOE's interpretation. Also, annual monitoring is required as part of the USACE process. This suggestion would be required by USACE if a DA permit were authorized.

## MISSISSIPPI DEPARTMENT of ARCHIVES AND HISTORY



PO Box 571, Jackson, MS 39205-0571  
601-576-6850 • Fax 601-576-6975  
mdah.state.ms.us  
H.T. Holmes, Director

December 1, 2009

Mr. Richard A. Hargis, Jr.  
NEPA Document Manager  
U.S. Department of Energy  
P.O. Box 10940  
Pittsburgh, Pennsylvania 15236

RE: Draft Environmental Impact Statement (EIS) for the Kemper County IGCC  
Project (DOE/EIS-0409D), MDAH Project Log #11-005-09, Kemper County

Dear Mr. Hargis:

We have reviewed the Draft Environmental Impact Statement (EIS) for the Kemper County IGCC Project (DOE/EIS-0409D), received on November 2, 2009, in accordance with our responsibilities under Section 106 of the National Historic Preservation Act and 36 CFR Part 800. After reviewing the information provided, we have no objection with the draft Environmental Impact Statement document.

MDAH-01

If you have any questions, please do not hesitate to contact us at (601) 576-6940.

Sincerely,

  
Jim Woodrick  
Review and Compliance Officer

FOR: H.T. Holmes  
State Historic Preservation Office

c: Clearinghouse for Federal Programs

**MDAH-01:** We have reviewed the Draft Environmental Impact Statement (EIS) for the Kemper County IGCC Project (DOE/EIS-0409D), received on November 2, 2009, in accordance with our responsibilities under Section 106 of the National Historic Preservation Act and 36 CFR Part 800. After reviewing the information provided, we have no objection with the draft Environmental Impact Statement document.

**Response:** Comment noted.



**STATE OF MISSISSIPPI**  
HALEY BARBOUR, GOVERNOR  
**MISSISSIPPI DEVELOPMENT AUTHORITY**  
GRAY SWOOPE  
EXECUTIVE DIRECTOR

December 11, 2009

Mr. Richard A. Hargis, Jr.  
NEPA Document Manger  
U.S. Department of Energy  
National Energy Technology Laboratory  
M/S 922-M217  
P.O. Box 10940  
Pittsburgh, PA 15236

Dear Mr. Hargis:

The Mississippi Development Authority is pleased to hear of the U.S. Department of Energy's proposed partnership with Mississippi Power, a subsidiary of Southern Company, in the implementation of the Kemper County IGCC Project (DOE/EIS-0409D). This type of project brings to Kemper County and the entire state a huge economic benefit, but also demonstrates effective use of this clean coal technology in generating reliable power in the future.

The investment of \$2 billion will have a lasting and favorable impact through the creation of jobs, improved infrastructure, and tax revenue. This project will become a catalyst for other economic projects in this region that will help reverse the impacts of a sagging economy.

This new environmentally friendly technology will also position Mississippi as a leader in utilizing natural resources that are abundant in this state. Also, by capturing the carbon dioxide produced in this process, Mississippi can take advantage of maximizing the profit at the facility while protecting the environment. This project definitely will help utilize all of our natural resources as we reduce our dependence on foreign fossil fuels.

The Mississippi Development Authority anticipates with great enthusiasm the start of this project and the overall benefits for this region and the State of Mississippi.

Sincerely,

Gray Swoope  
Executive Director

POST OFFICE BOX 849 - JACKSON, MISSISSIPPI 39205-0849  
TELEPHONE (601) 359-3449 - FAX (601) 359-2832 - [www.mississippi.org](http://www.mississippi.org)

MDA-01

**MDA-01:** The Mississippi Development Authority is pleased to hear of the U.S. Department of Energy's proposed partnership with Mississippi Power, a subsidiary of Southern Company, in the implementation of the Kemper County IGCC Project (DOE/EIS-0409D). This type of project brings to Kemper County and the entire state a huge economic benefit, but also demonstrates effective use of this clean coal technology in generating reliable power in the future.

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The Mississippi Development Authority anticipates with great enthusiasm the start of this project and the overall benefits for this region and the State of Mississippi.

**Response:** Comment noted.



MISSISSIPPI  
DEPARTMENT OF WILDLIFE, FISHERIES, AND PARKS

Sam Polles, Ph.D.  
Executive Director

December 21, 2009

Mr. Richard A. Hargis, Jr., NEPA Document Manager  
U.S. Department of Energy  
National Energy Technology Laboratory, M/S 922-M217  
P.O. Box 10940  
Pittsburgh, Pennsylvania 15236

Re: Kemper County IGCC Project  
Kemper County, Mississippi

R# 7618

To Mr. Richard A. Hargis, Jr.:

In response to your request for information dated December 8, 2009, we have searched our database for occurrences of state or federally listed species and species of special concern that occur within 2 miles of the site of the proposed project. Please find our concerns and recommendations below.

Although there are no documented occurrences of rare, threatened, or endangered species within a 2 mile buffer of the proposed project, there are a few occurrences of water-dependent rare and/or protected species downstream of the proposed project area as well as tributaries to waterbodies of ecological importance (i.e. Chickasawhay River, Chunky River, etc.). These species include the following:

SCIENTIFIC NAME	COMMON NAME	FED	STATE	STATE RANK
<i>Procambarus lagniappe</i>	Lagniappe Crayfish			S1
<i>Haliaeetus leucocephalus</i>	Bald Eagle		LE	S2B, S2N
<i>Anodonta radiatus</i>	Rayed Creekshell			S2

**State Rank**

S1 — Critically imperiled in Mississippi because of extreme rarity (5 or fewer occurrences or very few remaining individuals or acres) or because of some factor(s) making it vulnerable to extirpation.  
S2 — Imperiled in Mississippi because of rarity (6 to 20 occurrences or few remaining individuals or acres) or because of some factor(s) making it vulnerable to extirpation.  
S3 — Rare or uncommon in Mississippi (on the order of 21 to 100 occurrences)

MDWFP-01

**State and Federal Status**

LE Endangered — A species which is in danger of extinction throughout all or a significant portion of its range.  
LT Threatened — A species likely to become endangered in foreseeable future throughout all or a significant portion of its range.

Due to the large nature of the proposed project, should it be approved, it is essential that best management practices be utilized and maintained to a higher standard than normally required. Sediment is the most common pollutant of Mississippi waters and measures should be taken to prevent sediment and other pollutants from leaving the site via stormwater runoff.

**Recommendations:**

We recommend that best management practices be properly implemented, monitored, and maintained for compliance, specifically measures that will prevent suspended silt and contaminants from leaving the site in stormwater run-off as this may negatively affect water quality and habitat conditions within nearby streams and waterbodies.

Should the project be approved, we recommend that the applicant work closely with the MS Department of Environmental Quality to ensure adequate measures are taken to prevent sediment/pollutant runoff from entering other waterbodies and wetlands.

In addition, portions of this project site appear to be underlain by hydric soils and may be designated wetlands. If this project is approved, we ask that serious consideration be given to the cumulative impacts of wetland disturbance and elimination, and that appropriate, in-kind mitigation be provided.

We also recommend that the area be returned to pre-construction conditions once complete. This includes replacing stream channels (if re-aligned or damaged) with correct profile and dimensions and insuring bed and bank stability through natural channel design techniques, replacing wetlands with proper vegetation/hydrology, and restoring upland areas with appropriate, native vegetation.

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

Sincerely,

Andy Sanderson, Ecologist  
Mississippi Natural Heritage Program  
(601) 354-7303

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

MDWFP-01  
(contd.)

MDWFP-02

**MDWFP-01:** In response to your request for information dated December 8, 2009, we have searched our database for occurrences of state or federally listed species and species of special concern that occur within 2 miles of the site of the proposed project. Please find our concerns and recommendations below.

Although there are no documented occurrences of rare, threatened, or endangered species within a 2 mile buffer of the proposed project, there are a few occurrences of water-dependent rare and/or protected species downstream of the proposed project area as well as tributaries to waterbodies of ecological importance (i.e. Chickasawhay River, Chunky River, etc.). These species include the following:

SCIENTIFIC NAME	COMMON NAME	FED	STATE	STATE RANK
<i>Procambarus lagniappe</i>	Lagniappe Crayfish			S1
<i>Haliaeetus leucocephalus</i>	Bald Eagle		LE	S2B, S2N
<i>Anodontooides radiatus</i>	Rayed Creekshell			S2

#### State Rank

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

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

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

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

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

Due to the large nature of the proposed project, should it be approved, it is essential that best management practices be utilized and maintained to a higher standard than normally required. Sediment is the most common pollutant of Mississippi waters and measures should be taken to prevent sediment and other pollutants from leaving the site via stormwater runoff.

**Response:** Comment noted. The project applicants would implement BMPs (see Section 2.3 and Subsections 4.2.3 and 4.2.4, for example), as required by federal and state regulations (Chapter 7).

As noted in Subsection 4.2.4.2 of the EIS, the discharges from the proposed lignite mine would be subject to total suspended solids (TSS) limits imposed by the federal CWA. These limits, together with the imposition of BMP requirements, would result in water quality downstream that is equal or less turbid than current conditions.

**MDWFP-02: Recommendations:**

We recommend that best management practices be properly implemented, monitored, and maintained for compliance, specifically measures that will prevent suspended silt and contaminants from leaving the site in stormwater run-off as this may negatively affect water quality and habitat conditions within nearby streams and waterbodies.

Should the project be approved, we recommend that the applicant work closely with the MS Department of Environmental Quality to ensure adequate measures are taken to prevent sediment/pollutant runoff from entering other waterbodies and wetlands.

In addition, portions of this project site appear to be underlain by hydric soils and may be designated wetlands. If this project is approved, we ask that serious consideration be given to the cumulative impacts of wetland disturbance and elimination, and that appropriate, in-kind mitigation be provided.

We also recommend that the area be returned to pre-construction conditions once complete. This includes replacing stream channels (if re-aligned or damaged) with correct profile and dimensions and insuring bed and bank stability through natural channel design techniques, replacing wetlands with proper vegetation/hydrology, and restoring upland areas with appropriate, native vegetation.

**Response:**

With respect to potential impacts from the construction of the power plant and associated facilities, DOE would consider that best management practices be properly implemented, monitored, and maintained for compliance as a condition of the ROD, if these measures are not required under permit conditions. With respect to the mine, DOE expects that MDEQ and/or USACE would include these practices as a condition of the permits. Stream restoration and wetland mitigation would be required under both MDEQ and USACE permit conditions, if approved.

December 5, 2009

Mr. Richard A. Hargis, Jr  
626 Cochrans Mill Road  
Pittsburg, PA 15236-4604

Dear Mr. Hargis,

These are my comments:

I don't know where you live but I live 2.5 miles from the proposed coal plant.

My very first thoughts were why aren't we moving upward? Why is Mississippi so status quo? Coal is dirty. There is no such thing as clean coal. Mississippi does not need to be another West Virginia.

It is apparent with the questionable leadership of Governor Barbour and his "Mississippi Energy Policy Institute" survey is not truthful as Barbour founded the lobbying firm that still represents the Southern Company. I feel that the NYTimes said it the best: "His deep roots as a defender of large energy interest are some of the strongest opponents to any movement on climate change. This also weakens his credibility."

This month in Copenhagen water levels will be discussed. The Maldives, an island nation is slipping beneath the waves, and the countries from Bangladesh to the U.S. are confronting issues that result from a warming climate.

In July, 2009, Bob Thirsk, a Canadian astronaut, aboard the International Space Station stated it looks like Earth's ice caps have melted a bit since his last orbit twelve years ago.

Can our future ash waste in holding ponds be compared to the coker gasoline that was "cleaned" and off loaded (sludge) in 18 locations on the Ivory Coast? Within hours people were treated for ENT and pulmonary problems. We won't experience this immediately, but in the long run we will.

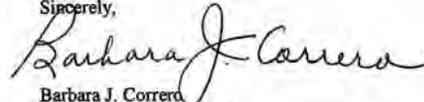
I have read that there are power plants not operating to full capacity. Indeed, one of these is KGen's Jackson, MS., power plant on Beasley Road. It is one of the most efficient, natural-gas electric generators in the Southeast. It only operates only 10-20 percent of the year. There are 8,000 MW of power "just sitting around" as there are 7,600 MW available to Mississippi from smaller, independent power set-ups. This potential energy already available to Mississippi is three times what we need even on peak demand days.

I am a retired Oncology registered nurse. For twenty-two years, at Emory University Hospital and Clinic, I was a hands-on nurse. People of all ages are dying from contaminated food, air and water. We are not only killing the earth but ourselves.

Responsibility must be taken now to stop greed driven pollution.

Thank you for permitting me to make these comments.

Sincerely,



Barbara J. Corredo  
670 Murphy Hardy Road  
DeKalb, MS 39328

BC-04

BC-05

BC-06

BC-07

- BC-04:** I don't know where you live but I live 2.5 miles from the proposed coal plant.
- My very first thoughts were why aren't we moving upward? Why is Mississippi so status quo? Coal is dirty. There is no such thing as clean coal. Mississippi does not need to be another West Virginia.
- It is apparent with the questionable leadership of Governor Barbour and his "Mississippi Energy Policy Institute" survey is not truthful as Barbour founded the lobbying firm that still represents the Southern Company. I feel that the NYTimes said it the best: "His deep roots as a defender of large energy interest are some of the strongest opponents to any movement on climate change. This also weakens his credibility."
- This month in Copenhagen water levels will be discussed. The Maldives, an island nation is slipping beneath the waves, and the countries from Bangladesh to the U.S. are confronting issues that result from a warming climate.
- In July, 2009, Bob Thirsk, a Canadian astronaut, aboard the International Space Station stated it looks like Earth's ice caps have melted a bit since his last orbit twelve years ago.
- Response:** Comment noted. Global climate change impacts are addressed in Section 6.1.
- BC-05:** Can our future ash waste in holding ponds be compared to the coker gasoline that was "cleaned" and off loaded (sludge) in 18 locations on the Ivory Coast? Within hours people were treated for ENT and pulmonary problems. We won't experience this immediately, but in the long run we will.
- Response:** The management of gasification ash is not comparable to the management of sludge from refinery operations. There would be no health effects from ash management. The ash would be handled in a dry state, precluding the potential for spills. There would be no effects to ground water, because the ash disposal design features would avoid impacts to ground water. Also, fugitive dust would be controlled through dust suppression systems.
- BC-06:** I have read that there are power plants not operating to full capacity. Indeed, one of these is KGen's Jackson, MS., power plant on Beasley Road. It is one of the most efficient, natural-gas electric generators in the Southeast. It only operates only 10-20 percent of the year. There are 8,000 MW of power "just sitting around" as there are 7,600 MW available to Mississippi from smaller, independent power set-ups. This potential energy already available to Mississippi is three times what we need even on peak demand days.
- Response:** The need for power is not in the scope of the EIS and is appropriately addressed by the Mississippi PSC.
- BC-07:** I am a retired Oncology registered nurse. For twenty-two years, at Emory University Hospital and Clinic, I was a hands-on nurse. People of all ages are dying from contaminated food, air and water. We are not only killing the earth but ourselves.
- Responsibility must be taken now to stop greed driven pollution.
- Response:** Comment noted.

Post Office Box 246  
DeKalb, Mississippi 39328

December 8, 2009

Mr. Richard Hargis  
U.S. Department of Energy  
P.O. Box 880  
Morgantown, WV 26507-0880

Dear Mr. Hargis:

As a citizen of Kemper County I wish to express my strong support for the lignite plant planned for Southwest Kemper.

The recent presentation and hearing in the Kemper High School cafeteria was informative, and the Department of Energy is to be commended for letting those opposed have their say.

I am active in several local organizations, and I hear what people are saying. I consider the overwhelming majority of area citizens favor construction and operation of the plant here. We are not just wanting the jobs and tax revenue, but are proud to have Kemper County going on the map as the location of the cleanest coal technology in America.

Sincerely yours,



Margaret Stennis Womble

MW-02

**MW-02:** As a citizen of Kemper County I wish to express my strong support for the lignite plant planned for Southwest Kemper. The recent presentation and hearing in the Kemper High School cafeteria was informative, and the Department of Energy is to be commended for letting those opposed have their say.

I am active in several local organizations, and I hear what people are saying. I consider the overwhelming majority of area citizens favor construction and operation of the plant here. We are not just wanting the jobs and tax revenue, but are proud to have Kemper County going on the map as the location of the cleanest coal technology in America.

**Response:** Comment noted.

MC-02  
(contd.)

December 8, 2009

Michael D. Correro  
2077 Davis Ishie Allen Road  
De Kalb, MS 39328  
601-743-5981  
[mdcorrero@kemper.lib.ms.us](mailto:mdcorrero@kemper.lib.ms.us)

Mr. Richard A. Hargis, Jr.  
NEPA Document Manager  
U.S. Department of Energy  
National Technology Laboratory  
M/S 922-M217  
P.O. Box 10940  
Pittsburgh, PA 15236  
[Kemper-EIS@NETL.doe.gov](mailto:Kemper-EIS@NETL.doe.gov)

Re: Kemper County IGCC Project Draft EIS (DOE/EIS-0409D)

Subject: **Opposition Statement to Kemper County IGCC Project**

Mr. Hargis, first I would like to thank you for providing the EIS material to the De Kalb Public Library, where I serve as the Head Librarian to the community of De Kalb and Kemper County residents. The material has been placed on display as requested.

Secondly, I would like to commend you and your staff for your outstanding research and presentation of the material of the potential environmental impact, if constructed; the IGCC plant will have on our community and other residents of MS.

For the record, I would like to quote a lifetime resident (retired RN), Mrs. Gladys Henderson, whom I invited to attend the DOE meeting on December 1, 2009.

“Why should I go? There is nothing we can do. Our hands are tied.”

Mrs. Henderson is over 80 years old, and she has children, grand-children, and great-grand-children living in the county, and she is very concerned about the outcome of her family’s health, especially since she just lost her youngest son (36 years old) to lung cancer.

I myself, purchased my retirement land and home, just eleven years ago, and now I am within the three mile foot print of the projected IGCC plant. I have 10 years left to complete my employment and retire in my country home, which it stands to be completely defeated, if the DOE and the MS PSC allow this IGCC plant to be constructed.

Mr. Hargis, you have urged us to look at the draft, and to let you know what we think. Well, my friend, you and your staff, couldn’t have presented it any more clearly, than what I have taken from your own research and other sources listed below:

MC-01

MC-02

“Air quality is, of course, influenced by the emissions of pollutants into the air. Emissions come from a variety of sources, including the combustion of fuel by stationary sources (e.g. power plants, factories, etc.)”

Source: Department of Energy / Environmental Impact Statement 0409D

The largest stationary industrial source of air pollutant emissions in Kemper County is the Tennessee Gas Pipeline (TGP) gas compressor station, which is located approximately 6 miles east of the proposed IGCC power plant site. The “primary function” of the TGP is to save on maintenance and repair costs, not the reduction of air pollutants.

Source: [www.epa.gov/Region7/programs/artd/air/nsr/.../tgp-pcp.pdf](http://www.epa.gov/Region7/programs/artd/air/nsr/.../tgp-pcp.pdf)

**Air pollutants are broken down into two different categories:**

**Primary and Secondary:**

**Primary Pollutants:**

Carbon monoxide (CO)

Generates headaches, drowsiness, fatigue, can result in death

Oxides of nitrogen (NO<sub>x</sub>, NO)

Emitted directly by autos and industry

Sulfur oxides (SO<sub>x</sub>)

Produced largely through coal burning

Responsible for acid rain problem

Volatile organic compounds (VOCs)

Released through incomplete combustion and industrial sources

Particulate matter (dust, ash, salt particles)

Bad for your lungs

**Secondary pollutants:** are formed when primary pollutants react with typical atmospheric compounds (water, nitrogen, oxygen) under various atmospheric conditions (temperature, humidity, light intensity). Example: ozone

The EPA has categorized 188 other hazardous air pollutants (HAPs). HAPs are those pollutants known or suspected to cause cancer or other serious health effects, such as reproductive effects or birth defects, or adverse environmental effects.

Examples of these air toxics include dioxin, asbestos, toluene, and metals such as cadmium, mercury, chromium, and lead compounds.

Source: Department of Energy / Environmental Impact Statement 0409D

Mr. Hargis, I'm not a chemist, an engineer, nor am I a RN like Mrs. Henderson, who not only gave more than thirty years of service of her life to this community as a nurse, and she still volunteers almost daily providing services to countless families and organizations in need, as well as, donations of hundreds of dollars a year to aid this library's operational budget. But, yet she feels her hands are tied! Well, sir, with all due respect, my hands are not tied, and I just hope the minds and hearts of the DOE and the PSC are not tied either, nor are they blinded by the terrible outcome, which is about to take place on our land, if the wrong decision is made against our wills and hearts.

Two Hundred plus people on a cold rainy Tuesday night in Kemper County, Mississippi, is a very strong Environmental Impact Statement. IGCC "Go Away!"

MC-03

**MC-01:** Mr. Hargis, first I would like to thank you for providing the EIS material to the De Kalb Public Library, where I serve as the Head Librarian to the community of De Kalb and Kemper County residents. The material has been placed on display as requested.

Secondly, I would like to commend you and your staff for your outstanding research and presentation of the material of the potential environmental impact, if constructed; the IGCC plant will have on our community and other residents of MS.

For the record, I would like to quote a lifetime resident (retired RN), Mrs. Gladys Henderson, whom I invited to attend the DOE meeting on December 1, 2009.

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Mrs. Henderson is over 80 years old, and she has children, grand-children, and great-grand-children living in the county, and she is very concerned about the outcome of her family’s health, especially since she just lost her youngest son (36 years old) to lung cancer.

I myself, purchased my retirement land and home, just eleven years ago, and now I am within the three mile foot print of the projected IGCC plant. I have 10 years left to complete my employment and retire in my country home, which it stands to be completely defeated, if the DOE and the MS PSC allow this IGCC plant to be constructed.

**Response:** Opposition to the project noted.

**MC-02:** Mr. Hargis, you have urged us to look at the draft, and to let you know what we think. Well, my friend, you and your staff, couldn’t have presented it any more clearly, than what I have taken from your own research and other sources listed below:

“Air quality is, of course, influenced by the emissions of pollutants into the air. Emissions come from a variety of sources, including the combustion of fuel by stationary sources (e.g. power plants, factories, etc.).”

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**Air pollutants are broken down into two different categories:**

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Oxides of nitrogen (NO<sub>x</sub>, NO)

Emitted directly by autos and industry

Sulfur oxides (SO<sub>x</sub>)

Produced largely through coal burning

Responsible for acid rain problem

Volatile organic compounds (VOCs)

Released through incomplete combustion and industrial sources

Particulate matter (dust, ash, salt particles)

Bad for your lungs

**Secondary pollutants:** are formed when primary pollutants react with typical atmospheric compounds (water, nitrogen, oxygen) under various atmospheric conditions (temperature, humidity, light intensity). Example: ozone

The EPA has categorized 188 other hazardous air pollutants (HAPs). HAPs are those pollutants known or suspected to cause cancer or other serious health effects, such as reproductive effects or birth defects, or adverse environmental effects.

Examples of these air toxics include dioxin, asbestos, toluene, and metals such as cadmium, mercury, chromium, and lead compounds.

*Source: Department of Energy / Environmental Impact Statement 0409D*

**Response:** Comment noted. The EIS addresses air pollutant emissions and potential impacts in detail.

**MC-03:** Mr. Hargis, I'm not a chemist, an engineer, nor am I a RN like Mrs. Henderson, who not only gave more than thirty years of service of her life to this community as a nurse, and she still volunteers almost daily providing services to countless families and organizations in need, as well as, donations of hundreds of dollars a year to aid this library's operational budget. But, yet she feels her hands are tied! Well, sir, with all due respect, my hands are not tied, and I just hope the minds and hearts of the DOE and the PSC are not tied either, nor are they blinded by the terrible outcome, which is about to take place on our land, if the wrong decision is made against our wills and hearts.

Two Hundred plus people on a cold rainy Tuesday night in Kemper County, Mississippi, is a very strong Environmental Impact Statement. IGCC "Go Away!"

**Response:** Opposition to the project noted.

2218 Mount Nebo Road  
DeKalb, MS 39328

U S Department of Energy  
Attention Richard Hargis

RE: Proposed Lignite Coal Plant for Kemper County

The Kemper County Messenger recently covered the meeting held in DeKalb at the Kemper County High School. I was distressed to read that no one spoke in favor of this new plant and sorry that I was not more vigilant in knowing this meeting was taking place.

I retired from teaching in 2003 and moved to DeKalb. While having never lived here prior to 2003, I do have deep roots here as both my father and mother were raised in Kemper County and spent their 28 years of retirement here. In fact, most of my relatives are buried in Liberty Church Cemetery which is very near the proposed site for the new lignite coal plant.

Not only was I delighted to learn that there might be a coal plant built here soon after I retired, but equally excited that Mississippi Power was the proposed builder. Before I moved to De Kalb, for 29 years I lived in Cartersville, Georgia. My former husband was city manager of that city and I became very familiar with Plant Bowen, a power plant in Cartersville, and through a community organization, Cartersville Woman's Club, became very active in many conservation and community projects. Our group worked with Georgia Power in recycling projects, blood drives and educational endeavors.

Our club sponsored a Peak Power Prevention Project which won national recognition somewhere around 1980 and later as a teacher I wrote and my class presented an "energy" play aimed at energy conservation. While I was naive to think that with enough encouragement and reminders people would learn to promote practices that would help their electric bills stabilize or hopefully decrease, I soon learned that conservation works only in small doses. Given the nature of human beings, the nature of electricity, the increasing population and longevity of our population today — the need for electricity is only going to increase!

MM-01

This proposed project in Kemper County sounds like a wonderful gift to a small rural community in need of good paying jobs with wonderful benefits. Georgia Power was a good neighbor when I lived in Cartersville. Their recreational facilities which they shared with the community, educational plant tours, and community involvement was phenomenal. Their personnel were very involved in local churches and schools. I knew many of their dedicated employees and they were outstanding families.

Again, I apologize for not being aware and attending the meeting recently in Kemper County. However, I could not rest until I let my "voice" be heard. The people of Kemper County are wonderful and I enjoy living here very much. I see this plant as a real blessing and opportunity. I know there will be growth but if Cartersville is any barometer, that growth will be slow and steady and genuine. Most communities in the United States would love such an opportunity. So many industries and opportunities are "fad" related today. Unless future plans for citizens of the United States include kettles (in the back yard to wash clothes), candles (for light), and an agrarian society, I see no reason why this plant is not a golden opportunity for all the citizens of Kemper County.

Yours truly,

*Melinda Mahone*

Melinda Mahone

Cc

Brian Henson, Economic Development, DeKalb  
Public Service Commission of Mississippi  
Mississippi Power Company

MM-01  
(contd.)

**MM-01:** The Kemper County Messenger recently covered the meeting held in DeKalb at the Kemper County High School. I was distressed to read that no one spoke in favor of this new plant and sorry that I was not more vigilant in knowing this meeting was taking place.

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This proposed project in Kemper County sounds like a wonderful gift to a small rural community in need of good paying jobs with wonderful benefits. Georgia Power was a good neighbor when I lived in Cartersville. Their recreational facilities which they shared with the community, educational plant tours, and community involvement was phenomenal. Their personnel were very involved in local churches and schools. I knew many of their dedicated employees and they were outstanding families.

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**Response:** Comment noted.

LAW OFFICE OF  
**THOMAS L. WEBB**  
613 22ND AVENUE  
MERIDIAN, MISSISSIPPI 39301

P. O. BOX 308  
MERIDIAN, MS 39302-0308  
www.thomaswebb.com

PHONE (601) 483-1200  
FAX (601) 483-2511  
tlw@thomaswebb.com

December 11, 2009

Mr. Richard A. Hargis, Jr.  
Post Office Box 10940  
Pittsburgh, PA 15236-0940

**RE: Kemper County IGCC Project**

Dear Mr. Hargis:

My wife and I attended the DOE meeting in Kemper County on December 1, 2009 to voice our opposition to the DOE funding and approval of the experimental IGCC plant.

With the EPA certifying the CO2 as a hazardous and harmful gas, the rules may be changing as to the IGCC process and standards. I would request that DOE receive written certification that the Kemper project does not exceed the CO2 gas release standards based on the new EPA findings.

I also request that the release of mercury and arsenic be reduced to protect the people within sixty (60) miles of the proposed site. It seems to me that the project's prepared release of these heavy metals exceeds the EPA standards. I would like written guarantees from the EPA and DOE that all construction will be stopped immediately should any heavy metals release from construction or operation exceed the EPA standards.

I would also like for the DOE to consider the environment being forced upon the people within the sixty (60) miles around the project. My wife and I purchased our property 25 years ago and built our homestead on that property. Our property is 32 acres of woods that is habitats to many different animals, birds and plants. We intentionally built our home where it is to leave the woods around us as protection from outsiders, at the same time not disturbing the different environments and habitats from wetlands to hills. I have seen nothing in your report that considers the right of the people to live in an environment where their homestead cannot be destroyed without due process under the IV Amendment to the Constitution. Why do you not consider the right of the people (or the animals for that matter) to live in an environment without the electromagnetic hum let along the possibilities of endangerment to people's health due to power lines within 100 feet of their home.

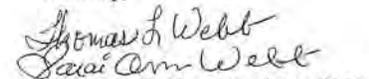
THOMAS L. WEBB

The XIV Amendment guaranties the citizens of this Country the right not to be deprived of "life, liberty or property" and in my opinion the DOE and Mississippi Power have conspired together to deprive my wife and I, and all the other people of Mississippi, of our "life, liberty and property" and then force the rate payers to foot the bill for a project we do not even want.

I guess the old adage is still true that one of the three (3) lies is "I am from the Government and I am here to help you." The DOE has failed to help us protect our homestead and the environment which God, my wife and I have created for our enjoyment.

Please consider the people whose lives you are destroying and stop the Kemper IGCC Project immediately.

Sincerely,

  
Thomas L. Webb and Sarai Ann Webb

TW-02

TW-03

TW-04

TW-05

DOE/EIS-0409

May 2010

- TW-02:** My wife and I attended the DOE meeting in Kemper County on December 1, 2009 to voice our opposition to the DOE funding and approval of the experimental IGCC plant.
- With the EPA certifying the CO<sub>2</sub> as a hazardous and harmful gas, the rules may be changing as to the IGCC process and standards. I would request that DOE receive written certification that the Kemper project does not exceed the CO<sub>2</sub> gas release standards based on the new EPA findings.
- Response:** Subsection 2.1.2 discusses the planned beneficial use and geologic storage of project CO<sub>2</sub>. The amount of CO<sub>2</sub> expected to be released to the atmosphere by the project is provided in the EIS in Table 2.5-1 and is expected to be equivalent to that released by natural gas combustion. Subsection 6.1.2 has been updated in the Final EIS to address EPA's endangerment findings regarding CO<sub>2</sub>, as well as recent developments regarding EPA's proposals for regulating GHGs under the Clean Air Act (CAA). However, it should be noted that EPA has not promulgated any CO<sub>2</sub> emissions standards at this time.
- TW-03:** I also request that the release of mercury and arsenic be reduced to protect the people within sixty (60) miles of the proposed site. It seems to me that the project's prepared release of these heavy metals exceeds the EPA standards. I would like written guarantees from the EPA and DOE that all construction will be stopped immediately should any heavy metals release from construction or operation exceed the EPA standards.
- Response:** Releases of mercury and arsenic (or other metals) would not exceed applicable EPA or MDEQ requirements. The proposed facility would not be a major source of hazardous air pollutants, such as mercury or arsenic. The EIS includes in Subsection 4.2.19.2 an analysis of inhalation risks for both arsenic and mercury emissions (as well as other metals) and a fate and transport analysis for mercury specifically.
- TW-04:** I would also like for the DOE to consider the environment being forced upon the people within the sixty (60) miles around the project. My wife and I purchased our property 25 years ago and built our homestead on that property. Our property is 32 acres of woods that is habitats to many different animals, birds and plants. We intentionally built our home where it is to leave the woods around us as protection from outsiders, at the same time not disturbing the different environments and habitats from wetlands to hills. I have seen nothing in your report that considers the right of the people to live in an environment where their homestead cannot be destroyed without due process under the IV Amendment to the Constitution. Why do you not consider the right of the people (or the animals for that matter) to live in an environment without the electromagnetic hum let along the possibilities of endangerment to people's health due to power lines within 100 feet of their home.
- Response:** DOE will consider the potential impacts to landowners prior to issuing a ROD. However, DOE is not involved in negotiations between landowners and the industrial participants over landowner rights. Potential impacts of transmission lines are addressed in the EIS. The response to SM-01 addresses Mississippi Power's legal obligations regarding acquisition of property rights.
- TW-05:** The XIV Amendment guaranties the citizens of this Country the right not to be deprived of "life, liberty or property" and in my opinion the DOE and Mississippi Power have conspired together to deprive my wife and I, and all the other people of Mississippi, of our "life, liberty and property" and then force the rate payers to foot the bill for a project we do not even want.

I guess the old adage is still true that one of the three (3) lies is “I am from the Government and I am here to help you.” The DOE has failed to help us protect our homestead and the environment which God, my wife and I have created for our enjoyment.

Please consider the people whose lives you are destroying and stop the Kemper IGCC Project immediately.

**Response:** Comment noted. One purpose of the EIS is to ensure that the DOE decision-maker considers the potential impacts, as well as public opposition, in making a final decision on DOE involvement in the project.

# Kemper County Economic Development Authority

102 Industrial Park Drive • Stennis Industrial Park • DeKalb, Mississippi USA • 39328-9603

December 16, 2009

Mr. Richard Hargis  
626 Cochrans Mill Road  
Pittsburg, PA 15236-0940

Re: Kemper County IGCC Project

Dear Mr. Hargis:

My name is Brian Henson and I am the Executive Director of the Kemper County Economic Development Authority. I am writing you today to express to you and the DOE our support for the Kemper County IGCC plant. Our office and staff have been working with Mississippi Power Company on various aspects of this project over the last few years. Mississippi Power has been very engaged with the community throughout this process spending extensive time talking and informing the local citizens about the plant and the technology.

Mississippi Power Company has offered numerous bus trips to our Kemper residents to see the test facility in Wilsonville, Alabama as well as bus trips to Ackerman, Mississippi where another lignite mining/power plant operation is currently producing power. Our office and local elected officials have been kept abreast monthly on the progress with the plant and the various aspects of this project, especially the EIS. We have seen numerous people working on the ground to gather all of the needed information on the EIS and we feel that great effort has been put forth on this process.

KEDA-01

The Kemper County Economic Development Authority is confident that due diligence has been performed by Mississippi Power in relation to the EIS. This project will improve Kemper County in many ways; from new jobs, increased tax base, and an excellent corporate citizen. Kemper County understands that this IGCC plant is cutting edge technology and we look forward to working with Mississippi Power to showcase this technology and project to the world.

Sincerely,



Brian A. Henson  
Executive Director

**KEDA-01:** I am writing you today to express to you and the DOE our support for the Kemper County IGCC plant. Our office and staff have been working with Mississippi Power Company on various aspects of this project over the last few years. Mississippi Power has been very engaged with the community throughout this process spending extensive time talking and informing the local citizens about the plant and the technology.

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The Kemper County Economic Development Authority is confident that due diligence has been performed by Mississippi Power in relation to the EIS. This project will improve Kemper County in many ways; from new jobs, increased tax base, and an excellent corporate citizen. Kemper County understands that this IGCC plant is cutting edge technology and we look forward to working with Mississippi Power to showcase this technology and project to the world.

**Response:** Comment noted.

**ROSIE B. COLMAN**  
**17208 STRATHMOOR**  
**DETROIT MI 48235**  
**313-345-7904**  
 Email: [rbcolman@att.net](mailto:rbcolman@att.net)

December 17, 2009

Mr. Robert A. Hargis, Jr.  
 U.S. Department of Energy  
 National Energy Technology Laboratory  
 M/S 922-M217  
 P.O. Box 10940:  
 Pittsburgh, PA 15236-0940

Re: SAM-2008-01759-DMY

Dear Mr. Hargis:

This letter is in reference to the notice I received about the **Kemper County IGCC Project** hearing that was December 1, 2009 and the document received dated November 6, 2009 from the **Department of the Army** regarding the application submitted by North American Coal Corporation.

Please be informed that Mercille Davis (my sister) and I owned land in Kemper County, MS and is not in support of this project that will destroy our property that has been in our family over 100 years.

The Kemper Natural Resources, LLC, contacted us, with a letter dated 2/6/2007, from Mr. George Kramer, Agent regarding leasing our property for the above named project. I spoke with Mr. Kramer several times by telephone regarding the project and received written information and my response was "no". Later I received a copy of the Coal Lease that was difficult to understand and paid to have an attorney review it (see attached letter). It was appalling and insulting to know that a company and a government thought very little of the landowners intelligence by requesting us to enter into an agreement with them and we come up on the short end of the stick or the losing end. The high pressure tactics of having Mr. Kramer come to Detroit (July 11, 2008) with a check in return for signing the lease let me know that the companies and the government involved would try everything to get what they want. Please note that I did not accept that check nor did I sign the lease. I sent Mr. Kramer a copy of my attorney's report (July 13, 2008) and have not heard from him since or anything about the project until the 12/1/09 hearing.

RC2-01

It appears that the project is going to move forward whether you agree with it or not and is not respecting our concerns:

- The land that has been in our family for many generations and is a legacy to our heirs and us will be destroyed.
- For the coal companies and government to have our property for twenty-five years and say that it will be put back together to the way it was prior to the project is not believable.
- To not adequately compensate landowners for their property is a travesty.
- For the coal companies to maintain and keep the mineral rights, gas, oil and other amenities that may be of value on the property is thievery.
- To destroy the beauty, wild life, water, plants, trees and animals makes no sense.

The literature indicates that coal is not clean, affects the environment and it pollutes the air. The digging and construction on the property would make it worthless. The idea that corporations and the government would steal or birthright against our wishes is unconscionable.

I am asking that you reconsider and not implement this project in Kemper County, MS. I look forward to your response and can be reached at the above address, telephone and/or email address.

Sincerely,

*Rosie B. Colman*  
 Rosie B. Colman, Landowner

*Mercille B. Davis*  
 Mercille B. Davis, Landowner

C: Mr. Damon M. Young, P.G., District Engineer, U.S. Army Engineer District, Mobile  
 Mrs. Florence Watson, Mississippi Department of Environmental Quality, Office of  
 Pollution Control  
 Mississippi Department of Marine Resources

RC2-01  
 (contd.)

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The literature indicates that coal is not clean, affects the environment and it pollutes the air. The digging and construction on the property would make it worthless. The idea that corporations and the government would steal or birthright against our wishes is unconscionable.

**Response:** The federal government, and specifically DOE, is not involved in any negotiations involving purchase of private property. DOE’s proposed action with respect to the project is limited to providing funds and a loan guarantee for the power plant. In addition, with respect to the adjacent mine, Kemper Natural Resources, LLC, is acquiring property interests for the mine to be operated by NACC without the right of eminent domain. If permission is not granted for access to land for the purpose of baseline testing or sampling, Kemper Natural Resources and NACC do not access the land. If coal is mined from the property or coal-related disturbance occurs to property, it is only through negotiated purchase of the land or lease of the land. DOE understands that initial contacts by the company did not occur until 2007. This contact consisted of initial discussions with area landowners; some landowners were mailed lease forms (at their request) to review. See Subsection 2.2.1 for additional information.

**CHARLES BLACKWELL**  
**P.O. Box 417730**  
**Sacramento CA 95841**

December 17, 2009

Mr. Richard Hargis  
 U.S. Department of Energy  
 National Energy Technology Laboratory  
 M/S 922-M217  
 P.O. Box 10940  
 Pittsburgh, PA 15236-0940

**Re: SAM-2008-01759-DMY**

Dear Mr. Hargis:

I have recently been made aware of hearings pertaining to the proposed coal energy plant to be built in Kemper County, Mississippi.

I am a taxpayer, U.S. Citizen and landowner of long time family property. I have drawn water from the well, chopped weeds, chopped wood, sat at the table and ate the vegetables grown on the land. For the past seven years I received letters pertaining to the purchasing of land, testing the soil and all are high- pressure tactics including mailing a contract through certified mail? I have responded "no way". I am not interested nor did I grant permission to test the soil. I would like to keep my land as it is and if something changes, I would like to do it without high-pressured corporate tactics. I mention this because at some point it sounds like they are going to take, test or do whatever they please with without my permission. Is this correct? That's how those companies operate.

Based on the information I've been exposed to, the energy companies will acquire the minerals from the land leaving the land totally destroyed. The Eco-system, wild life and the natural habitat of the land will be dismantled. The reports that I hear regarding the Coal Energy Plant is associated with pollution, creating health problems for those living near such a facility.

At first the advertising sounded so polished as if it were the best thing for everyone and that was only in theory. Years later we would see the physical damage but then it's too late. I am requesting that you allow the people to decide for themselves without the high- pressure corporate tactics whether they want to sell or lease their land.

I am totally opposed to this project and ask that the Department of Energy abandon the project for the benefit of the people and the land, thank you. I await your response and can be reached at the above address.

**CB-01**

Sincerely,

*Charles Blackwell*

Charles Blackwell, Landowner

C: Mr. Damon Young, District Engineer, U.S. Army Engineer District, Mobile AL  
 Mrs. Florence Watson, P.E, Mississippi Department of Environmental Quality, Office  
 of Pollution Control  
 Mississippi Department of Marine Resources

**CB-01:** I have recently been made aware of hearings pertaining to the proposed coal energy plant to be built in Kemper County, Mississippi.

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DOE understands that the company did not contact landowners 7 years ago, but began in 2007. The contact consisted on initial discussions with area landowners; some landowners were mailed lease forms (at their request) to review.

One purpose of the EIS is to ensure that the DOE decision-maker considers the potential impacts, as well as public opposition, in making a final decision on DOE involvement in the project.



## UNITED FOR A HEALTHY GULF

338 Baronne St., Suite 200, New Orleans, LA 70112  
 Mailing Address: P.O. Box 2245, New Orleans, LA 70176  
 Phone: (504) 525-1528 Fax: (504) 525-0833  
[www.healthygulf.org](http://www.healthygulf.org)

December 17, 2009

**Mr. Richard A Hargis, Jr.**  
**National Environmental Policy Act (NEPA) Document Manager**  
**U.S. Department of Energy, National Energy Technology Laboratory**  
**626 Cochran Mill Road**  
**PO Box 10940**  
**Pittsburg, Pennsylvania 15236-0940**  
**Via email: [Kemper-EIS@netl.doe.gov](mailto:Kemper-EIS@netl.doe.gov)**

**RE: Kemper County IGCC Project Draft Environmental Impact Statement DOE/EIS-0409D**

Dear Mr. Hargis,

Please consider the following comments from the Gulf Restoration Network (GRN) on the Kemper County IGCC Project Draft Environmental Impact Statement DOE/EIS-0409D that will disturb over 2,400 acres of wetlands and approximately 230,000 linear feet of streams within the Chunky/Okatibbee and Sucarnoochee watersheds in Kemper County, Mississippi. The GRN is a network of local, regional, and national environmental, environmental justice, social justice, and public interest groups dedicated to uniting and empowering people to protect and restore the natural resources of the Gulf Region. GRN reserves the right to rely on all public comments submitted.

**Stormwater runoff Measures Are Insufficient to Comply with Section 438 of the Energy Independence and Security Act of 2007 (EISA).**

Section 438 states "The sponsor of any development or redevelopment project involving a Federal facility with a footprint that exceeds 5,000 square feet shall use site planning, design, construction, and maintenance strategies for the property to maintain or restore, to the maximum extent technically feasible, the predevelopment hydrology of the property with regard to the temperature, rate, volume, and duration of flow." The DOE and the Corps are the federal sponsoring agencies for this project. On Oct. 5, 2009, the President signed Executive Order (EO) 13514, "Federal Leadership in Environmental, Energy, and Economic Performance." The EO calls for federal agencies to lead by example in the areas of clean energy and safeguarding the health of our environment. EO 13514 sets as policy that federal agencies shall "... conserve and protect water resources through efficiency, reuse, and stormwater management."

GRN-01

Rainwater runoff from coal piles adjacent to power plants have been shown to flush heavy metals like arsenic and lead out of the coal and into surface and groundwater resources. The DEIS claims that stormwater collection channels (CC) will be built to "collect runoff from mined or disturbed areas and route these flows into; (c) water treatment (i.e., sedimentation) ponds (SP) designed to treat water to meet MDEQ effluent limitations; and (d) flood protection levees intended to either contain runoff from disturbed lands or protect active mining areas from flooding." The Chickasawhay River is already impaired for sediment from non-point sources and has an active Total Maximum Daily Load (TMDL). The water treatment ponds should receive a NPDES permit and monitoring schedule and the permit limits must be protective of Mississippi's water quality for Tier 2 waters. Further, it must be shown that these measures comply with Section 438 of the EISA using the 95<sup>th</sup> percentile rainfall event.

GRN-01  
(contd.)

**ICGG is Unproven Technology**

This is a test project to determine if new carbon sequestration technology will function the way theory predicts it will and if this technology will be commercially viable. The justification for this test project is to demonstrate a cleaner way to produce energy from coal. According to the draft EIS, "Because the planned CO<sub>2</sub> removal technology has not been commercially demonstrated at a facility like the proposed IGCC power plant, and in light of the anticipated evolving regulatory treatment of CO<sub>2</sub>, short-term capture rates could vary from 0 percent (for example, due to a malfunction of the CO<sub>2</sub> compressor) up to the design of 67 percent." The outcome of this test could result in zero carbon savings, however, the CO<sub>2</sub> pipeline will still have impacted valuable wetlands, streams, and other important habitats for wildlife and recreation.

GRN-02

**The Project Will Increase GHG Emissions Though the Stated Purpose is to Decrease GHG emissions.**

The stated purpose of DOE's action in the DEIS "is to demonstrate the feasibility of this selected IGCC technology at a size that would be attractive to utilities for commercial operation. The proposed TRIGTM IGCC technology is cost-effective when using low-heat content, high moisture, or high-ash content coals, including lignite. These coals constitute approximately one-half of the proven United States' and world's coal reserves." This stated purpose does not consider the contribution of the greenhouse gas emissions that will add to climate change if half of the proven United States' and world's coal reserves are burned in IGCC plants. This is not a carbon neutral technology. Under the best scenario, only 67% of the GHGs will be removed for storage, the rest of the 43% will be released into the atmosphere where it will impact the climate system. Though IGCC plants emit less GHGs than traditional coal burning plants, compared to clean energy technologies, IGCC plants still fall short of the carbon cuts needed to maintain a safe climate system.

GRN-03

Further, an alternative design of the plant using a different fuel source was not included in the alternatives analysis nor the option of investigating the potential of wind, solar, or geothermal power sources in Mississippi.

GRN-04

**The Wetland Mitigation Plan is Insufficient to Maintain the Government's Goal of "No Net Loss".**

According to the DEIS, approximately 2,400 acres of wetlands will be impacted by the Kemper power plant and lignite mine. The wetlands that would be impacted include those on federally owned or managed lands (such as the Okatibbee Wildlife Management Area). The Federal government cannot degrade land that is already being used to mitigate the loss of wetlands.

The DEIS maintains that function of degraded wetlands will be replaced however, we question that any mitigation for lost wetlands could completely replace the function and values lost. Part of the mining plan is to build levees to provide flood control while destroying wetlands to extract lignite coal. This plan will only compound the flooding problems at the site and the surrounding community. Wetlands function as natural flood control by absorbing rainwater, the loss of which will cause more water to remain on the surface. Further, the levees on site will change the hydrology by cutting off the natural flow of water which will cause problems in a severe rain event. We have serious doubts that any amount of mitigation offsite would be able to replace the function and values (local flood mitigation, local flora/fauna, etc.) that this tract of wetland currently performs.

The loss of wetlands will not solely impact local flood control and water quality. The loss of wetlands with a hydrologic connection to the Pascagoula River could lead to additional degradation of water quality downstream. Wetlands remove and retain inorganic nutrients, process organic wastes, and reduce suspended sediments from surface runoff before the runoff reaches open water. The Gulf of Mexico is a very important economic and environmental resource. The impacts this loss will have on water quality in the streams being impacted needs to be studied. The DEIS claims that the University of Mississippi is monitoring stream flow, but toxics, sediment, and micro and macro fauna impacts should also be monitored.

**The Costs to Water Quality Outweigh the Benefits of the Project**

The proposed power plant site and mine study area are located in the Chunky River-Okatibbee Creek hydrologic unit (HUC 03170001). The Chunky River and Okatibbee Creek are headwater tributaries of the Pascagoula River Basin, which drains to the Gulf of Mexico. The Chunky River is a state wild and scenic stream and should be protected from damage.

The Okatibbee Lake, located in Lauderdale County immediately south of the proposed lignite mine, supports numerous recreational facilities which allows swimming, camping, fishing, boating, hiking, and hunting. Recreational amenities include boat ramps, a marina, beaches, campgrounds, picnic areas, playgrounds, and hiking trails. MDEQ has classified Okatibbee Lake for recreation and water supply.

There is a 6,883-acre Okatibbee Wildlife Management Area (WMA) that surrounds the lake to the north along Okatibbee and Chickasawhay Creeks. The proposed lignite mine

GRN-05

GRN-06 (contd.)

GRN-06

GRN-07

directly abuts the WMA north boundary. The WMA was created by the Water Resources Development Act (WRDA) of 1986, Public Law 99-662, which enabled Okatibbee Lake to become a key component of the Tennessee-Tombigbee Waterway Wildlife Mitigation Project. The Army Corps of Engineers Mobile District website claims "The bottomland forests and numerous beaver flowages provide a paradise for the bird watcher and nature enthusiast. The endangered American Alligator is a permanent resident. . . ." Also, USACE states that "public hunting is a popular activity at Okatibbee during the fall and winter. More than 6,000 acres of land are licensed to the Mississippi Department of Wildlife, Fisheries, & Parks for wildlife management purposes."

MDEQ completed a TMDL for the Chickasawhay River in 2005 for biological impairment due to sediment. The TMDL only included non-point sources in the load allocations and the Kemper IGCC plant and lignite mine were not mentioned in the TMDL. A full antidegradation review would be required for this new source of sediment pollution to the Chickasawhay as well as a compliance schedule for the TMDL. EPA's water quality standards regulations at 40 C.F.R. § 131.12 contain an antidegradation policy that protects existing uses and prevents the "unnecessary" degradation of water quality from new and expanding sources. Section 131.12 requires a State to not only "develop and adopt" a "statewide antidegradation policy," but also to "identify the methods for implementing such policy pursuant to this subpart." 40 C.F.R. § 131.12(a). Mississippi's antidegradation policy requires the State to maintain existing water quality that is "better than the established standards" unless the Commission finds "after full satisfaction of the intergovernmental coordination and public participation provisions of the State's continuing planning process, that allowing lower water quality is necessary to accommodate important economic or social development in the area in which the waters are located." See WPC-2, Section 1(1).

In addition, there are sediment allocations for the Chickasawhay and any new discharge would be subject to compliance schedules. The owner or operator of a new source or new discharger proposing to discharge into a water segment which does not meet applicable water quality standards . . . and for which the State or interstate agency has performed a pollutants load allocation for the pollutant to be discharged, must demonstrate, before the close of the public comment period, that: (1) There are sufficient remaining pollutant load allocations to allow for the discharge; and (2) The existing dischargers into that segment are subject to compliance schedules designed to bring the segment into compliance with applicable water quality standards (40 C.F.R. § 122.4(i)).

Pilot IGCC plants have shown to be a source of water pollution. IGCC plants use water to clean the gas which causes contamination problems. Coal gasification wastewater has an average pH of 9.8, similar to the pH of hand soap (pure water has a pH of 7.0).<sup>1</sup> The Wabash River Plant was out of compliance with its water permit during 1998-2001 because it emitted arsenic, selenium and cyanide.<sup>2</sup> The Great Plains Coal Gasification plant in Beulah, ND generated 4.83 million metric tons of wastewater in 1988, 766,000 metric tons of

<sup>1</sup> U.S. Department of Energy, *Notice of Financial Assistance for Mesaba*, May 23, 2006, [http://www.netl.doe.gov/technologies/coalpower/cct/ccpi/pubs/2006\\_program\\_update.pdf](http://www.netl.doe.gov/technologies/coalpower/cct/ccpi/pubs/2006_program_update.pdf)  
<sup>2</sup> Wabash River Energy Ltd. (August 2000). "Wabash River Coal Gasification Repowering Project Final Technical Report". *Work performed under Cooperative Agreement DE-FC21-92MC29310*. The U.S. Department of Energy / Office of Fossil Energy / National Energy Technology Laboratory / Morgantown, West Virginia.

contaminated "cooling tower blowdown" water and 245,000 metric tons of gasifier ash. Groundwater in the area has been contaminated with high pH, sulfates, chlorine, arsenic and selenium.<sup>3</sup> The DEIS states that "The proposed project would discharge no process water effluent from the site."

**GRN-07  
(contd.)**

Coal ash storage is a big concern. In December 2008, Tennessee had an unprecedented spill of coal ash. The Tennessee Valley Authority (TVA) report shows the Kingston Fossil Plant discharged 2.66 million pounds of arsenic, lead, mercury and other pollutants into the Emory river in 2008. The DEIS should analyze the probability of coal ash spills and the potential impacts to water quality.

**GRN-08**

Additional concerns exist with the large amounts of water used with coal power plants as a coolant. The large water needs of a coal power plant may negatively affect neighboring plants and wildlife that depend upon access to water. This plant plans on using treated wastewater from two local wastewater treatment facilities the East Meridian POTW (permit number MS0055735) and the Meridian POTW (permit number MS0020117). East Meridian Plant was in non-compliance for pH in 2008 and there was a violation of the monthly maximum limit of chlorine residue by 2167% in 2007. The Meridian POTW has been in non-compliance 10 times in the past three years. Since 2006, the Meridian plant has violated their DO limit, total suspended solid limit (up to 404% over the limit), zinc (up to 495% over the limit), copper (up to 1141% over the limit), cadmium (up to 56% over the limit), and cyanide (up to 306% over the limit). Though wastewater is supposed to be treated to secondary levels, the probability of violations is high given the compliance records for these two plants. It is unknown how these violations will affect the specialized technology in the IGCC plant.

**GRN-09**

Thank you for the opportunity to provide comments.

Sincerely,

Casey DeMoss Roberts, MSPH  
Assistant Director, Water Resources Program  
Gulf Restoration Network

<sup>3</sup> MPUC Docket No. E-6472/M-05-1893, In the Matter of the Petition of Excelsior Energy Inc. for Approval of a Power Purchase Agreement Under Minn. Statute 261B.1694, Determination of Least Cost Technology, and Establishment of a Clean Energy Technology Minimum Under Minn. Statute 218B.1693, dated April 12, 2007. <http://www.puc.state.mn.us/docs/calendar/weeklypdf/puc072606.pdf>

**GRN-01:** **Stormwater runoff Measures Are Insufficient to Comply with Section 438 of the Energy Independence and Security Act of 2007 (EISA).**

Section 438 states “The sponsor of any development or redevelopment project involving a Federal facility with a footprint that exceeds 5,000 square feet shall use site planning, design, construction, and maintenance strategies for the property to maintain or restore, to the maximum extent technically feasible, the predevelopment hydrology of the property with regard to the temperature, rate, volume, and duration of flow.” The DOE and the Corps are the federal sponsoring agencies for this project. On Oct. 5, 2009, the President signed Executive Order (EO) 13514, “Federal Leadership in Environmental, Energy, and Economic Performance.” The EO calls for federal agencies to lead by example in the areas of clean energy and safeguarding the health of our environment. EO 13514 sets as policy that federal agencies shall “...conserve and protect water resources through efficiency, reuse, and stormwater management.”

Rainwater runoff from coal piles adjacent to power plants have been shown to flush heavy metals like arsenic and lead out of the coal and into surface and groundwater resources. The DEIS claims that stormwater collection channels (CC) will be built to “collect runoff from mined or disturbed areas and route these flows into; (c) water treatment (i.e., sedimentation) ponds (SP) designed to treat water to meet MDEQ effluent limitations; and (d) flood protection levees intended to either contain runoff from disturbed lands or protect active mining areas from flooding.” The Chickasawhay River is already impaired for sediment from non-point sources and has an active Total Maximum Daily Load (TMDL). The water treatment ponds should receive a NPDES permit and monitoring schedule and the permit limits must be protective of Mississippi’s water quality for Tier 2 waters. Further, it must be shown that these measures comply with Section 438 of the EISA using the 95<sup>th</sup> percentile rainfall event.

**Response:** Section 438 of the EISA applies to a federal facility that is defined as any building that is constructed, renovated, leased, or purchased in part or in whole for use by the federal government. The Kemper County IGCC Project is not a federal facility.

**GRN-02:** **ICGG is Unproven Technology**

This is a test project to determine if new carbon sequestration technology will function the way theory predicts it will and if this technology will be commercially viable. The justification for this test project is to demonstrate a cleaner way to produce energy from coal. According to the draft EIS, “Because the planned CO<sub>2</sub> removal technology has not been commercially demonstrated at a facility like the proposed IGCC power plant, and in light of the anticipated evolving regulatory treatment of CO<sub>2</sub>, short-term capture rates could vary from 0 percent (for example, due to a malfunction of the CO<sub>2</sub> compressor) up to the design of 67 percent.” The outcome of this test could result in zero carbon savings, however, the CO<sub>2</sub> pipeline will still have impacted valuable wetlands, streams, and other important habitats for wildlife and recreation.

**Response:** DOE’s proposed action is to provide financial assistance to demonstrate advanced coal-based power systems, not a new carbon sequestration technology. While DOE encouraged the applicant to make carbon capture and geologic storage a feature of its proposed project, DOE did not require projects seeking funding under CCPI Round 2 to capture, inject or monitor CO<sub>2</sub>. DOE expects that the carbon capture technology would operate as designed, but the range of possible capture rates is properly disclosed in the EIS.

**GRN-03:** **The Project Will Increase GHG Emissions Though the Stated Purpose is to Decrease GHG emissions.**

The stated purpose of DOE's action in the DEIS "is to demonstrate the feasibility of this selected IGCC technology at a size that would be attractive to utilities for commercial operation. The proposed TRIGTM IGCC technology is cost-effective when using low-heat content, high moisture, or high-ash content coals, including lignite. These coals constitute approximately one-half of the proven United States' and world's coal reserves." This stated purpose does not consider the contribution of the greenhouse gas emissions that will add to climate change if half of the proven United States' and world's coal reserves are burned in IGCC plants. This is not a carbon neutral technology. Under the best scenario, only 67% of the GHGs will be removed for storage, the rest of the 43% will be released into the atmosphere where it will impact the climate system. Though IGCC plants emit less GHGs than traditional coal burning plants, compared to clean energy technologies, IGCC plants still fall short of the carbon cuts needed to maintain a safe climate system.

**Response:** No claim of carbon neutrality has ever been made. The EIS does address potential climate change and the facility's GHG emissions (Subsection 6.1.2). Also, as noted in Subsection 2.1.2, the IGCC plant's CO<sub>2</sub> emissions, if controlled to the 67-percent design goal, would be equivalent to firing natural gas.

The net effects of market penetration of IGCC technology would depend on assumptions regarding the mix of technology being displaced. For example, the displacement of conventional coal-fired power plants would result in lower emissions; whereas, displacement of natural gas-fired power plants would generally result in net increases in impacts. Although projections of net effects of commercialization of IGCC technology alone are not currently available, DOE has made projections of the market penetration of various technologies under various scenarios of fuel prices and regulations to estimate the benefits of the implementation of the fossil energy research and development (R&D) program (DOE March 2006). This analysis considers the potential market penetration of fossil energy technologies, as well as nuclear and renewable energy technologies. Depending on the scenario considered, the implementation of the fossil energy R&D program would result in IGCC capturing from 3 to 9 percent of the total market by 2025. Since fossil energy would still provide a substantial portion of the nation's electricity supply under all scenarios, the analysis shows that implementation of the fossil energy R&D program, which includes IGCC, would result in emission reductions of NO<sub>x</sub>, SO<sub>2</sub>, and CO<sub>2</sub> by the year 2025, relative to a scenario that does not involve fossil energy R&D and the subsequent advancement of IGCC technology.

DOE does have other programs, including Round 3 of CCPI, that specifically address carbon capture and sequestration technology.

**GRN-04:** Further, an alternative design of the plant using a different fuel source was not included in the alternatives analysis nor the option of investigating the potential of wind, solar, or geothermal power sources in Mississippi.

**Response:** Alternative fuels and energy technologies are addressed in the EIS. Only those reasonable alternatives that satisfy DOE's purpose and need were analyzed in detail in the EIS. DOE's purpose is to demonstrate an advanced energy technology, not to meet a specific need for power. The Mississippi PSC has jurisdiction over power resources in Mississippi.

**GRN-05: The Wetland Mitigation Plan is Insufficient to Maintain the Government’s Goal of “No Net Loss”.**

According to the DEIS, approximately 2,400 acres of wetlands will be impacted by the Kemper power plant and lignite mine. The wetlands that would be impacted include those on federally owned or managed lands (such as the Okatibbee Wildlife Management Area). The Federal government cannot degrade land that is already being used to mitigate the loss of wetlands.

The DEIS maintains that function of degraded wetlands will be replaced however, we question that any mitigation for lost wetlands could completely replace the function and values lost. Part of the mining plan is to build levees to provide flood control while destroying wetlands to extract lignite coal. This plan will only compound the flooding problems at the site and the surrounding community. Wetlands function as natural flood control by absorbing rainwater, the loss of which will cause more water to remain on the surface. Further, the levees on site will change the hydrology by cutting off the natural flow of water which will cause problems in a severe rain event. We have serious doubts that any amount of mitigation offsite would be able to replace the function and values (local flood mitigation, local flora/fauna, etc.) that this tract of wetland currently performs.

The loss of wetlands will not solely impact local flood control and water quality. The loss of wetlands with a hydrologic connection to the Pascagoula River could lead to additional degradation of water quality downstream. Wetlands remove and retain inorganic nutrients, process organic wastes, and reduce suspended sediments from surface runoff before the runoff reaches open water. The Gulf of Mexico is a very important economic and environmental resource. The impacts this loss will have on water quality in the streams being impacted needs to be studied. The DEIS claims that the University of Mississippi is monitoring stream flow, but toxics, sediment, and micro and macro fauna impacts should also be monitored.

**Response:** As stated in the mitigation overview on the USACE Mobile District Web site ([www.sam.usace.army.mil/RD/reg/mitigation.htm](http://www.sam.usace.army.mil/RD/reg/mitigation.htm)), “the Corps strives to avoid adverse impacts to waters of the United States, and to achieve a goal of no net loss of wetland functions and values.” Where impacts are unavoidable, USACE requires compensatory mitigation. The amount of mitigation necessary is based on the functional values of the area being impacted, the temporal loss of habitat that would occur, as well as an adequate margin to reflect anticipated degree of success associated with the proposed mitigation plan. The functional values of the wetlands that would be impacted have been assessed and are being reviewed by USACE. Upon completion of this detailed evaluation of wetland area and function to be impacted, USACE would determine the appropriateness or lack thereof for the proposed mitigation.

The Okatibbee WMA would not be impacted by surface mining or related disturbances.

With respect to flooding impacts, please refer to the response to FEMA-01.

**GRN-06: The Costs to Water Quality Outweigh the Benefits of the Project**

The proposed power plant site and mine study area are located in the Chunky River-Okatibbee Creek hydrologic unit (HUC 03170001). The Chunky River and Okatibbee Creek are headwater tributaries of the Pascagoula River Basin, which drains to the Gulf of Mexico. The Chunky River is a state wild and scenic stream and should be protected from damage.

The Okatibbee Lake, located in Lauderdale County immediately south of the proposed lignite mine, supports numerous recreational facilities which allows swimming, camping, fishing, boating, hiking, and hunting. Recreational amenities include boat ramps, a marina, beaches,

campgrounds, picnic areas, playgrounds, and hiking trails. MDEQ has classified Okatibbee Lake for recreation and water supply.

There is a 6,883-acre Okatibbee Wildlife Management Area (WMA) that surrounds the lake to the north along Okatibbee and Chickasawhay Creeks. The proposed lignite mine directly abuts the WMA north boundary. The WMA was created by the Water Resources Development Act (WRDA) of 1986, Public Law 99-662, which enabled Okatibbee Lake to become a key component of the Tennessee-Tombigbee Waterway Wildlife Mitigation Project. The Army Corps of Engineers Mobile District website claims “The bottomland forests and numerous beaver flowages provide a paradise for the bird watcher and nature enthusiast. The endangered American Alligator is a permanent resident . . .” Also, USACE states that “public hunting is a popular activity at Okatibbee during the fall and winter. More than 6,000 acres of land are licensed to the Mississippi Department of Wildlife, Fisheries, & Parks for wildlife management purposes.”

MDEQ completed a TMDL for the Chickasawhay River in 2005 for biological impairment due to sediment. The TMDL only included non-point sources in the load allocations and the Kemper IGCC plant and lignite mine were not mentioned in the TMDL. A full antidegradation review would be required for this new source of sediment pollution to the Chickasawhay as well as a compliance schedule for the TMDL. EPA’s water quality standards regulations at 40 C.F.R. § 131.12 contain an antidegradation policy that protects existing uses and prevents the “unnecessary” degradation of water quality from new and expanding sources. Section 131.12 requires a State to not only “develop and adopt” a “statewide antidegradation policy,” but also to “identify the methods for implementing such policy pursuant to this subpart.” 40 C.F.R. § 131.12(a). Mississippi’s antidegradation policy requires the State to maintain existing water quality that is “better than the established standards” unless the Commission finds “after full satisfaction of the intergovernmental coordination and public participation provisions of the State’s continuing planning process, that allowing lower water quality is necessary to accommodate important economic or social development in the area in which the waters are located.” See WPC-2, Section 1(1).

In addition, there are sediment allocations for the Chickasawhay and any new discharge would be subject to compliance schedules. The owner or operator of a new source or new discharger proposing to discharge into a water segment which does not meet applicable water quality standards . . . and for which the State or interstate agency has performed a pollutants load allocation for the pollutant to be discharged, must demonstrate, before the close of the public comment period, that: (1) There are sufficient remaining pollutant load allocations to allow for the discharge; and (2) The existing dischargers into that segment are subject to compliance schedules designed to bring the segment into compliance with applicable water quality standards (40 C.F.R. § 122.4(i)).

**Response:** The potential impacts to water quality are presented in the EIS assuming that permit conditions designed to meet water quality standards are met. Chapter 6 of the Final EIS has been expanded to include an analysis of the potential cumulative effects downstream in the Pascagoula River Basin, including water quality and the MDEQ TMDL program.

DOE has noted in the Draft EIS that NACC and Mississippi Power would be required to obtain, and would be subject to the terms and conditions of, Section 402 of the CWA. MDEQ, with oversight by EPA, implements the Section 402 permit process. In addition, MDEQ must certify to USACE that issuance of a Section 404 dredge-and-fill permit will not cause violations of state water quality standards to occur. Based on these permit application evaluation requirements, DOE concludes federal water quality protection measures prescribed by the CWA would be applied and adhered to for both the proposed IGCC power plant and the proposed lignite mine.

A TMDL has been generated by MDEQ for a segment of the Chickasawhay River located from confluence with Buckatunna Creek to confluence with the Leaf River, which is located approx-

imately 85 miles south of the proposed mining operations. NACC will be required to obtain an NPDES permit from MDEQ prior to discharging any water from sedimentation ponds. MDEQ will consider impaired downstream water bodies as they establish the discharge limits. Once the discharge limits have been determined by MDEQ, NACC will operate the sediment control ponds to insure no discharges from the sediment control ponds violate the established water quality standards as required by Surface Coal Mining Regulations (§5331 and §5333) and NPDES regulations.

**GRN-07:** Pilot IGCC plants have shown to be a source of water pollution. IGCC plants use water to clean the gas which causes contamination problems. Coal gasification wastewater has an average pH of 9.8, similar to the pH of hand soap (pure water has a pH of 7.0). The Wabash River Plant was out of compliance with its water permit during 1998–2001 because it emitted arsenic, selenium and cyanide. The Great Plains Coal Gasification plant in Beulah, ND generated 4.83 million metric tons of wastewater in 1988, 766,000 metric tons of contaminated “cooling tower blowdown” water and 245,000 metric tons of gasifier ash. Groundwater in the area has been contaminated with high pH, sulfates, chlorine, arsenic and selenium. The DEIS states that “The proposed project would discharge no process water effluent from the site.”

**Response:** Unlike the two gasification plants cited in the comment, no process water effluent would be discharged from the Kemper site. As discussed in Chapter 2, the plant would employ a zero liquid discharge system. Most of the water used in the power plant, including water used in the gas cleanup systems, would be used for cooling and would be evaporated (Figure 2.5-2). The remainder would be discharged to onsite treatment systems and recycled within the facility.

**GRN-08:** Coal ash storage is a big concern. In December 2008, Tennessee had an unprecedented spill of coal ash. The Tennessee Valley Authority (TVA) report shows the Kingston Fossil Plant plant discharged 2.66 million pounds of arsenic, lead, mercury and other pollutants into the Emory river in 2008. The DEIS should analyze the probability of coal ash spills and the potential impacts to water quality.

**Response:** Gasification ash would be managed differently from the fly ash ponds cited in the comment. In a typical pulverized coal fired unit, fly ash is mixed with water and sluiced to a holding pond with discharge of the water through a permitted outfall. In contrast, gasification ash is managed in a dry state. No water discharges are associated with the management of gasification ash.

**GRN-09:** Additional concerns exist with the large amounts of water used with coal power plants as a coolant. The large water needs of a coal power plant may negatively affect neighboring plants and wildlife that depend upon access to water. This plant plans on using treated wastewater from two local wastewater treatment facilities the East Meridian POTW (permit number MS0055735) and the Meridian POTW (permit number MS0020117). East Meridian Plant was in non-compliance for pH in 2008 and there was a violation of the monthly maximum limit of chlorine residue by 2167% in 2007. The Meridian POTW has been in non-compliance 10 times in the past three years. Since 2006, the Meridian plant has violated their DO limit, total suspended solid limit (up to 404% over the limit), zinc (up to 495% over the limit), copper (up to 1141% over the limit), cadmium (up to 56% over the limit), and cyanide (up to 306% over the limit). Though wastewater is supposed to be treated to secondary levels, the probability of violations is high given the compliance records for these two plants. It is unknown how these violations will affect the specialized technology in the IGCC plant.

**Response:** The impacts to aquatic ecology in Sowashee Creek are addressed in Subsection 4.2.7.2. Although the Meridian POTW has experienced some exceedances of its permit limits, this would not negatively affect the operation of the IGCC facility. The applicant’s water treatment plans anticipate variations in water quality. The sizeable onsite surge pond would attenuate water quality swings.

Higher contaminate levels would require additional water treatment, but treatment systems would be designed appropriately for the anticipated range of incoming water quality.

Also, as noted in Subsection 4.2.7.2, use of the Meridian treated effluent for the power plant's cooling needs would remove a source of pollutants to Sowashee and Okatibbee Creeks, resulting in long-term benefits for the creeks' biological communities.

COMMENTS SENT FROM  
WILLIAMS RESEARCH  
PRINCIPAL INVESTIGATOR JOHN PAUL WILLIAMS  
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RE: KEMPER COUNTY IGCC PROJECT, DOE/EIS-0409D

Dear Sir/Ms;

I am an industrial consultant with over 20 years experience that includes reading, writing, and commenting on NEPA documents. I have reviewed many NEPA documents prepared on power plants, including Department on Energy (DOE) EISes and EISes regarding thermal power plants under Bonneville Power Administration jurisdiction.

I am submitting these comments on behalf of Concerned Citizens for Clean Air, the Mississippi AFL-CIO, and the Mississippi Building Trades Council. All of these groups have members, supporters, and supporting organizations with members living and working in the affected vicinity of the proposed Kemper IGCC project.

On behalf of these groups I also incorporate by reference all other comments submitted on this DEIS.

Please forward these comments to the responsible officials at Army Corps and Mississippi DEQ who are preparing the 401 certification and the 404 permit.

Yours, John Williams

**DOE'S DAUNTING DISPLAY OF PLAIN PRO-PROJECT PREJUDICE**  
**NEGATES NEPA**

The DOE recently wrote a vividly pro-project letter to the Mississippi Public Service Commission. It stated they have already given the project money, they will give the project more money in the near future, they loved the project and wanted it built PDQ. This gushing missive was a wildly inappropriate exclamation from an agency that is in the middle of the NEPA review process and is legally obligated to commit to a neutral stance, pending final NEPA review and issuance of a proper Record of Decision.

The whole point of NEPA is to have the NEPA analysis form the basis for making a decision, not to simply justify a decision that is already made. The fundamental premise of NEPA is that the agency will develop the facts **first and then** make a decision, **not** make a decision and then develop the facts. See e.g. *ONDA v. Singleton*, 47 F.Supp.2d. 1182, 1194 (D. OR. 1998). See also, *Foundation for North American Wild Sheep v. U.S. Dept. of Agriculture*, 681 F.2d. 1172, 1179 (9<sup>th</sup> Cir. 1982). Ignoring prior public or agency comments serves to further the public perception that this project is actually "a done deal" and that this NEPA process is really just a sham.

Most fair-minded persons would read DOE's letter to the Mississippi PSC and conclude that the DOE has already made a decision on this project and it is in fact a done deal. In the light of DOE's unbecoming and written display of pro-project display, the commentators feel that the DEIS should be read skeptically as a document crafted to support a pro-project decision made long ago.

**INADEQUATE PURPOSE AND NEED STATEMENT**

The purpose and need statement of the DEIS presents only the needs and objectives of Mississippi Power to build a profit-generating power plant.

**DOE**

The purpose and need statement inadequately presents the Department of Energy's own purpose and need and fails to justify the Department's desire to pour hundreds of millions of dollars into Mississippi Power's pockets.

**CORPS**

The project's stated Purpose and Need statement especially its unexplained reliance on a lignite mine next door to the power plant, it also fails to satisfy the Army's Corps' purpose and need for a comprehensive review of potential mitigation of the proposed wetlands losses. The resulting document lacks an evaluation of alternative sites with lesser impacts on waters of the US, including

JW-08

JW-09

wetlands, and lacks satisfactory discussion of the wetlands mitigation bank that is crucial to the Corps' decision.

JW-09  
(contd.)

**WHY HAS THE PURPOSE AND NEED CHANGED SO RADICALLY SINCE THE VERSION OF THIS PROJECT TWO YEARS EARLIER? (THE STANTON PROJECT)**

The comparison between the purpose and need for the Kemper project, and its immediate predecessor, the related Stanton, Florida project, demonstrates that Mississippi Power's objectives are driving the purpose and need statement of the DEIS, while the Department and Army Corps' purposes and needs are neglected and unmet by this DEIS.

For instance the Stanton project was smaller, produced less pollution, and did not need a new adjacent lignite mine with all of its harmful impacts.

The commentators object to the DEIS' failure to plainly state, and justify, how the new "adjacent lignite" version of the project satisfies the Department's own purpose and need, of promoting environmentally beneficial and commercially viable and repeatable energy generation processes, while prudently investing taxpayer dollars.

**THE DEIS FAILS TO SATISFY THE ARMY CORPS OF ENGINEERS PURPOSE AND NEED**

The Army Corps of Engineers (ACE) purpose and need is to carefully the project's destruction of water bodies and wetlands, determine if all or part of the destruction could have been avoided, and what mitigation measures must be required. (DEIS, p 1-5)

ACE must issue permits prior to any activities taking place in the Water of the United States. In this instance, the siting of the power plant, new mine, and utility corridors will cause destruction and degrading of well over 2000 acres of wetlands (2374 acres just at the mine site alone) and adverse impacts on over 40 miles of creeks and streams. The proposed new mine and power plant are non-water related impacts, meaning that ACE is obligated to require the project developer to consider alternative projects sites that cause less degradation of wetlands.

This DEIS does not fulfill the ACE's purpose and need for several reasons. This DEIS presents a very crabbed definition of the developer's purpose, which is needlessly limited only to the exact proposal most recently offered to DOE, as modified after abandonment of the original Stanton site.

This tactic truncates ACE's review to consideration of essentially no alternatives; since no alternatives were offered in Southern Company's bid to DOE.

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Southern Company have written their purpose and need to only include opening of a new lignite mine near Mississippi Power's service territory, north of hurricane country, with an adjacent new power plant.

The DEIS fails to service ACE's Purpose and Need by failing to offer alternative sites, even though federal EPA asked for consideration of several alternative sites, leaving the understaffed ACE to scramble to locate viable alternative sites all on its own.

This failing means that ACE is stuck with having to simply accept the project's destruction of massive acreages of wetlands and miles of streams. The DEIS Appendix contains a mitigation plan that claims that stream relocation and eventual wetlands reclamation, decades in the future, will mitigate a fraction of those huge wetlands losses.

But the DEIS fails to provide any details regarding the claimed wetlands off-site mitigation locations.

The DEIS casually concedes that reclamation will not ultimately provide satisfactory wetlands replacement, so at some unnamed and undisclosed location that may not exist now or for decades, at an undisclosed distance from the mine and power plant site, additional wetlands may be restored or protected.

The DEIS completely fails to assess whether this hypothetical wetlands restoration site will provide adequate mitigation, partly because this supposed site is still a fantasy at this point in time. (p. 2-48)

The DEIS' utter failure to require the Developer to provide even a sketchy description of the additional wetlands mitigation site, or even to determine if any such sites exist, is a substantial failure of its NEPA obligations and fails to provide the proper level of assistance to ACE to perform its agency functions.

The DEIS' failure to even present the additional wetlands mitigation site means this document is legally inadequate according to court decisions including Sierra Club v. Froehke. There is no genuine effort presented to mitigate a major portion of the wetlands losses, since no mitigation site is even presented.

**UTILITY CORRIDOR TEMPORAL LOSSES UNMITIGATED**

The wetlands mitigation scheme that was provided in the appendix also fails to provide any mitigation for the temporal wetlands losses from the construction and operation of the utility corridors, even though over 300 acres of wetlands will be degraded in those areas. Likewise the discussion of wetlands mitigation in the ACE notices of the proposed wetlands permits stated that the corridors' temporal effects on wetlands will not be mitigated.

**NEPA RESPONSIBILITIES TO DISCUSS ALTERNATIVES**

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**EPA ALTERNATIVES ANALYSIS IGNORED**

Comprehensive analysis of project alternatives is the very heart of the NEPA process, according to the Council on Environmental Quality. In fact, the Federal EPA explicitly warned the DEIS preparers in writing that a broad range of alternatives should be provided, **including a minimum of three alternative sites. EPA plainly asked that the alternative of expanding an existing generating plant should be discussed, and alternative coal technologies designs should be discussed. (DEIS V2., Appx. A, EPA letter dated 12/11/08.)**

Tragically the DEIS ignored these plain, written requests from an important federal agency.

Alternatives analysis in a NEPA document should clearly indicate why and how the particular range of project alternatives was developed, including what kind of public and agency input was used. In addition, alternatives analysis should explain why and how alternatives were eliminated from consideration. The DEIS must make clear what criteria were used to eliminate alternatives, at what point in the process the alternatives were removed, who was involved in establishing the criteria for assessing alternatives, and the measures for assessing the alternatives' effectiveness.

In this instance the DEIS fails to candidly explain how and why the proposal was suddenly limited to a single project alternative of being sited next to a lignite deposit, what criteria dictated that choice, at what point were other coal fuel alternatives removed from consideration, since other coals were plainly considered as alternatives just two years ago, who decided to limit the project site to lignite deposit areas, and who decided this limitation increased the effectiveness of serving the DOE's purpose and need.

In preparing NEPA documents, project sponsors should be candid about the rationale for generating, evaluating, and eliminating alternatives. Being as specific as possible is important. If an alternative is eliminated from further consideration because it "does not meet the purpose and need," the DEIS must adequately explain how or why this alternative doesn't meet the purpose and need.

In this instance, the rejection of any other coal types or plant sites that are not next to a lignite deposit was dismissed in one paragraph of discussion, even though this limitation was partly responsible for driving the selection of a plant and mine site that contain thousands of acres of wetlands.

During the draft EIS stage all reasonable alternatives, or the reasonable range of alternatives, should be considered and discussed at a comparable level of detail to avoid any indication of a bias towards a particular alternative.

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But this DEIS lacks that comparable level of discussion of alternative coal types and other subjects as discussed below.

The very text of the NEPA regulations states that an "...agency must ... study, develop, and describe appropriate alternatives ... in any proposal." (40 CFR 1501.2 (c).

But the Kemper DEIS does not provide or even discuss a single alternative location, alternative project size, alternative coal suppliers, alternative pollution control methods, or alternative water use reduction methods, among the many other factors that could be altered to provide plain reductions in the project's adverse environmental impacts.

DOE claims that the enabling legislation for the so-called clean coal grants restricted its ability to even discuss alternative project sites, although the DEIS did not cite any specific legislative language to support this claim.

Aside from DOE's claims, the Army Corps, which is a cooperating agency in the NEPA review process, still has a plain regulatory responsibility to require the permit applicants to consider alternative mine and power plant sites which have fewer impacts on wetlands. This DEIS is also supposed to fulfill the Army Corps' requirements of reviewing potential alternative project sites. (DEIS, p. 1-5)

**ALTERNATIVE SITES TO PRESERVE WETLANDS NOT DISCUSSED**

These omissions render the DEIS legally deficient for several reasons. The project will cause massive losses of wetlands exceeding 2000 acres. These losses can clearly be mitigated by exploring for alternative plant and mine sites that include far less wetlands.

For instance the project's original Stanton site had only about 4 acres of wetlands. While the DEIS states that an adjoining landowner to Stanton decided not to participate in the project at some point, there was no explanation why the Stanton site was still available for a redesigned project, which would have avoided these wetlands losses at Kemper.

**ALTERNATIVE LIGNITE MINE SITES**

The opening of a new lignite strip mine to supply the Kemper IGCC is responsible for 90% of the wetlands losses. The DEIS dismissed in a single paragraph the alternative of supplying coal from an existing mine that would degrade less wetlands, to avoid the wetlands losses caused by the proposed new strip mine.

For instance, the DEIS failed to compare and describe, even briefly, the impacts from supplying the Kemper project for its entire life from the existing Red Hills mine, or siting the project next to, or closer to the Red Hills mine. The Red Hills mine owner admits in its web site that Red Hills has over 200 million tons of

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reserves, which is enough coal to mine at its current rate, plus service the Kemper plant for the next 40 years.

The power plant could also be sited next to the Red River or Oxbow lignite mines near Coushatta, Louisiana, or the Dolet Hills Lignite Mine, both within 180 miles of Mississippi. Likewise, there are existing lignite mines in Texas, including Sabine, Texas. Alternatively, lignite could be shipped to Kemper from these or other mines.

These alternatives would avoid many of the wetlands impacts caused by the proposed action which includes new lignite strip mining in an area containing over 2000 acres of wetlands.

**ALTERNATIVE SITES NEARER THE RED HILLS MINE**

Google aerials of the Red Hills mining site vicinity seem to show considerable cleared, level areas, perhaps including reclaimed mined areas, adjacent or near to the existing mine and power plant. Those alternative sites would degrade fewer wetlands because a new mine would not have to be developed, and this location might not require the large acreage of additional clearance of new utility corridors needed for the Kemper site.

The existing (formerly Reliant) Choctaw gas-fired power plant near French Camp also has large cleared areas nearby, probably has infrastructure already constructed, is underutilized, and is only a few miles from the existing Red Hills Mine. Mississippi Power has other power plants in Mississippi that may have adjacent vacant land. Other gas-fired power plants in Mississippi are underused. These and other alternative sites should have been discussed and considered.

**TRANSPORT OF LIGNITE IS A FEASIBLE ALTERNATIVE**

The DEIS, and DOE persons at the December 1, 2009 hearing stated that lignite is not economic to ship, therefore only a lignite mine mouth location is suitable for Kemper.

This is untrue. NAAC, the operator of several existing lignite mines, currently ships lignite considerable distances to several power plants that presumably operate profitably, since these arrangements are ongoing and have existed for many years.

The NAAC Freedom mine in North Dakota ships lignite 38 miles to the 656 MW Lehman Olds Electric Generation Station, The Freedom mine also ships lignite 38 miles to the 177 MW Stanton Power Station, owned by the United Power Association.

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The Falkirk Mine in North Dakota also ships lignite two miles to the 1100 MW Coal Creek Power Station.

The Dolet Hills mine ships lignite at least seven miles to the CLECO power plant near Mansfield, Louisiana. CLECO just purchased the Red River Mining Oxbow Mine near Armistead, Louisiana, which also ships lignite to the CLECO plant from about 20 miles.

These and other examples were discussed in the CISVEST Int'l Visit to the NAAC Operating Subsidiaries, August, 1995. (<http://kkypartners.com/NAACCO%20trip%20report%20August%201995.pdf>)

These five examples plainly illustrate the economic and physical reality that off-site lignite mines could supply the Kemper plant while avoiding the 2000 acres of wetlands impacts. The DEIS should have discussed this alternative.

**ALTERNATIVE TRANSPORT OF LIGNITE**

Transport of lignite to Kemper or an alternate location from other mines by rail, slurry pipeline, or conveyor would not cause the same amount of environmental impacts as would trucking the lignite.

**DEIS DID NOT DISCUSS USE OF MORE COMMON AND ECONOMICALLY AVAILABLE, ALTERNATIVE GRADES OF COAL**

One example of how Southern Power's distorted the purpose and need of this project to suit its own profitability, and to undermine the DOE's purpose and need, is the sudden appearance of a "project need" to site the Kemper plant next to an unmined lignite deposit, even though this siting does not serve DOE's purposes and needs.

Demonstrating IGCC technology on lignite coal does not fulfill the DOE's purpose and need to "... demonstrate advanced coal-based technologies ... that can be readily replicated in commercial practice within the electric power industry." This is because lignite makes up only 9% of US coal reserves and is mainly available in only three states, according to the DOE's own Energy Information Administration.

It is wasteful and inefficient to spend over \$300 million of taxpayer money to prove out a technology on a low grade fuel that makes up a tiny fraction of US coal reserves. Since lignite is such a poor fuel, new lignite-fired IGCC power plants will have to be next to, or near lignite mines, and the future of IGCC development would be limited to a mere handful of potential locations, essentially in only three states, two of which collectively contain less than 1% of the US population.

The DEIS does not explain how proving up IGCC on lignite coal would demonstrate a technology that is commercially and readily applicable and

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capable of being replicated on other types of coal or other fuels. In fact the DEIS language on page 1-8 states the purpose of this project is to prove up use of lignite in an IGCC unit.

At page 1-8 the DEIS claims that the project's primary benefit include demonstrating that IGCC-combusted lignite is an attractive alternative to bituminous coal and one of the project's benefits is to demonstrate the viable use of lignite as a fuel source in an IGCC unit. The DEIS states on page 2-6 that the Kemper project will be designed to operate on lignite coal.

At DEIS page 1-7 the DEIS states that the "basic project purpose ... is to construct and operate an IGCC power plant facility co-located with a lignite fuel supply." The Southern Power tax credit application apparently states it will use lignite fuel but the DEIS fails to explain if that application can be amended.

This stunted project purpose of using only lignite undermines the DOE's own purpose and need. It also thwarts meaningful discussion of alternative sites by cobbling the requirement of an adjacent lignite mine onto any prospective plant site.

This claimed insistence on the lignite fuel supply is highly suspect since lignite was not a project feature just two years ago. The original Stanton project at least would have demonstrated the viability of IGCC on sub-bituminous coal, which would include 37% of US reserves. Even proving up IGCC on this type of coal, while an improvement over the lignite scheme, would still only establish IGCC for just over 1/3<sup>rd</sup> of the US coal supplies. As previously stated, the belated late arrival of this lignite criteria for the project appears extremely suspicious, especially in light of DOE's written prejudice in favor of this project.

Selection of uneconomic lignite as the exclusive project fuel will meet only Mississippi Power's purpose and need, and will undermine the DOE's own purpose and need. The Kemper plant will demonstrate the suitability of this particular IGCC technology only for the consumption of lignite coal, and only one type of lignite coal, which in turn can only be used for mine-mouth operations, and not for other types of coal.

This very limited demonstration of fuels appropriate for IGCC technology does not fulfill the purpose and need of DOE to "demonstrate advanced coal-based technologies ... that can be readily replicated in commercial practice within the electric power industry." (DEIS p. 1-3)

Demonstration of Mississippi lignite as an IGCC fuel does not provide a technology that can be readily replicated because lignite cannot economically be shipped according to the DEIS, it is found mostly in only 3 states and makes up only 9% of US coal reserves, and therefore is not readily available, in contrast

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(contd.)

with the widely available sub-bituminous coal that would have fueled the Stanton facility. (DEIS, p. 2-72, 77)

The DOE should explain why if the Stanton proposal did not include a co-located lignite mine as part of the project purpose and need, for what reason, suddenly only two years later, the Kemper Purpose and Need Statement lives and dies on the need for a co-located lignite mine.

Southern Power's crabbed Purpose and Need restricted its plant site search to areas adjacent to lignite deposits. Southern's lignite-induced constraint on the plant site selection had the impact of undermining DOE's own purposes, and also undermined the NEPA responsibility to consider project alternatives, by restricting alternative sites to a tiny radius around commercial lignite deposits.

In contrast, the Stanton facility was allowed to use a more readily available coal, which produced less pollution, and better fulfilled DOE's purpose and need of demonstrating IGCC's capabilities to run on different types of coal. While the DEIS rejected discussion of alternative coals at p. 2-77, the DEIS does not explain why sub-bituminous coal was acceptable for the earlier version of this project but is suddenly not even discussed for Kemper.

The Kemper DEIS itself admits there are almost no opportunities for any other lignite power plants; because the low heat value of lignite means it is unprofitable to ship it from mines to power plants (DEIS 2-72, 77). Only lignite mine-mouth power plants will be able to replicate the Kemper results. That restriction to lignite mine-mouth operations does not fulfill DOE's purpose of establishing a technology that can be readily replicated. So this project will demonstrate a technology that may never have any other opportunities to be repeated.

In contrast, the prior Stanton project consumed sub-bituminous coal brought in by train, which is in abundant supply and is economically capable of being freighted to power plants in every corner of the United States.

The Stanton project, had it been completed, would have demonstrated use of a widely available fuel source, in sharp contrast to Kemper. Even if Kemper operates successfully, it will have only demonstrated use of a fuel that is generally uneconomic for power plants unless they are sited directly adjacent to a mine.

But the DEIS never provided an adequate discussion use of a more generally available coal fuel in the Kemper plant, claiming that the project design precluded other coal types. But consumption of other coal types would have vastly broadened the demonstration of IGCC's proven ability to use all types of coal, and also would have allowed for alternative plant and mine sites in locations that did not require destruction of over 2000 acres of wetlands.

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Even if Southern Power properly restricted the project sites to locations next to lignite mines, there are still alternative locations from which the developer could supply electricity to its rate base. Any alternative location next to an existing lignite mine would cause far fewer wetlands losses because a new mine would not have to be created, causing tens of thousands of acres of new disturbances.

**KEMPER LOCATION WAS NOT ORIGINALLY CONSIDERED APPROPRIATE COMPARED TO ALTERNATIVE SITES**

During the prior NEPA process for this very project before it was originally under construction in Florida just two years ago, there were several other alternative sites that were preferable to the Kemper County site. In fact, the Kemper site was not even considered as an alternative even worth a word of discussion in the original EIS for the project that was commenced two years ago.

But the current DEIS acts as if the Kemper site is so plainly appropriate that any effort to discuss alternative sites is dismissed out of hand.

The original EIS for this project clearly stated that sites in several other states, including undeveloped sites, and co-location with existing power plants in Alabama, New Mexico, Florida, Pennsylvania, and North Dakota were initially considered. These alternative sites deserve additional discussion now, in the Kemper DEIS, to determine if any of these locations are more appropriate or provide less environmental harm than Kemper.

These and other alternative plant and mine locations may not cause losses of more than 2000 acres of wetlands and 40 miles of streams, and might not require the start-up of a new lignite mine that will strip mine tens of thousands of acres of farmland and forest over 40 years.

**ALTERNATIVE OF EXPANDING EXISTING SOUTHERN POWER PLANT SITES**

Alternative sites should have been discussed in the DEIS, especially existing power plant sites which already possess infrastructure. These alternative sites should have included but not been limited, to the existing Southern Power plant sites within and near to Mississippi, and the gas and coal-fired power plant sites in Choctaw County that are next to, and within 15 miles of the lignite mine.

While sub-bituminous coal would have to be delivered to the existing Southern Power sites, as previously described, use of that type of coal draws on 5 times the amounts of reserves, compared to lignite, and is therefore at least 5 times more beneficial in fulfilling DOE's purpose and need of developing a readily replicated method of advanced coal combustion.

Use of some of these alternative sites could have avoided the temporal degradation of the 452 acres of wetlands consumed by the Kemper infrastructure

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(contd.)**

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construction activities, as well as the 2000+ acres of wetlands on the Kemper plant and mine site.

These facts greatly trouble the commentators because the evidence points DOE's unseemly pro-project prejudice, and towards Southern Power completely driving this entire process, including the wholesale rewriting of the purpose and need for the project in such a way as to diminish the purpose and needs of the DOE and diminishing the benefit to the taxpayers and ratepayers who will watch more than \$300 million disappear into this project.

**OTHER SOUTHERN COMPANY POWER PLANT SITES SHOULD HAVE BEEN CONSIDERED**

Southern Company, the parent of Mississippi Power, has a mammoth service territory of 120,000 square miles that including four states and more than 20 existing sites of their own thermal power plants that probably already possess the requisite infrastructure of roads, rail transport, transmission lines and gas lines.

Likewise, there are many other power plants and coal mines, within or near the Southern Power service territory that could accommodate siting of the IGCC plant without requiring the massive infrastructure construction, or the large scale wetlands destruction, needed by the Kemper site

The DEIS should have included, at the very least, discussion of these existing Southern Power thermal plant sites, to determine if any of those locations have adjoining vacant acreage that could house the proposed IGCC project.

After all, the original justification for rejecting the five other alternative sites in the original EIS was because the Stanton site already had a power plant with existing infrastructure, which avoided the additional costs and environmental damages resulting from construction of new infrastructure.

**KEMPER SITE WILL TRIGGER MASSIVE WETLANDS LOSSES BECAUSE OF THE NEED FOR A NEW MINE AND UTILITY CONSTRUCTION**

But now, in utter conflict with the rationale plainly expressed in the Stanton EIS, DOE is proposing construction at an undeveloped site, with no mine nearby, that will require a new mine which will destroy thousands of acres of wetlands. The Kemper site also has inadequate transmission and gas line access, without a word of explanation why this lack of infrastructure is acceptable now, but was not acceptable two years ago at Stanton.

This lack of infrastructure at the Kemper site is not small beer. This project deficiency will require hundreds of thousands of additional man-hours of construction labor and expenditure of additional millions of dollars for project supplies. The new transmission and pipeline routes required to service the Kemper site will themselves cause temporal degradation about 452 acres of wetlands, according to the DEIS at p. 4-70.

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**ALTERNATIVE, MORE EFFICIENT AIR POLLUTION CONTROL WAS NOT DISCUSSED IN THE DEIS**

**ALTERNATIVE MERCURY CONTROLS**

The commentors also feel that the DEIS is legally deficient because it fails to discuss alternative methods of reduction of airborne mercury emissions and other air pollutants, by even failing to mention that different and more efficient air pollution control devices for mercury and other pollutants were approved for use on the original Stanton Florida project.

For instance, the Kemper project states at p 2-11 that mercury will be removed by a reactor containing alumina-based sulfide, allowing 64 lb/yr of mercury emissions according to Table 2.6-1; .016 t/y from each of two stacks.

The Stanton project, in contrast, proposed a carbon adsorption system that would have allowed on 19 lb/year of mercury emissions. (Orlando Gasification Project EIS, p. 4-14)

In other words, Kemper's mercury control allowed more than triple the amount of mercury to be emitted, than would have the Stanton mercury control technology, even though the Kemper facility will be only about twice as large.

The DEIS should have described and studied the Stanton mercury control method of carbon adsorption as a beneficial alternative to the far less efficient proposed mercury control system of an alumina-based sulfide reactor.

Also, add-on controls for Volatile Organic Compounds and Carbon Monoxide, including but not limited to catalytic oxidizers, are in common use on many power plants. The use of catalytic oxidizers was discussed in the Stanton EIS, and this alternative pollution control device to reduce pollutants from the Kemper plant should also have been presented as an alternative.

**STANTON PROJECT DESIGN WAS ENVIRONMENTALLY SUPERIOR**

As currently proposed, the Kemper project design is environmentally inferior when compared to its immediate predecessor, the IGCC portion of the Stanton proposal. The Kemper design plant will produce much more than twice as much of some air pollutants as Stanton, even though it is almost exactly twice as large. (Stanton was 285 MW, Kemper will be 582 MW)

I am referring to the IGCC portion of the Stanton project as if it were a stand-alone project in this comparison.

Kemper will emit more than four times as much SO<sub>2</sub>; 670 t/y compared to 155 t/y from Stanton, Kemper will emit much more than twice as much NO<sub>x</sub>; 2090 ton/year vs. 855 t/y from Stanton; and more than triple the amount of PM-10; 521 t/y vs. 156 t/y from Stanton. (Table 2.1.1, Orlando Gasification Project EIS,

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appendix for PSD permit limits, compared to Kemper County IGCC EIS Table 3-1 In Appendix C, Table S-3, and Table 2.6-1, . p. 2-60.)

**INCOMPATIBLE EMISSIONS DATA IN DIFFERENT TABLES IN THE EIS**

The emissions figures in the Kemper EIS in Table S-3 and Table 2.6-1 conflict with each other and with Table 3-1 in Appendix C. For instance, the Kemper SO<sub>2</sub> emissions in Table S-3 are 590 t/y, in Table 2.6-1 they are claimed to be only 132 t/y, in Table 3-1, Appendix C, the SO<sub>2</sub> emissions are listed as 669.7 t/y.

**STANTON ALTERNATIVE DESIGN SHOULD HAVE BEEN DISCUSSED**

Plainly the Stanton plant design and operation are an environmentally superior alternative to the Kemper plant and design, but the Stanton design was never even mentioned in the Kemper DEIS, as an alternative project configuration with less environmental harms.

**THE DEIS FAILED TO ADEQUATELY ANALYZE THE LIKELY PM 2.5 IMPACTS**

1 Matters Involving Environmental Review of PM 2.5 Emissions and Projected Ambient Impact

1.1 Because the Kemper County IGCC Draft EIS Fails to Properly Describe PM 2.5 Emissions and Associated Ambient Impacts and Further Fails to Properly Describe the Effect of Current PM 2.5 New Source Review Requirements Binding on the Facility, the Draft EIS Fails to Meet NEPA Requirements to Properly Assess Facility Emissions and the Human Health and Environmental Impacts of the Operation of the Proposed Facility

Environmental impact review under the National Environmental Policy Act (NEPA) requires that the environmental impact statement process properly presents information on facility emissions and impacts. Because of multiple erroneous characterizations and assumptions regarding PM-2.5, the Draft Kemper County IGCC EIS utterly fails to meet the required standard for accurate presentation of facility emissions and impacts. The problems regarding PM 2.5 are outlined in subsequent sections below.

1.1.1 The Draft EIS Erroneously Characterizes the Required New Source Review Elements Applicable to PM-2.5 Emissions from the Proposed Facility Claiming that EPA's NSR Surrogate Policy Remains In Effect

The Draft EIS contains the following passage addressing the matter of PM-2.5 emission regulation from the proposed facility:

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"On May 8, 2008, [SIC]<sup>1</sup> EPA issued a rule that finalizes several New Source Review (NSR) program requirements for sources that emit PM2.5; however, several other NSR program requirements were left unaddressed. The rule contains a transition policy that suggests State Implementation Plan (SIP)-approved states should continue to use PM10 as a surrogate for PM2.5 to demonstrate compliance with PSD requirements. Mississippi is an SIP approved state; therefore, MDEQ is allowed to use PM10 as a surrogate for PM2.5.

"Since 1997 it has been EPA's policy that compliance with NSR requirements for PM10 may be used as surrogate for compliance with requirements for PM2.5 (1997 Memorandum from John S. Seitz: Interim Implementation for the New Source Review Requirements for PM2.5 and 2005 Memorandum from Stephen D. Page: Implementation of New Source Review Requirements in PM2.5 Nonattainment Areas). Although this policy still remains in effect, and despite the lack of final rules regarding all of the requirements of NSR for PM2.5, the universal use of this policy for all source types has recently been questioned. For the Kemper County IGCC Project, the analysis in this EIS uses PM10 as a surrogate for PM2.5 because:

For each source type, the emissions of PM2.5 generally correlate with the PM10 emissions.

The PM2.5/PM10 ratios with and without particulate control technology applied are reasonably similar."<sup>2</sup>

The entire portrayal of the allegedly applicable requirements as discussed in the quoted passage of the Draft EIS is an erroneous rendition of the presently applicable requirements for review of PM-2.5 in for the air permit application requested by the Applicant.

While EPA did indeed publish a PM-10 surrogate grandfathering policy in its May 16, 2008 PM 2.5 NSR rulemaking at 40 C.F.R. Sec. 52.21(i)(1)(xi), on September 22, 2009 EPA published a final notice staying the effectiveness of that grandfathering provision until June 22, 2010. The effect of this EPA stay action is to deny the possibility that any air quality permit issued for this facility can use PM-10 as a surrogate for evaluating PM-2.5, including the required air quality impact review for showing attainment and maintenance with the PM-2.5 National Ambient Air Quality Standards.

<sup>1</sup> The referenced rule was published on May 16, 2008 and not on May 8, 2008 as claimed.

<sup>2</sup> Kemper County IGCC Draft EIS - p. 4-8 to 4-9

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(contd.)**

The Draft EIS is defectively because of this erroneous rendition of the applicable Clean Air Act-related new source review requirements covering the NSR-regulated pollutant, PM-2.5.

With the final effective date of the PM 2.5 NSR rule on July 15, 2008 and the stay on the grandfather provision noted above, the federal regulation requires that the Mississippi State Implementation Plan be considered to provide the requirement that PSD applicants provide an air quality impact assessment that reviews the effect of permit issuance on attainment and maintenance of National Ambient Air Quality Standards (NAAQS) for all criteria pollutants listed in the regulation, including PM-2.5.

The Draft EIS narrative which indicates this facility's air permit application may rely on the previous 'PM-10 surrogate for PM-2.5' policy is in error.

1.1.2 The EIS-Portrayed "Modeling" of Facility PM-2.5 Ambient Air Quality Impacts Can Never Be Considered a Valid PM-2.5 Predictive Ambient Air Quality Determination Because the Method Used to Address PM-2.5 Ambient Air Quality Impacts is Technically Inappropriate and Erroneous

The EIS claims to show "modeled" results for PM 2.5 ambient air quality impacts. The report of PM-2.5 ambient impacts shown in Table 4.2-4, "NAAQS Impact Analysis," has a footnote attached to the reported PM 2.5 ambient impact concentrations:

"Maximum modeled concentration from the proposed facilities and other offsite sources. PM-2.5 modeled concentrations are estimated based on the 0.11 ratio of PM-2.5 to PM-10."

Upon further reading the following admission is made:

"Current research and data indicated that the multipliers in the range of 0.06 to 0.11 can be used to infer or scale PM-2.5 concentrations for PM-10 data (EPA, 2005). The PM-2.5 modeled concentrations included in Table 4.2-4 were estimated by applying a multiplier of 0.11 to the PM-10 modeled concentrations. When using a multiplier of 0.11 for relive PM-2.5 to PM-10, the resulting concentrations of 24-hour and annual PM-205 would not exceed their respective NAAQS standards."<sup>3</sup>

The year 2005 reference cited and the matter mentioned earlier in the text involving factors relating PM-2.5 to PM-10 at fugitive dust emission sources both indicate that the Applicant and the EIS authors were relying on such a scalar

<sup>3</sup> EIS p. 4-10, 2<sup>nd</sup> full para.

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method to make their "modeling" determination.

"Regarding fugitive dust and material handling sources, in 2006 EPA updated the AP-42 emission factors for fugitive dust sources including paved and unpaved roads, material handling and storage piles, industrial wind erosion, material transfer operations, and construction and demolition. The uncontrolled PM-2.5 to PM-10 ratios across all of these categories ranged from 0.10 to 0.15 (EPA, 1995a)."<sup>4</sup>

Both of the EPA papers cited for 1995a and 2005 are EPA emission factor data that sets forth expected ratios of fugitive dust emissions for characterizing particle sizes of emissions from a single fugitive dust source. That is the only purpose of the paper and data cited. The EPA materials about fugitive dust are not capable of discerning expected ambient air quality suspended particle size distributions attributable to background plus installation of a new, complex major emission source. Use of a scalar produced in the manner shown in the PM-2.5 air quality impact section of the Draft EIS can never be considered a valid method for determining PM-2.5 ambient impacts from PM-10 modeled impacts from a complex air pollution source.

The Draft EIS reliance on numerical fractional scalars to make PM-2.5 ambient air quality impact predictions based on a PM-10 ambient air quality modeling determination constitutes technical error and cannot be considered to be a valid air quality modeling determination. A valid air quality modeling determination must always rest on the use of an inventory of point and fugitive PM-2.5 emission source information and the use of this information as an input to approved air quality model in order to predict ambient air quality outside of the facility fence line.

When the Draft EIS makes the fundamental error of improper ambient assessment determination on PM-2.5 all other conclusions of the document relying on such a finding are also rendered suspect or unreliable, including statements about the effect of the facility on human health and environment.

1.1.3 The Draft EIS Fails to Recognize Mississippi Air Regulations Requiring All Ambient Air Quality Modeling Determinations Used in Prevention of Significant Deterioration Permit Applications Must Comply with EPA Regulations at 40 C.F.R. Part 51 - Appendix W on Air Quality Models

Neither the Applicant, MDEQ nor the writers of the Draft EIS have recognized that all ambient air quality modeling determinations done in support of new source review (NSR) permit issuance must conform to EPA guidance on air quality models at 40 C.F.R. Part 51 - Appendix W regulations. This requirement

<sup>4</sup> EIS p. 4-9, last full para on page

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(contd.)

has been established by pre-existing Mississippi air quality regulations:

"B. Air Quality Models.

1. All estimates of ambient concentrations of air pollutants shall be based on the applicable air quality models, data bases, and other requirements specified in the "Guideline on Air Quality Models (Revised)" 40 CFR, Part 52, Appendix W, which are incorporated herein and adopted by reference.

2. Where an air quality impact model specified in the "Guideline on Air Quality Models (Revised)" 40 CFR, Part 52, Appendix W, is inappropriate, the model may be modified or another model substituted. Such a modification or substitution of a model may be made on a case-by-case basis or, where appropriate, on a generic basis. Written approval of the DEQ and the Administrator of EPA must be obtained for any modification or substitution. In addition, use of a modified or substituted model shall be subject to public notice and opportunity for public comment."<sup>5</sup>

Using PM-2.5 scalars in the Draft EIS as outlined and as applied to PM-10 ambient air quality predictions to make PM-2.5 ambient air quality predictions is not a method for carrying out an air quality modeling determination that complies with Appendix W or the MDEQ administrative rule. Under these authorities, all NSR air permit application must incorporate modeling that conforms to Appendix W. However no aspect of the present Appendix W provides for a PM-2.5 ambient air quality assessment to be carried out in the manner provided in the Draft EIS.

The Draft EIS must not be finalized without a requirement for submission of a PM-2.5 ambient air quality modeling study complying with Appendix W that shows the facility PM-2.5 ambient air quality impact. The determination of whether or not the proposed facility jeopardizes attainment and maintenance of the PM-2.5 National Ambient Air Quality Standards is a central requirement of the PSD permit issuance proceeding and must be conclusively addressed.

1.1.4 The Site Location Selected by the Applicant for the Facility Shows a High PM-2.5 Ambient Background Concentrations Just Under the Present NAAQS Air Standards; Such Circumstances Mean the Facility Must Address Maintenance of PM-2.5 National Ambient Air Quality Standard Compliance Under a SIP-Required Appendix S Emission Offset Interpretive Ruling Procedures

Table 4.2-4 on NAAQS Impact Analysis shows PM-2.5 ambient background as 28.9 ug/M3 for the 24-hour average and 13.2 ug/M3 for the annual average.

<sup>5</sup> MDEQ Regulation APC-S-2(V.B)

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(contd.)

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This leaves a margin of only 6.1 ug/M3 (24-hour average) and 1.8 ug/M3 (annual) underneath the present NAAQS concentration for ambient degradation allowable with the present background.

In a circumstance in which a new source in an attainment area may cause or contribute to a predicted or measured actual violation of the PM-2.5 National Ambient Air Quality Standards, such permitting circumstances must be carried out under SIP-approved procedures following guidance at 40 CFR Part 51, Appendix S procedures [also known as the "Emission Offset Interpretive Ruling"].

In light of the severe constraints on any PM-2.5 emissions grown in the area and the demonstrated health concerns with human exposure to PM-2.5 concentrations below the presently set PM-2.5 NAAQS ambient standards, such circumstances urgently justify carrying out an Appendix W-compliant PM-2.5 air quality modeling demonstrations to determine expected PM-2.5 air concentrations from the proposed facility. Any such demonstrations must necessarily show that the PM-2.5 NAAQS will not be exceeded at the facility fence line. Table 4.2-4 of the Draft EIS cannot suffice in this regard.

#### 1.1.5 The EIS Fails Completely on Addressing Condensable Particulate Matter Emissions and Effect of Such Emissions on Air Quality Standard Attainment and Maintenance

All of the PM-10 emission characterizations displayed in the EIS appear to be filterable PM only. The Applicant and the EIS reviewers apparently do not view they are required to consider and evaluate condensable particulate matter as inputs to air quality modeling determinations. No review was done which shows the effects of both filterable and condensable PM on maintenance of the PM 2.5 National Ambient Air Quality Standards. Such a review is necessary in order to make a proper determination of the expected facility impact upon operation.

A 2008 rulemaking by EPA had the effect of deregulating condensable particulate matter from net emission increase determination for PM-2.5 and PM-10 if condensable PM was not already regulated under the pre-existing State Implementation Plan. The Applicant, the EIS reviewers and MDEQ apparently consider that condensable PM was deregulated in Mississippi. However, such a determination and expectation regarding condensable PM is not correct.

The following rule definitions apply in Mississippi as found in Section 2 of the MS APC-S-1 air pollution control rules:

"Fly ash.' Particulate matter capable of being gasborne or airborne or carried in the gas stream and consisting essentially of ash, fused ash, and/or unburned material."

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(contd.)**

"'Particulate matter.' Any airborne finely divided solid or liquid material with an aerodynamic diameter smaller than 100 micrometers."

"'Particulate matter emissions.' All finely divided solid or liquid material, other than uncombined water, emitted to the ambient air as measured by an applicable EPA Test Method, an equivalent or alternative method specified by the EPA, or by a test method specified in the approved State Implementation Plan."

These definitions make clear that the substance of what is condensable PM is presently regulated in Mississippi as particulate matter, PM-10 and PM-2.5. Similar language in the definition of PM-2.5 and PM-10 all indicate that condensable particulate matter has been the subject of pre-existing regulation in Mississippi.

As a result, nothing about regulatory provisions of EPA's 2008 PM-2.5 NSR rule granting a condensable particle deregulation if a state has not previously regulated condensable PM in its state implementation plan applies in the state of Mississippi. MDEQ cannot merely determine by administrative fiat that all of a sudden condensable particulate matter emissions will no longer be regulated when the state's pre-existing air pollution control rules require such condensable PM regulation.

Excluding consideration of condensable PM in emission characterizations and in demonstrations of future ambient impact and PM-2.5 and PM-10 National Ambient Air Quality Standard compliance demonstrations constitutes an erroneous and understated PM-2.5 ambient air quality determination in the Draft EIS.

Excluding modeling review of condensable PM also means that the technical modeling determination of both PM-10 and PM-2.5 fundamentally misstates the actual physical relationship between condensable emissions and predicted ambient impact of the project facility. Such PM-10 and PM-2.5 air quality modeling determinations must necessarily emphasize including the physically correct emission source input determination from all emission units. Excluding condensable emissions means the modeled determination can never reflect the full measure of the actual ambient physical impact from the expected future emissions. Arbitrary source emission input exclusions are not an element of technically proficient predictive air quality modeling. Appendix W review considerations also justify requiring the use of condensable particulate matter in source emission model input determination.

2 The Draft EIS Failed to Provide Total Particulate Matter Emissions Data

**JW-35  
(contd.)**

**JW-36**

No aspect of the Draft EIS provides total particulate matter (PM) emissions information from the proposed facility. PM is defined as an 'NSR-regulated pollutant' by EPA's Part 51 and 52 NSR regulations. As such, information about total PM emissions is an important part of the community and environmental impact from the proposed facility. Commentors assert that it is error to fail to properly and completely describe expected PM emissions and PM emission controls in the Draft EIS.

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(contd.)

**ADDITIONAL AIR QUALITY AND OTHER CONCERNS**  
**Kemper County IGCC Project Draft EIS - Key Points - Air Quality**

**3 Project Facility Site-Wide Comments**

**3.1 The EIS-Provided Narrative and Pictorial Descriptions of the Certain Portions of the Proposed Process Equipment Lacks Sufficient Detail for Process and Emissions Evaluation**

JW-37

The EIS contain little or no technical detail about certain portions of the planned process equipment and wastewater management activities. The EIS descriptions and emission characterization for the Acid Gas Removal (AGR) system contains few technical details and no technical schematic depictions. Process knowledge of this system is essential to environmental review and emissions assessment as perturbations of operation and malfunctions in this process area can cause exceptionally high emissions.

**BACKUP SULFUR RECOVERY NEEDED**

The present process design apparently features only a single regular disposition point for hydrogen sulfide acid gas and that is the wet sulfuric acid plant. If the facility is not sending acid gas to the wet sulfuric acid plant, it will probably send the gas to the flare. The Applicant's process must be evaluated for operating during time of certain process downtime. If the wet sulfuric acid plant is down for an extended period of time then will the facility be allowed to operate continuously venting acid gases to the flare? Such matters should have been clarified in the EIS.

JW-38

For example, in petroleum refining and other industrial sectors, facilities of the nature of the Applicant's are frequently designed and constructed with backup capabilities for handling such streams that do not involve flaring uncontrolled emissions. For example, management of similar acid gas streams at a petroleum refinery may be directed to 2 or more sulfur recovery units or a dedicated acid gas incinerator rather than being sent an open flare. This process disposition backup approach should have been evaluated for the subject facility in the EIS as a project process alternative. At the very least, the facility should have been designed to allow sharing of the sulfur acid gas removal system and sulfuric acid plant disposal of sulfur-containing streams between the two gasification process trains.

**TRANSIENT EMISSIONS, ACID GAS REMOVAL PLANT**

The EIS failed to identify the process connection and the purposes of the four listed Acid

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Gas Removal plant facilities and to indicate how transient emissions might occur at these stacks. These stacks may have potential for high transient emissions of carbon monoxide, as well as some hydrogen chloride and hydrogen sulfide.

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(contd.)

**PROCESS WASTEWATER AND MERCURY**

The EIS failed to provide details and diagrams on precisely how process contact wastewater associated with syngas cleaning will be addressed. For example, syngas coming into contact with water within the post gasifier equipment may generate a cross-media-transfer to wastewater of mercury and other toxicants. The EIS contains little detail on the disposition of such wastewater. There is suggestion that some of it might be re-injected into the gasifier process. Such an operation cannot be considered the best possible process control of toxicant material. Re-injection of mercury-containing wastewater back to the gasifier will necessarily mean a high equilibrium mercury concentration in syngas burned in the IGCC turbines that would be the case without such re-injection.

JW-40

Most IGCC gas cleaning units employ low temperature processing of gas, but none of the temperature features of the process are either qualitatively or quantitatively identified. Low temperature cryogenic systems involve the use of refrigerants, such as ammonia or hydrogenated chlorofluorocarbons (HCFCs). The EIS contains no information about fugitive emissions, risks and process aspects of the equipment to produce such low temperature conditions for solvent acid gas extraction and cleanup of process-produced syngas.

JW-41

**3.2 The EIS Failed to Characterize Emissions and to Show Best Available Control Technology Emission Limitations for Required NSR-Regulated Pollutants**

PM, PM-2.5, hydrogen sulfide and total reduced sulfur are NSR-regulated pollutants that must be addressed in state prevention of significant deterioration major stationary source pre-construction permit determinations, including for the present proposed facility.

JW-42

The EIS does not fully characterize the emissions of these specific pollutants which must be regulated in a PSD permit.

**3.3 Applicant's Appendix R Risk Screening Analysis Did Not Evaluate the Full Potential to Emit for All Hazardous Air Pollutants Emitted and Understated Formaldehyde Emission Inputs for Modeling Purposes**

Applicant's two risk screening analysis for the two different CO2 capture scenarios both have a Table 1 showing hourly emission rates for several listed hazardous. Summing the emission rates listed shows a total of 0.476 lbs/hr and 0.429 lbs/hr of HAP emissions, or 2.08 tons/year and 1.88 tons/year. The Applicant is claiming about 18 tons per year total HAP emissions, so the risk screening analysis provided did not comprehensively review

JW-43

the risk of all HAP emissions from the proposed facility.

Appendix C Table 3-8 shows formaldehyde emissions as 3.10 tons/year from the two IGCC stacks; however the Applicant's risk screening reviews modeled only a formaldehyde emission of 0.442 tons/year and 0.377 tons/year for the two risk screening

**DEIS FAILS TO PROPERLY DESCRIBE THE PROJECT'S ADVERSE AIR QUALITY IMPACTS**

The DEIS in Chapter 4 claims that since the predicted increases in air contamination from construction and operation of the power plant are temporary, and do not cause illegally high levels of air pollution (above the National Ambient Air Quality Standards or PSD increments) then the increased air pollution is below levels of concern. (P. 4-4)

The DEIS is ignoring the plain fact that many respected scientific studies have plainly shown that increases in air pollution clearly harm human health, even those the air quality standards are not exceeded.

The DEIS is deficient for failing to disclose, for instance, that the predicted increases in PM-10 levels caused by the project, which included increases of 39 ug/M3 from construction and 21.4 ug/M3 from power plant operations, are much higher than the 10 ug/M3 increases in PM levels that have been shown to cause measurable increases in the death rate among the exposed population.

The following studies include data demonstrating that the predicted increase of 39 ug/M3 of PM-10 caused by the power plant's construction would be responsible for measurable increases in the death rate among the exposed population, and increases in the numbers of emergency room admissions from Asthma sufferers. The Seattle study, in particular found that even a short-term exposure to increase of 30 ug/M3 of PM-10 caused a clear increase in the number of asthma sufferers seeking emergency room treatment.

That study's abstract also discusses several studies that concluded that the death rate rose .5% for every increase of 10 in PM-10, some of which are cited below. Since the power plant's PM-10 emissions will cause an increase of more than 20 ug/M3 in PM-10 concentrations, the scientific evidence indicates that the exposed population will suffer a .5 to 1% increase in their death rate. The DEIS was deficient for not discussing these and other human health impacts potentially caused by the power plant's increases in air pollution, even if the result is below the NAAQS.

This issue is especially important of the other discussions in these comments about how the mine will contribute significant amounts of PM into the ambient air, and that secondary formation of PM from ammonia emissions and other factors will also increase PM emissions about what the DEIS predicted.

**JW-43  
(contd.)**

**JW-44**

**REFERENCED SOURCE MATERIALS**

"Particulate Air Pollution and Hospital Emergency Room Visits for Asthma in Seattle." American Review of Respiratory Disease, Schwartz, Slater, Larson, Pierson, and Koenig. V. 147, pp 826-831, 1993.

"Air Pollution and Daily Mortality in Birmingham, Alabama." American Journal of Epidemiology, Joel Schwartz. Vol. 137, No. 10, 1993. See particularly figure 6, page 1145 for an illustration of how any increase in PM10 correlates to increased deaths.

"Air Pollution and Daily Mortality in Steubenville, Ohio." American Journal of Epidemiology, Joel Schwartz and Douglas Dockery. Vol. 135, No. 1. 1992.

"Increased Mortality in Philadelphia Associated with Daily Air Pollution Concentrations." American Review of Respiratory Disease, Schwartz & Dockery. 145:600-604. 1992.

"Pulmonary Function and Ambient Particulate Matter." Archives of Environmental Health, Chestnut, Schwartz, Savitz, and Burchfiel. May/June 1991 (Vol. 46 (No.3) p 135-144.

"Particulate Air Pollution and Daily Mortality: A Synthesis." Schwartz. Public Health Review 1991/92; 19:39-60/

**COAL MINE'S AIR IMPACTS UNDERESTIMATED**

The DEIS estimated that the coal mine will cause only minor increases in the levels of particulate pollution in the project area, by using theoretical "modeling." But real-life air quality testing reveals other results. The Mine Safety and Health Administration has tested air quality on-site at the Red Hills Mine, and on January 21, 2009, has discovered the mine is emitting particulate concentrations at or above 160 ug/M3 (.160 mg/M3), which exceeds the National Air Quality standards. If the air quality standards are actually exceeded on the mine site itself, it is likely that air quality will be measurable and significantly degraded in the immediate vicinity of the mine also. The DEIS should have described the likely offsite air quality impacts at times with the NAAQS is being exceeded on the mine property. (<http://www.msha.gov/drs/ASP/MineAction.asp>)

**THE DEIS SHOULD HAVE DESCRIBED THE COAL MINE AND POWER PLANT AS A SINGLE AIR POLLUTION SOURCE**

The coal mine's sole purpose will be to feed lignite into the maw of the Kemper facility. As such, the regulatory agencies consider the mine a support facility of the power plant and its air emissions are combined with the power plant's air emissions. The DEIS improperly bifurcated the mine's air emissions from Kemper's emissions, causing the illusion that each source had lesser impacts. The DEIS should have described the mine and power plant as a single industrial entity with combined air emissions, as required by the federal EPA New Source

**JW-45**

**JW-46**

Review Handbook. The NSR Handbook describes precisely the situation of a coal mine and an adjacent, related pollution source, and plainly stated the two should be lumped together for regulatory purposes. See <http://www.epa.gov/ttn/nsr/gen/wkshpman.pdf> at pages A.3-4.

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**THE DEIS FAILED TO PROVIDE AN ADEQUATE DISCUSSION OF THE FATE OF THE MERCURY EMISSIONS**

The federal EPA commented on the prior EIS for the Stanton plant that the DEIS was deficient because it failed to provide an adequate discussion of the fate of that plant's mercury emissions. The Final EIS responded by including considerable discussion about the potential fate of that plant's mercury emissions, including references to several scientific studies on mercury deposition.

Now the Kemper plant proposed to emit over 60 lb/year of mercury, as compared to the 19 lb/yr that would have been emitted from Stanton, so the mercury deposition discussion is even more important for this DEIS. Indeed, the Federal EPA asked for special consideration of this issue in their scoping letter, published in the DEIS Appendix. But the Kemper DEIS has neglected to provide a comprehensive discussion of the fate of the mercury emissions, including but not limited to bioaccumulation.

**AN ALTERNATIVE DESIGN OF AIR COOLING INSTEAD OF WATER COOLING WAS NOT DISCUSSED**

The DEIS also failed to discuss alternative designs that would vastly reduce water use by 90%, such as air cooling which is in widespread use in the USA and worldwide at scores of power plants including thousands of megawatts of coal fired units.

Air cooling typically involves the piping of heated water which is cooled by large fans before being returned to the plant cooling system, which comparatively minor water losses of around 100,000 gallons/day for a plant the size of Kemper.

Air cooling is less efficient during hot summer months, although it is still used in searing climates such as South Africa, southern Nevada, and Wyoming. In some instances, power plants have hybrid systems that use air cooling during cooler seasons, and water cooling during hot seasons.

Water cooling, which is proposed for Kemper, essentially allows the conversion and losses of millions of gallons of water daily into steam which is ejected out of cooling towers.

Air cooling also would greatly reduce the thirty thousand pounds/year of PM emissions that otherwise would be emitted from the Kemper cooling towers.

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JW-48

The DEIS should have comprehensively discussed alternative designs of the facility that would reduce water use and discharge, including air cooling, or a hybrid system of both air and water cooling, depending on the season.

**MANY POWER PLANTS USE AIR COOLING**

This alternative would include air cooling or hybrid cooling systems, rather than water cooling, for the facility. The commentors are aware of many existing and proposed power plants including but not limited to coal-fired units that are air cooled. Currently operating air cooled coal fired units including the Neil Simpson plants, the Wyodak plant, and the three Wygen coal-fired power plants, all in Wyoming. Black Hills Power, operator of the Wygen plants, states it saves 93% on water use by air cooling. <http://www.blackhillscorp.com/wygen.htm>

Other permitted or operating air-cooled power plants, and their fuel, include the (coal-fired) Matimba and Kendal powerhouses in South Africa, the Rosebud coal-fired plant in Montana, the Linden and Sayreville plants in New Jersey, the proposed dry-cooled 420 MW Dry Forks PC in Wyoming, Colorado Springs near Fountain, Colorado, Chehalis Power (natural gas) facility in the State of Washington, Diamond Generating, near Goodsprings, Nevada, the Doswell facility in Virginia, Duke, and Miriant, both near Las Vegas, Reliant's Choctaw County plant near French Camp, Mississippi, and its Hunterstown, Pennsylvania, project, Taiyuan #2 in China, Trakya in Turkey, Uran III in India, Tousa in Iran, the Camarillo facility in Ventura County, California, and a proposed 500 MW PRB-fired supercritical PC plant in Wisconsin. See also the March 2007 Power Engineering editorial on the use of dry cooling in new power plants.

In addition, most large power plants permitted recently in California have been exclusively air cooled, including Sutter Power, and Otay Mesa.

**THE KEMPER PROJECT'S ADVERSE ENVIRONMENTAL CONSEQUENCES FOR FUTURE POWER PLANT CONSTRUCTION WERE NOT DISCLOSED IN THE DEIS**

The Stanton EIS warned that the consequence of proving up IGCC technology would be that developers would keep burning coal using the IGCC design, which is cleaner than older coal plants but still not as clean as natural gas fired power plants. In effect, the IGCC technology would "displace" future use of natural gas fired power plants, causing a net increase in air emissions, in comparison with the current trend whereas natural gas fired power plants are displacing coal-fired units. This regrettable consequence should have been discussed in the Kemper DEIS, especially since it was discussed in the Stanton EIS.

**AMMONIA RISKS**

The Kemper facility will manufacture and use anhydrous ammonia. (p. 2-64) But some of that gaseous ammonia will escape during its handling, use, and shipping, causing and contributing to potentially significant impacts. The DEIS

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JW-50

failed to discuss these issues, and didn't even list ammonia emissions in Table 2.6-1, although ammonia will be used in the SCR system.

**THE DEIS FAILED TO CONSIDER HOW AMMONIA SLIP WILL ADD TO PM10 EMISSIONS**

The DEIS failed to describe the reactions between SO<sub>3</sub>, NH<sub>3</sub>, and NO<sub>2</sub>, which form salts, some of which are emitted to the atmosphere. Equations can be used to estimate a portion of the secondary PM<sub>10</sub> that is formed from ammonia slip. Secondary PM<sub>10</sub> can be formed by reaction of ammonia with SO<sub>3</sub> and NO<sub>2</sub> emitted by the turbines and present in the stack gases and plume as well as additional SO<sub>3</sub> and NO<sub>2</sub> that are present downwind in the atmosphere. Additional ammonium nitrate could form from the reaction of NO<sub>2</sub> in the atmosphere with any emitted ammonia. This additional PM<sub>10</sub> may not have been included in the Project's emissions estimates. Apparently the formation of secondary PM<sub>10</sub>, ammonia nitrate, from the proposed project, was not done in the DEIS, so the combined PM<sub>10</sub> emissions will be more than what was estimated. Ammonia emissions could produce as much as 460% of their own weight as secondary particulate.

In summary, the DEIS appears to have underestimated the resulting concentrations of PM<sub>10</sub> from the project because of the failure to consider secondary formation.

For these reasons, the subject of the health and environmental effects of PM-10 and the plant's contribution individually and cumulatively, should have been presented in depth, as discussed elsewhere in these comments.

**PM<sub>10</sub> FORMATION CAUSES VISIBILITY REDUCTION**

The fact that ammonia/PM reactions actually occur and cause visibility impacts is well documented in the technical literature. A noted atmospheric textbook, for example, contains this vivid description of the problem (Pitts and Pitts, 1999,<sup>6</sup> p. 284):

"The formation of ammonium nitrate has some interesting implications for visibility reduction. In the Los Angeles air basin, for example, the major NO<sub>x</sub> sources are at the western, upwind end of the air basin. Approximately 40 miles east in the vicinity of the BPA and Benton County of Chino, there is a large agricultural area that has significant emissions of ammonia...under typical meteorological conditions, air is carried inland during the day, with NO<sub>x</sub> being oxidized to HNO<sub>3</sub> as the air mass moves downwind. When it reaches the agricultural area, the HNO<sub>3</sub> reacts with gaseous NH<sub>3</sub> to form ammonium nitrate ... the particles formed by such gas-to-particle conversion processes are in the size range where they scatter light efficiently, giving the appearance of a very hazy or smoggy atmosphere even though other manifestations of smog such as ozone levels may not be highly elevated."

**AMMONIA RELATED PM<sub>10</sub> FORMATION ENDANGERS BIOTA**

<sup>6</sup> Barbara J. Finlayson-Pitts and James N. Pitts, Jr., *Chemistry of the Upper and Lower Atmosphere. Theory, Experiments, and Applications*, Academic Press, San Diego, 1999,

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**JW-53**

The majority of the ammonia slip reacts with NO<sub>x</sub> to form ammonium nitrate, which is PM<sub>10</sub>. This PM<sub>10</sub> can be deposited on surrounding hills, located adjacent to the site.

This additional PM<sub>10</sub> would increase the Project's reported contribution to soil nitrogen. The impact of this additional ammonium nitrate has not been evaluated and must be to fully evaluate the environmental impacts of SCR. Ammonia emissions are discussed further in the following comments. These types of reactions, as described above, are a potentially significant impact that should have been discussed in the DEIS.

**AMMONIA**

The proposed power plant will use, handle, store and transport large amounts of ammonia (p 2-63-65). Ammonia is listed on the EPA's list of extremely hazardous chemicals. The State of Louisiana has recently tightened regulations governing handling of ammonia. It is prudent to minimize the use and storage of any hazardous chemicals such as ammonia. Nonetheless, Plymouth Power proposes to transport, use and store large quantities of ammonia on site.

The DEIS is deficient in failing to describe and address the possible consequences of transporting, piping, storing and emitting hundreds of thousands of pounds of ammonia at this facility every year. There are two issues regarding ammonia. The first issue is the constant release of ammonia from this facility under normal operating conditions. The second issue is the risk of large scale ammonia releases from the storage and transportation of this hazardous chemical.

**AMMONIA EMISSIONS UNDER NORMAL OPERATING CONDITIONS**

The DEIS failed to admit that hundreds of tons of ammonia will be emitted from the project as ammonia "slip" from the SCR and other sources such as valves and tanks.

There may be other ammonia sources in this area, including feed lots and fertilizer production facilities, and agricultural users of nitrogen based fertilizer, whose applications could contribute to an ambient ammonia level. These other ammonia sources were not evaluated in the DEIS. In this case it is possible that the ammonia odor threshold could be exceeded under adverse air quality mixing conditions, such as inversions. These nearby ammonia sources should have been inventoried, because those sources may cumulatively contribute to formation of secondary particulate.

But no controls for ammonia are discussed, nor is there any modeling that accounts for potential ambient levels of ammonia that would cumulatively join with the proposed facility's emissions. The impacts of ammonia emissions on PM formation were discussed earlier.

**RISKS OF AMMONIA RELEASES**

The plant will store hundreds of thousand of pounds of ammonia on site, and millions of pounds of ammonia will be transported to this site every year. But the DEIS does not

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describe the likelihood of a transportation accident, alternative truck routes, the possible size of any ammonia releases from a truck accident, the inability of this rural area's emergency response system to react to a large release, the neighborhoods and businesses that would be threatened by a release, or the risk and effects of a release from the ammonia tanks at the power plant, including the risk and effect of a tank failure.

In fact, the DEIS is virtually silent on this troubling subject, of large scale ammonia releases from transport and storage of large amounts of ammonia on the site, and how, or whether, emergency responses will be conducted. Ammonia releases are fairly common. A study submitted to the Congress revealed there have been over 1000 ammonia releases over one nine year period, which caused 801 injuries, 9 deaths, and 61 evacuations of over 22,000 people.<sup>7</sup>

For instance, there was a release of ammonia in August, 2001 from the Pratt & Whitney power plant in East Hartford, Conn., that caused the shutdown of nearby streets for five hours and led to the evacuation of 20 people. For this reason the commentors urge that the DEIS should have discuss ammonia hazards, and the ability to respond, from storage and transport releases, and any requirements to comply with the CAA amendments governing storage and transport of ammonia and other hazardous materials.

The Project may be subject to the Title III requirements regarding storage of hazardous materials, but those requirements, including a hazard assessment and risk management program, have not yet been developed and reviewed by the public and the relevant agencies. These requirements should have been fulfilled in time for these proceedings, so that the public can evaluate this project's risks in a single round of reviews and meetings.

The DEIS evaluation should also study alternatives on the types of ammonia to be stored and used, for instance the use of urea instead of ammonia, and alternative transport methods for ammonia.

The DEIS' evaluation should also study the potential impacts of large scale ammonia releases from different site locations, and the release impacts from different types of transport accidents. The alternative of siting the plant farther from populated areas and from the State Highway, to reduce the public's exposure from ammonia releases, should have been discussed.

**SAMPLE RELEASES OF AMMONIA (not a complete list)**

evacuations	injuries	location	gallons released
36	1300	Minot, ND	about 140,000
280	4	Washington, IND	Not provided
1000	65	Quebec	" "
1500	0	Morro Bay, CA	300

<sup>7</sup>Report to Congress Section 112(r) (10) Clean Air Act as Amended. EPA 550-r-93-002. December, 1993.

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(contd.)**

100-300	n/a	Wauwatosa, WI	n/a
100	n/a	Columbus, IA	na
not known	15	St. Paul, MN	not provided
not known	9	Lorain, Ohio	10 pounds
230	5	Old Monroe, MO	not known

**USEFUL DOCUMENT SOURCES**

Science Applications International Corporation. Model Risk Management Program and Plan for Ammonia Refrigeration. May, 1996.

Washington State Department of Health. Ammonia Emergency Release Events in Washington State, 1993-2001, February, 2003.

US EPA. Anhydrous Ammonia Theft. EPA-F-00-005. March, 2000.

US EPA. Hazards of Ammonia Releases at Ammonia Refrigeration Facilities. EPA 550-F-98-017. August, 1998.

**LEGIONAIRES DISEASE AND BIOCIDES**

The Kemper facility's cooling towers provide a potential source of Legionnaires' Disease. The DEIS failed to discuss this potential impact. Likely Kemper will use highly toxic biocides in the cooling towers to prevent discharges of Legionnaires' disease. The DEIS should have named the likely biocides to be used, discussed how those will be safely transported, stored and used, and discussed the likely concentrations at which those biocides will be discharged and their deposition rates, and the likelihood of adverse impacts from that deposition.

Please see for the following discussion of this threat:  
[http://www.osha.gov/dts/osta/otm/legionnaires/cool\\_evap.html](http://www.osha.gov/dts/osta/otm/legionnaires/cool_evap.html)

"Cooling towers, evaporative condensers, and fluid coolers use a fan to move air through a recirculated water system. This allows a considerable amount of water vapor and sometimes droplets to be introduced into the surroundings, despite the presence of drift eliminators designed to limit droplet release. This water may be in the ideal temperature range for Legionnaires' disease bacteria (LDB) growth, 20°-50°C (68°-122°F). Good maintenance is necessary, both to control LDB growth and for effective operation."

**THE DEIS FAILED TO DESCRIBE PIPELINE DANGERS**

**PIPELINE IMPACTS**

The proposed power plant and its support facilities include a lengthy natural gas pipeline and lateral. There are many other natural gas pipelines around the country that were constructed according to federal standards. But pipelines have often blown up within the last few years.

**JW-56  
(contd.)**

**JW-57**

**JW-58**

A pipeline near Bonneville Dam recently exploded and burned on February 27, 1999. The roar from the explosion was heard for two miles. The 300 foot high fireball was so huge it was visible for miles. Route 14 in Washington was closed to protect the public. Press accounts state that earth movement from recent heavy rains may have been responsible for the pipeline break. The fire destroyed a resort hotel that was under construction and a nearby dwelling.

Near Kalama, Washington, a natural gas pipeline broke in February, 1997. Again, a 300 foot high fireball blazed into the sky. And just one day earlier, the same pipeline exploded and burned near Bellingham, Washington.

In March of 1995, that same pipeline had ruptured and blew up near Castle Rock, Washington. After that 1995 explosion, the company removed soil from 300 feet of the pipeline, to relieve any stress. But less than two years later, it blew up again. Again, soil movement was the cause of the pipeline breakage, according to published accounts.

Earlier this year, at least six people were killed in a natural gas pipeline explosion near Carlsbad, New Mexico, and another six were injured. Landslides in Ventura County, California ruptured several natural gas pipelines in February, 1998, again after heavy rain. Between 1965 and 1986, there have been 250 pipeline failures in the United States as a result of stress corrosion cracking, caused by a combination of water, soil types, and gas temperature within the pipelines.

Twenty-one people were killed during 1995 from natural gas pipeline accidents.<sup>8</sup> A Transwestern Pipeline natural gas pipeline exploded on August 20, 1994 in New Mexico, near the Rio Grande River, damaging a bridge. An October 1994 explosion of a pipeline in Torrance, California, injured 30. A December, 1989 pipeline rupture caused by a farmer's plow, triggered the evacuation of 600 people in Butler, Illinois.

In March, 1994, a natural gas pipeline exploded in New Jersey, killing and injuring scores of people and creating a 30 foot deep crater and a fire that destroyed eight buildings and severely damaged six more buildings.

All of these pipelines were constructed to federal standards, and monitored by federal agencies. The DEIS should explain why, with all the mitigation measures and careful engineering, pipelines, can still blow up, and the consequences of such an explosion from the proposed facilities. When these events occurred in populated areas, there may be heavy loss of life and property. These pipeline explosions are significant impacts. Additional protective measures should be discussed and implemented, and the problems that caused this explosion should be carefully explained at length in a revised DEIS.

<sup>8</sup>New York Times, 4/9/97, p. 1.

**JW-58  
(contd.)**

The DEIS also did not discuss pipeline accidents, also known as "service incidents."

A service incident is reportable if there is a gas leak causing a death or serious injury, gas ignition, over \$5000 in property damage, if it occurred during a test, if it required immediate repair, or if a portion of the line was taken out of service because of the incident.

An revised DEIS should be prepared to describe the likely scenario of service incidents on the pipeline serving the power plant, perhaps by describing several of the recent explosions at similar pipelines.

Descriptions of a range of several recent incidents should be provided, so that readers and commentors can be apprised of the possible impacts of service incidents. This is appropriate because service incidents can be expected over a 50 year life span for these pipelines. The DEIS should also have discussed whether, and how local agencies in this rural area would respond to a pipeline explosion and fire.

#### **POWER PLANT ACCIDENTS**

The DEIS failed to discuss the potential for accidents and explosions at this proposed facility. On occasion, similar power plants have experienced fires and explosions that have damaged property and killed people. While these other facilities are not exactly the same design as Kemper, these plants share many characteristics, including coal handing facilities, and storage and use of toxic, hazardous, flammable and explosive materials.

On October 8<sup>th</sup>, 2002, a massive explosion at the Florida Power & Light natural gas fired Palm Beach plant rocked two counties, followed by a hydrogen-fed fire. The explosion shook houses and rattled windows, and was as loud as a sonic boom. In January, 2002, there was a hydrogen explosion and a resulting fire at the natural gas fired BC Hydro plant in Port Moody, BC.

On October 1, 2002, there was a nine-alarm fire at the Sithe power plant in Boston, which began in a hydrogen generator. The fire and explosion caused \$10 million in property damage.

At the Sithe blaze, 180 firefighters had to respond. The natural gas fired turbine at the Doswell power plant in Virginia also suffered a catastrophic fire and explosion. It took 75 fire fighters to quell the resulting fire. The DEIS should have discussed what will happen if hundreds of fire fighters are needed to respond to a problem at Kemper.

**JW-58  
(contd.)**

**JW-59**

There were other explosions and fires at power plants. An explosion and fire rocked the Black Hills Power and Light power plant in Wyoming, in June, 2002. A back-up generator blew up and caused a "major" fire at the Allegheny Energy plant in Pennsylvania, in July, 2002. Firefighters from at least five communities had to respond to the blaze.

A pressure relief valve activation at the Mirant plant in Zeeland, Michigan in August, 2002 caused diversion of traffic, to avoid released gasses. Three workers were killed at a fire in the O'Brien Newark, New Jersey Cogeneration power plant fire. At least 20 other fires have been recorded over the last several years at power plants, causing another death and \$417 million in property damage. The most severe fires often involved the release of lube oil, which ignited.

There were 272 to 557 equipment failures and accidents per year at power boilers and pressure vessels since 1992, causing almost 200 injuries and 29 deaths, and another 145 to 387 failures, and another 270 injuries and 54 deaths, from unfired pressure vessels, according to Power Magazine, Jan-Feb., 2001, p 53.

Power plants typically store and use many materials that present a danger of fire and explosion, such as hydrogen and lube oil. Some of these hundreds of annual accidents at power plants cause injuries, and losses of life and property beyond the power plant boundaries, and require a large response of emergency personnel, as previously described.

The dangers from the use and storage of these materials to be stored at Kemper, and the ability or lack thereof of local fire departments to respond, was not discussed in the DEIS. These kinds of serious accidents are significant impacts that should be discussed in an EIS.

#### **SOCIO-ECONOMIC IMPACTS DURING CONSTRUCTION**

The plant's construction will require more than one thousand construction workers at peak and the job will last for four years. Kellogg Brown & Root is a partner in the project and is a heavy industrial construction contractor. KBR is based out of Texas as was Brown & Root, its predecessor. Another construction company recently merged into KBR was formerly known as BE&K, also an out-of-state company

Brown & Root and BE&K are well known for importing large percentages of out of area workers to a construction job site. The famous TV show "60 Minutes" has done at least three shows exposing Brown & Root, including a program on the large scale importation of out of area workers into other states, creating a "boom town" situation with all the attending problems.

JW-59  
(contd.)

JW-60

KBR has not publicly denied that it will also use an out of area work force for the Kemper facility construction.

This writer has researched employment-related issues for the last twenty years. I was a researcher for two subcommittees of the United States Congress House of Representatives' Education and Labor Committee.

I have participated in many private research projects on behalf of newspaper, TV stations, attorneys and public interest groups regarding the importing of out of state workers into large construction projects.

The first projects I researched in the mid-1980s involved contractors importing about 30-50% of their work force from out of the local area<sup>9</sup>. Some of these projects included the BE&K company's construction of the USS-Posco steel mill 30 miles east of San Francisco, where about 30% of the workers were imported. That University of California study is especially relevant since BE&K is now part of the KBR company who reportedly will provide construction labor for the Kemper project.

Another large job was the LUZ power plant construction work in rural, southeast California, where 53% of the construction employees were imported. That job was also closely studied for its socio-economic impacts

By the 1990s, I was frequently seeing construction sites where the rate of out of area workers was frequently closer to 70%, based on license plate counts of contractor parking lots at various construction jobs in the Northwest.

In 2000, TIC, the general contractor for the Hermiston, Oregon Calpine power plant admitted to the Oregon Energy Facility Siting Council that it only obtained about 25% of its own direct hires from the local work force.<sup>10</sup>

I also obtained a National Labor Relations Board list of the home addresses of construction workers on a sugar beet plant in southeast Washington. This list revealed that 87% of that construction work force was imported from outside of the local area. That contractor, Lurgi, has extensive experience in the gasification technology and could potentially be a subcontractor on the Kemper job.

This evidence indicates that a significant percentage of the Kemper construction work force could also be imported into the local area.

<sup>9</sup>An out-of-area worker is a person whose permanent address is more than 75 miles from the construction site. Other studies have indicated this is the likely maximum distance that construction workers will commute from their homes without relocating.

JW-60  
(contd.)

This will have significant socio-economic impacts that were not studied in the DEIS.

Local workers spend 95% of their paychecks locally, while out of area workers spend only about 50% of their paycheck in the local community. That extra payroll spent locally creates a "multiplier" effect, meaning that it creates additional jobs in secondary industries. But that multiplier effect will be severely diminished by out of area hires.

Many out of area workers also migrate to a job site, bringing their families, and placing an increased burden on local schools. Many children of out of area construction workers will be enrolled in local schools.<sup>11</sup> That is likely in Kemper since the job will last four years.

Large numbers of imported construction workers have also caused increases in crime rates in the affected communities, as closely documented the study of the Luz power plant job. That power plant construction job by an Alabama contractor utilizing out of area labor coincided with 62% increase in all crimes and a 120% increase in violent crimes.

Private communications with law enforcement at another mine construction job in Ely, Nevada, and a hand search of arrest records in Nevada, at a mine construction job in Alaska, and a power plant construction job in Idaho, confirmed that out-of-area transient construction workers were implicated in many of these crimes.

Another factor is the unemployed construction workers who bring their families and come to Kemper from afar, but whom apply unsuccessfully for work. Those unfortunate folks will end up on the local welfare rolls, in the jails, in the hospitals, and some of their children may end up in local schools, imposing additional costs on social services.

Low-wage workers usually do not have health benefits for the first 90 days on the job. If they or their family become injured or ill, they may have to resort to hospital emergency rooms for medical care. That becomes another burden to local services.

The important number is the peak employment for the construction job, because local government must provide services for all of those people and their families.

<sup>11</sup> Assuming 69% of out of area workers, are married, 49% of the married workers would bring their families, with an average of 1.6 school age children per family. These assumptions are derived from The University of California study. A similar economic study of the Luz Power construction project included an actual count of the increase in school attendance resulting from an out of area construction work force, which showed 156 school age children in the families of 500 out of area construction workers.

JW-60  
(contd.)

Assuming the job peaks at about 1200 workers, those folks would also bring another 1200 family members into the local area. These 2,400 new residents will cause significant burdens on public services, such as schools, health care, welfare, parks, libraries, and police services. There will be about 800 children, many of which will need to attend local schools.

These calculations are based on the findings in the University of California study "The Impact of Out-of-Area Workers in Non-Residential Construction on Contra Costa County. A Case Study of the USS-Posco Modernization." In Association with the Institute of Industrial relations, University of California. July, 1989

The DEIS failed to take a hard look at the probable socio-economic impacts from the very likely probability of the importation of a large percentage of the construction work force. To the contrary, the DEIS' discussion of socio-economics fell into a common error in an EIS. It became a cheerleader for what it assumed was a positive project benefit.

One book on the EIS process warned against these types of conclusory statements that could be termed "advertising claims" which are stated as fact. Claims of economic benefits are among the most common problem areas, warned the authors, and this advertising claim of economic benefit is also a problem in this DEIS. (Jain, Urban, Stacey, and Balbach. Environmental Assessment.1993. McGraw-Hill. P. 159)

JW-60  
(contd.)

COMMENTS SENT FROM  
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RE: KEMPER COUNTY IGCC PROJECT, DOE/EIS-0409D

ADDITIONAL DISCUSSION OF THE DEIS' INADEQUATE REFERENCES TO  
THE MINED LANDS RECLAMATION

ACIDIC RUNOFF

The land to be mined contains large amounts of acid-generating materials. (p. 3-37) Many square miles of these lands will be stripped and stockpiled and exposed to wind and rain. These procedures will likely cause production of acid drainage, due to the large amounts of area rainfall (almost five feet per year, Table 3.6-1)) that will rinse and leach the acid-producing materials from the excavated soils and overburden.

Almost 1000 acres of land will be initially disturbed, left exposed and unreclaimed each year. The first year almost another 300 acres will be disturbed and only 12 acres will be reclaimed, leaving about 1200 exposed acres. Each successive year more land will be disturbed than reclaimed, leaving 1271-to 1897 acres exposed and unreclaimed, until after 43 years there are 1336.30 acres disturbed and unreclaimed until the final year. (Table 2.4-1) These areas will be reclaimed by placement of oxidized (acidic) overburden on the disturbed areas.

This means that about over 1000 acres times almost 5 feet of rainfall will wash over this disturbed lands containing acid-generating materials, producing over 5000 acre-feet of potentially acidic stormwater runoff, or well over 160,000,000 gallons of tainted stormwater runoff. Even the reclaimed areas will feature millions of gallons of stormwater rinsing through the oxidized overburden.

INCREASED METALS DISCHARGES TO WATER

This acid runoff would potentially liberate metals and toxins in the overburden and soils, washing those materials into the surface waters. While initial tests of the overburden show the presence of low levels of metals, the DEIS failed to explain if leaching tests have been performed to determine to what extent those metals can be leached by stormwater. (Table 4.2-9) These metals concentrate in the sediment runoff ponds.

Although Section 4.2.3 was touted at page 2.47 as an explanation of the impact of using oxidized overburden for reclamation, no explanation of these or other potential impacts was found at this heading.

JW-61

JW-62

The DEIS provided data showing currently detectable levels of metals in groundwater and surface water, indicating that metals currently entering the aquatic environment. Mining's surface disturbances and the exposure of overburden and soils to weathering will only increase these discharges of metals.

ADDITIONAL METALS SOURCES--COAL ASH

The existing North American Red Hills mine used coal ash to "pave" the on-site roads. The Kemper ash will contain elevated levels of heavy metals and selenium. Similar use of the Kemper ash as road paving material at the new Liberty Mine would cause and contribute to leaching and discharges of metals, selenium, and other toxins in addition to the releases from the acidic overburden and exposed soils. The DEIS concedes at p. 2-64 that the ash will be offered for road paving material.

Coal fired power plants have caused elevated levels of selenium at other locations which have caused wildlife mutations and birth deformities.

AIR EMISSIONS

Table 2.6-1 shows that Kemper will emit about one half-ton/year of heavy metals and selenium, some of which will fall onto the mined lands or otherwise be deposited within the watershed drainage. These emissions will add to the cumulative impacts of metals and toxins on soil and water quality.

The DEIS at 4-17 admitted that Kemper's airborne sulfur and nitrogen emissions would increase acidification of nearby soils, but incorrectly concluded that compliance with NAAQS standards would protect soil quality. A proper analysis would calculate annual tonnages of sulfur and nitrogen compounds deposited on nearby lands and determined the levels of impacts, since chemical deposition can cause adverse impacts even if a facility complies with the NAAQS. Regulators concede, for instance, that acid rain has become an intolerable impact in recent years, even while the NAAQS was not exceeded.

MINE OPERATOR'S VIOLATIONS

Published accounts state that North American, the mine owner, has several environmental violations recorded against its existing Mississippi lignite mine. The DEIS failed to disclose or discuss these violations, which directly bear on the likelihood that North American will fully avoid adverse water quality impacts from the proposed mine site.

SUMMARY

The DEIS fails to adequately address how the mine will mitigate these potentially significant impacts of acidic runoff and metals and selenium deposition and releases, beyond general discussion about introducing buffering materials.

The disturbance of several square miles of lands, and the 40-year mine life, threaten water quality. Simple buffering would be dwarfed by this problem's magnitude, and the potential downstream impacts in Okatibbee Lake and other water bodies.

JW-62  
(contd.)

JW-63

JW-64

JW-65

JW-66

The commentors oppose issuance of a "401 Certification" for the above and below reasons and for other water-quality impacts cited in these and others' comments on the DEIS.

#### WETLANDS MITIGATION PLAN

Reading between the lines of the DEIS, the commentors are concerned that the descriptions of ongoing wetlands restoration plans during mining are not adequate to significantly restore wetlands functions. The "true" wetlands mitigation plan will be setting up a "wetlands mitigation bank," to improve wetlands at some other location. But the DEIS does not tell readers anything about this mitigation bank.

#### THE DOE SHOULD HAVE DELAYED THE DEIS UNTIL THE WETLANDS MITIGATION BANK DETAILS COULD BE PROVIDED TO THE PUBLIC

The mitigation for the project's destruction of wetlands will not be readily accomplished by reclamation of the mine site. Instead, "an off-site mitigation area proposed to be determined in the future." (P 2, Army Corps Notice for the Liberty Mine.) In other words, someday, somewhere, some wetlands may be restored at a "mitigation bank."

The existence of, much less the contents of this extremely important wetlands mitigation bank are barely hinted at in the DEIS.

Army Corps persons said privately at the December, 2009, public meeting that the project developer has recently provided the Corps additional details about this proposed mitigation bank. If true, we think it was underhanded for the DOE to publish a draft EIS just a few weeks before this mitigation bank plan was available for public review. The result is we are commenting on the wetlands mitigation plan in the dark, deprived of important details. We ask that the comment deadline for this DEIS be extended until commentors can review the mitigation bank details.

Going forward prematurely with the DEIS just before the wetlands mitigation bank plans will be made available is not legal. The law is clear. A "...perfunctory description of mitigating measures is inconsistent with the 'hard look' [that] is required to render under NEPA. 'Mitigation must be discussed in sufficient detail to ensure that environmental consequences have been fairly evaluated.' 'A mere listing of mitigation measures is insufficient to qualify as the reasoned discussion required by NEPA.' *Neighbors of Cuddy Mountain v. USFS*, 137 F.3d 1372, 1380 (9th Cir. 1998) (citations omitted).

Since this DEIS has provided not even a perfunctory look at, much less a perfunctory description of, the wetlands mitigation bank, this DEIS lacks the legally required "hard look" that NEPA requires.

See also: "Mitigation must be discussed in sufficient detail to ensure that environmental consequences have been fairly evaluated." *Carmel-By-The-Sea v.*

JW-66  
(contd.)

JW-67

JW-68

Dept. of Transportation, 123 F.3d 1142, 1154 (9th Cir. 1997) (quoting *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 353 (1989)). "A mere listing of mitigation measures is insufficient to qualify as the reasoned discussion required by NEPA." *Northwest Indian Cemetery Protective Association v. Peterson*, 795 F.2d 688, 697 (9th Cir. 1986), rev'd on other grounds, 485 U.S. 439 (1988).

*National Audubon Society v. Hoffman*, 132 F.3d 7, 17 (2nd Cir. 1997) ("we emphasize the requirement that mitigation measures be supported by substantial evidence in order to avoid creating a temptation for federal agencies to rely on mitigation proposals as a way to avoid preparation of an EIS"); *Friends of the Ompopompoosic v. FERC*, 968 F.2d 1549, 1556-57 (2nd Cir. 1992); *Abenaki Nation of Misissquoi v. Hughes*, 805 F.Supp. 234, 245 (D. Vt. 1992), *aff'd* 990 F.2d 729 (2nd Cir. 1993).

#### CONCERNS ABOUT MITIGATION RATIOS

The developers in the DEIS Appendix P provide calculations about the appropriate areas of replacement wetlands that should be included in the mitigation bank. The commentors believe, as stated above, that the continuous restoration of a hundred of more acres each year, within an active mining operation, that is surrounded by highly disturbed lands, featuring high levels of acidic stormwater runoff containing metals and toxins, intermingled with toxic discharges from waste water units, will not produce useful wetlands habitat until the mining is completely ceased after 40 years.

The interim reclaimed areas will not provide retention of stormwater through natural designs, that provide wildlife habitat that possesses high levels of wetlands functions. Erosion, turbid waters, elevated metals levels, lack of vegetation, and the surrounding noise, dust, and surface disturbance of an ongoing mining operation will reduce the value of the reclaimed wetlands during the active mine life.

The commentors ask that the mine and power plant owners be required to design a scheme to avoid killing the existing wildlife and aquatic species and any rare or scarce plants during site clearance, for instance by earlier site surveys on foot. Trained personnel could perform critter and plant rescues and relocation prior to site clearance.

High quality wetlands values cannot be restored after a few years and become better-than-before after 40 years (See Appx. P, p. 8-9 for an example). The 40-year lag between wetlands destruction and restoration to high values, even if possible, is such a long temporal wetlands loss that little, if any mitigation credits would be due.

Some experts characterize wetlands mitigation as "experimental, and state that it might take several decades to restore functional equivalency in created wetlands. Many generations of organisms are lost during the establishment phases of mitigation projects. (Bill, 1991,Golet, 1986, Demgen, 1988, Rylko and Kentula, 1991, Zedler, 1984)

JW-69

The developer claims that restoration, including introduction of high-value hardwoods to replace the current low-quality pines and pasturelands (Appx P, p.6-7) will achieve considerable mitigation "credits."

JW-69 (contd.)

However published accounts state that 95% of the reclaimed lands at the existing Red Hills mine are replanted in pines, not high quality hardwoods. For this reason the commentors oppose the award of any mitigation credits based on claims that pines and pastures will be replaced by higher-quality hardwoods in reclaimed wetlands.

Documented successful compensation for forested wetlands is rare. Some scientists feel it is virtually impossible to create functionally equivalent wetlands for these types, partly due to their sensitive long term hydrologic requirements and because they reach maturity slowly. (Golet, Walker 1986, Carothers et al. 1990, Kulser and Kentula, 1990)

JW-70

Many studies show that often half or more of created/restored wetlands often lack the size, functions and replacement types needed to accomplish even a rough mitigation for the lost wetlands. For instance only 33% of wetlands replacement in the San Francisco Bay area were deemed successful in follow-up studies. (Demgen, 1988) In Oregon, later monitoring found that none of the replacement wetlands were created according to their plans or in compliance with their permit conditions.

**STORMWATER CONTROL BASINS ARE NOT WETLANDS**

As previously mentioned, hundreds of million of gallons of stormwater runoff will pass through the mine site. Runoff control will typically require the construction and maintenance of multi-acre open ponds, including but not limited to the ponds and diversion channels cited on p. 4-22.

These stormwater containment structures will contain turbid water that is highly contaminated with dissolved and suspended solids, and metals and toxins. The power plant site itself and other locations will produce and contribute stormwater runoff that is polluted from spills and leaks of oil and vehicle fuels, from fueling and maintenance of vehicles and equipment, and vehicle tire residues.

As one study found,

JW-71

"Stormwater runoff is an important source of toxic substances to the marine environment. In this study, simulated rainfall was applied to parking lots to examine the toxicity of runoff while controlling for antecedent period, intensity, and duration of rainfall. Runoff samples were tested for toxicity using the purple sea urchin fertilization test. Every runoff sample tested was found to be toxic. The toxicity increased rapidly during the first month. No difference in toxicity was found between the different levels of use or maintenance treatments. The intensity and duration of rainfall were inversely related to degree of toxicity. For all intensities tested, toxicity was always greatest in the first sampling time interval. Dissolved zinc was most likely the primary cause of toxicity based on toxicant characterization of selected runoff samples," (l).

Greenstein, L Tiefenthaler, and S. Bay. Southern California Coastal Water Research Project, 717! Fenwick Lane, Westminster, California 92683, United States)

In other words, these stormwater treatment basins are not "wetlands." They are pollution control treatment systems. If those basins discharge into the project's "enhanced" and "created wetlands," those wetlands will become polluted too.

JW-71 (contd.)

The commentors urge the regulators to insure these stormwater containment basins and channels are not "counted" as wetlands because these features do not provide high quality wetlands functions, they contain polluted waters, and do not include appropriate aquatic habitat just because ducks may land on the water.

Any "reclaimed" wetlands downstream of the waste water treatment system will likely also contain water too polluted to quality as a functioning wetland also, and should not be considered eligible for mitigation credits.

**SUMMARY**

Since the premature release of the DEIS has thwarted any opportunities to review the mitigation bank plan, the commentors offer the following suggestions on wetlands replacement mitigation ratios. As stated, because of the decades of proposed wetlands losses, the likelihood that most of the area will be reclaimed to pines and pasture, the distortion of natural drainages, and the acidic runoff, no mitigation wetlands credits are due from mined lands reclamation.

The undisclosed, but likely distance between the mining site, and the unknown mitigation bank site, which may not even be within the same watershed, also requires a high mitigation ratio. It is likely that the mitigation bank area will include enhancement as part of the mitigation, but that will only allow a gain in function and not in area.

JW-72

For these reason, the commentors suggest that the Record of Decision require that 5 acres of wetlands should be restored and protected within the mitigation bank area for every acre of wetlands that is disturbed during the mining.

The previously quoted Wetlands studies are cited in:

Washington Department of Ecology. February, 1992. Wetlands Mitigation Replacement Ratios: Defining Equivalency.

**THE DEIS FAILED TO PLAINLY DISCLOSE THE CONCURRENT ARMY CORPS AND STATE 401 AND 404 PUBLIC COMMENT PERIOD**

The Army corps is a cooperating federal agency for this DEIS. But the DEIS does not plainly warn readers and commentors that their comments on this DEIS will be reviewed by Army Corps as part of their decision making process for the Section 401 and 404 permits. See for instance the discussion of the Army Corps role on page 1-5, which

JW-73

admits the Corps is considering whether to issue these permits, but this section does not plainly state that the Army Corps will utilize this EIS and the comments as part of its review process.

Nor does the DEIS' description of the proposed action on p. 2-1 mention that the proposed actions include issuance of the 401 and 404 permits. Less vigilant reviewers mistakenly assume that the Army Corps may have its own public comment and NEPA compliance procedures in the near future.

This failure to alert commentors that their comments will be reviewed by these other agencies as part of a related permit process, undermines the purpose of the NEPA review.

The purpose of NEPA is to "insure that environmental information is available to public officials and citizens **before** actions are taken." 40 C.F.R. § 1500.1(b)(emphasis added). See also, *Dubois v. U.S. Department of Agriculture*, 102 F.3d. 1273,1294, (1<sup>st</sup> Cir. 1996), cert. den. 138 L.Ed.2d. 1013 (1997) and *Kleppe v. Sierra Club*, 427 U.S. 390, 410, n. 21 (1976). To the extent that the NEPA document at issue (in this case a Draft Environmental Assessment or EA) fails to take into account such facts it is legally insufficient to satisfy this fundamental objective.

If no one knows that other agencies, including Army Corps and Mississippi DEQ, will be issuing permits whose impacts are being studied in this EIS, then environmental information, which are the commentors' concerns in this instance, will not be addressed and written to be helpful to public officials, namely the Corps and DEQ.

**COMMENTS ON THE 401 CERTIFICATION**

These comments related to the 401 certifications requested by the proposed Liberty Mine and the Kemper IGCC power plant, described. The commentors hereby request a public hearing.

Mississippi Water Quality regulations state that the Section 401 certification application is the Army Corps public notice. The notices for these projects do not comply with these regulations because the notices do not provide a description of the applicant's future development of an off-site wetlands mitigation bank. This notice also fails to provide the necessary complete description of the mining activity that will cause the wetlands losses or a description of the materials (including oxidized overburden) used as fill, although a description is contained in the DEIS.

Our attached comments discuss why the proposed discussion of alternatives was not adequate, and vital information about the proposed wetlands mitigation bank, including its very location, was not provided in the DEIS.

Our comments on the DEIS also object to the adequacy of that discussion regarding a variety of water quality impacts including but not limited to storm water management. We also understand that the mine applicant has an environmental violation history.

JW-73  
(contd.)

JW-74

We believe that the proposed activity permanently alters the aquatic system at portions of the mine site such that water quality criteria will be violated, and it will not support its existing or classified uses, for up to 40 years at various locations. Forty years of mining on 2000 acres of wetlands and scores of miles of streams will effectively destroy this water system for two decades, with no assurances that anyone alive today will be able to confirm that the aquatic system will ultimately be restored to prior uses.

Our comments on the DEIS discuss several feasible alternatives that reduce the project's adverse consequences. The project will mine with the 150-foot buffer zone for perennial streams required by Department regulations.

JW-74  
(contd.)

**JW-08: DOE'S DAUNTING DISPLAY OF PLAIN PRO-PROJECT PREJUDICE NEGATES NE-PA**

The DOE recently wrote a vividly pro-project letter to the Mississippi Public Service Commission. It stated they have already given the project money, they will give the project more money in the near future, they loved the project and wanted it built PDQ. This gushing missive was a wildly inappropriate exclamation from an agency that is in the middle of the NEPA review process and is legally obligated to commit to a neutral stance, pending final NEPA review and issuance of a proper Record of Decision.

The whole point of NEPA is to have the NEPA analysis form the basis **for** making a decision, not to simply justify a decision that is already made. The fundamental premise of NEPA is that the agency will develop the facts **first and then** make a decision, **not** make a decision and then develop the facts. *See e.g. ONDA v. Singleton*, 47 F.Supp.2d. 1182, 1194 (D. OR. 1998). *See also, Foundation for North American Wild Sheep v. U.S. Dept. of Agriculture*, 681 F.2d. 1172, 1179 (9<sup>th</sup> Cir. 1982). Ignoring prior public or agency comments serves to further the public perception that this project is actually “a done deal” and that this NEPA process is really just a sham.

Most fair-minded persons would read DOE's letter to the Mississippi PSC and conclude that the DOE has already made a decision on this project and it is in fact a done deal. In the light of DOE's unbecoming and written display of pro-project display, the commentors feel that the DEIS should be read skeptically as a document crafted to support a pro-project decision made long ago.

**Response:** The comment misapprehends the application of NEPA to federal financial assistance programs that make awards on the basis of a competitive selection process. It also misrepresents the content and purpose of DOE's filing before the Mississippi PSC.

Since the early 1970s, DOE and its predecessor agencies have pursued R&D programs that include long-term, technically complex activities in pursuit of innovation in a wide variety of coal technologies through the proof-of-concept stage. However, helping a technology reach the proof-of-concept stage does not ensure its continued development or commercialization. Before technologies can be considered seriously for commercialization, it must be demonstrated at a sufficient scale to prove its reliability and economically competitive performance. The financial risk associated with such large-scale demonstration projects is often too high for the private sector to assume in the absence of strong incentives.

The CCPI program was established in 2002 as a government and private sector partnership to implement the recommendation in President Bush's National Energy Policy to increase investment in clean coal technology.

The Congress established criteria for projects receiving financial assistance under this program in Title IV of the Energy Policy Act of 2005 (Pub. L. 109-58) (EPAAct 2005). Under this statute, CCPI projects must “advance efficiency, environmental performance, and cost competitiveness well beyond the level of technologies that are in commercial service” (Pub. L. 109-58, § 402(a).

DOE selects projects for its CCPI partnerships through an open and competitive process. Potential private sector partners include developers of technologies, utilities and other energy producers, service corporations, research and development firms, software developers, academia and others. DOE issues funding opportunity announcements that specify the types of projects it is

seeking, and invites submission of applications. Applications are reviewed on the bases of the criteria specified in the funding opportunity announcement, and include technical, financial, environmental, and other considerations. DOE selects the projects that demonstrate the most promise when evaluated against these criteria, and enters into a cooperative agreement with the applicant. These agreements set out the project's objectives, the obligations of the parties, and other features of the partnership. Applicants must agree to provide at least 50 percent of their project's cost; for most CCPI projects, the applicant's cost share is much greater.

DOE's filing with the Mississippi PSC simply reflects DOE's reasons for selecting this project from the applications submitted for this round of funding in the CCPI program. It should not be surprising that DOE selected a project it considers promising and that would, if successful, advance the deployment of the Transportation Integrated Gasification (TRIG) technology. The filing relates DOE's long-term involvement in the development of this technology, and its belief that the project is worthy of support. It is unreasonable to expect DOE to conduct a competitive financial assistance program designed by the Congress to achieve certain objectives without regard as to which projects can best achieve those objectives.

DOE's NEPA regulations create a special process for identifying and analyzing reasonable alternatives in the context of providing financial assistance through a competitive selection of projects proposed by entities outside the federal government. The range of reasonable alternatives in competitions for grants, loans and other financial support is defined in large part by the range of responsive proposals DOE receives. Unlike projects undertaken by DOE itself, DOE cannot mandate what outside entities propose, where they propose to do it, or how they propose to do it beyond establishing requirements in the funding opportunity announcement that meet the program's statutory objectives. DOE's decision is limited to selecting among the applications submitted by project sponsors that meet CCPI's goals.

Recognizing that the range of reasonable alternatives in the context of financial assistance and contracting are in large part determined by the number and nature of the proposals submitted, DOE analyzes the environmental impacts of the submitted projects before it selects from among them (10 CFR 1021.216). The DOE official that selects which projects DOE will pursue considers these impacts and issues, along with other aspects of the proposals (such as technical merit and financial ability). Once DOE selects projects for an award, the range of reasonable alternatives becomes the project as proposed by the applicant, any alternatives still being considered by the applicant or that are reasonable within the confines of the project as proposed (e.g., the particular location of the generating plant on the applicant's site or the rights of way for linear facilities), and a no-action alternative. Regarding the no action alternative, DOE assumes that, if it were to decide to withhold financial assistance from a project, the project would not proceed.

Under the no action alternative, DOE would not provide funding under CCPI to the Kemper project for detailed, design, construction, or operation. In the absence of further financial assistance from DOE, Mississippi Power could reasonably pursue two options. It could build the project without DOE funding; the impacts of this option would be essentially the same as those of DOE's proposed action. Or, Mississippi Power could choose not to pursue its project, and there would be no impacts from the project. This option would not contribute to the goal of the CCPI program, which is to accelerate commercial deployment of advanced coal technologies that provide the United States with clean, reliable, and affordable energy. However, DOE analyzes this option as the no-action alternative in order to have a meaningful comparison between the impacts of DOE providing financial assistance and withholding that assistance.

DOE's Draft EIS identifies and analyzes the environmental impacts of the proposed Kemper project, including the mine and linear facilities. Although DOE has identified providing continued financial assistance cost-shared funding as its preferred alternative and proposed action, it

has not decided whether it will provide this continued funding. It will make a decision only after considering the potential impacts identified in the EIS, the comments submitted on the Draft EIS, and other factors. The funding DOE has provided to date is limited to project definition activities, including preparation of the EIS. These activities do not have any potential adverse environmental impacts, and they do not limit the range of reasonable alternatives (40 CFR 1506.1[a]).

**JW-09: INADEQUATE PURPOSE AND NEED STATEMENT**

The purpose and need statement of the DEIS presents only the needs and objectives of Mississippi Power to build a profit-generating power plant.

**DOE**

The purpose and need statement inadequately presents the Department of Energy's own purpose and need and fails to justify the Department's desire to pour hundreds of millions of dollars into Mississippi Power's pockets.

**CORPS**

The project's stated Purpose and Need statement especially its unexplained reliance on a lignite mine next door to the power plant, it also fails to satisfy the Army's Corps' purpose and need for a comprehensive review of potential mitigation of the proposed wetlands losses. The resulting document lacks an evaluation of alternative sites with lesser impacts on waters of the US, including wetlands, and lacks satisfactory discussion of the wetlands mitigation bank that is crucial to the Corps' decision.

**Response:** The purpose and need of the DOE to provide cost share funding and a loan guarantee is set out on page S-2 and Subsection 1.5.1.

The purpose and need for USACE's action is set out in the EIS in Subsection 1.5.2 and in the Summary. Subsection 2.7.4.5 contains a five-page discussion of alternative mining plans and their relative impacts to waters of the United States. Subsection 2.7.3.2 explains the project need for being located adjacent to a lignite mine.

An evaluation of site alternatives has been prepared by the participants at the request of USACE to address the issue of the least environmentally damaging practicable alternative and has been included as Appendix T of the Final EIS. Mitigation for unavoidable impacts subject to Section 404 of the CWA will be subject to the new compensatory mitigation rule.

**JW-10: WHY HAS THE PURPOSE AND NEED CHANGED SO RADICALLY SINCE THE VERSION OF THIS PROJECT TWO YEARS EARLIER? (THE STANTON PROJECT)**

The comparison between the purpose and need for the Kemper project, and its immediate predecessor, the related Stanton, Florida project, demonstrates that Mississippi Power's objectives are driving the purpose and need statement of the DEIS, while the Department and Army Corps' purposes and needs are neglected and unmet by this DEIS.

For instance the Stanton project was smaller, produced less pollution, and did not need a new adjacent lignite mine with all of its harmful impacts.

The commentors object to the DEIS' failure to plainly state, and justify, how the new "adjacent lignite" version of the project satisfies the Department's own purpose and need, of promoting

environmentally beneficial and commercially viable and repeatable energy generation processes, while prudently investing taxpayer dollars.

**Response:** Both projects satisfy DOE's purpose and need of commercializing clean coal technologies under CCPI. They are both commercial sized projects and the needs of the industrial participants are different. The objectives of the NEPA process are to analyze the potential environmental impacts of the proposed action and reasonable alternatives, provide the public an opportunity to comment, and ensure informed decisionmaking.

The Stanton site previously considered is not a reasonable alternative, since the host site withdrew from the project.

**JW-11: THE DEIS FAILS TO SATISFY THE ARMY CORPS OF ENGINEERS PURPOSE AND NEED**

The Army Corps of Engineers (ACE) purpose and need is to carefully the project's destruction of water bodies and wetlands, determine if all or part of the destruction could have been avoided, and what mitigation measures must be required. (DEIS, p 1-5)

ACE must issue permits prior to any activities taking place in the Water of the United States. In this instance, the siting of the power plant, new mine, and utility corridors will cause destruction and degrading of well over 2000 acres of wetlands (2374 acres just at the mine site alone) and adverse impacts on over 40 miles of creeks and streams. The proposed new mine and power plant are non-water related impacts, meaning that ACE is obligated to require the project developer to consider alternative projects sites that cause less degradation of wetlands.

This DEIS does not fulfill the ACE's purpose and need for several reasons. This DEIS presents a very crabbed definition of the developer's purpose, which is needlessly limited only to the exact proposal most recently offered to DOE, as modified after abandonment of the original Stanton site.

This tactic truncates ACE's review to consideration of essentially no alternatives; since no alternatives were offered in Southern Company's bid to DOE.

Southern Company have written their purpose and need to only include opening of a new lignite mine near Mississippi Power's service territory, north of hurricane country, with an adjacent new power plant.

The DEIS fails to service ACE's Purpose and Need by failing to offer alternative sites, even though federal EPA asked for consideration of several alternative sites, leaving the understaffed ACE to scramble to locate viable alternative sites all on its own.

This failing means that ACE is stuck with having to simply accept the project's destruction of massive acreages of wetlands and miles of streams. The DEIS Appendix contains a mitigation plan that claims that stream relocation and eventual wetlands reclamation, decades in the future, will mitigate a fraction of those huge wetlands losses.

But the DEIS fails to provide any details regarding the claimed wetlands off-site mitigation locations.

The DEIS casually concedes that reclamation will not ultimately provide satisfactory wetlands replacement, so at some unnamed and undisclosed location that may not exist now or for

decades, at an undisclosed distance from the mine and power plant site, additional wetlands may be restored or protected.

The DEIS completely fails to assess whether this hypothetical wetlands restoration site will provide adequate mitigation, partly because this supposed site is still a fantasy at this point in time. (p. 2-48)

The DEIS' utter failure to require the Developer to provide even a sketchy description of the additional wetlands mitigation site, or even to determine if any such sites exist, is a substantial failure of its NEPA obligations and fails to provide the proper level of assistance to ACE to perform its agency functions.

The DEIS' failure to even present the additional wetlands mitigation site means this document is legally inadequate according to court decisions including Sierra Club v. Froehlike. There is no genuine effort presented to mitigate a major portion of the wetlands losses, since no mitigation site is even presented.

**Response:** The impacts to waters of the United States would not occur without a permit from USACE. USACE has specific guidance on minimizing, avoiding, and mitigating impacts that must be satisfied prior to permit issuance. See also Subsection 7.1.2, which has been expanded in the Final EIS.

It is expected that mitigation plans would be finalized during the USACE permitting process.

**JW-12: UTILITY CORRIDOR TEMPORAL LOSSES UNMITIGATED**

The wetlands mitigation scheme that was provided in the appendix also fails to provide any mitigation for the temporal wetlands losses from the construction and operation of the utility corridors, even though over 300 acres of wetlands will be degraded in those areas. Likewise the discussion of wetlands mitigation in the ACE notices of the proposed wetlands permits stated that the corridors' temporal effects on wetlands will not be mitigated.

**Response:** Wetland disturbances due to construction of ancillary linear facilities will result in the temporary disturbance of some herbaceous and shrub-dominated wetlands due to trenching for laying of pipeline. These disturbances will be temporary in nature and the functions and values of the wetlands crossed will be restored. In forested areas crossed by the pipelines and transmission lines, it will be necessary to remove trees for maintenance and operational safety issues. The forested wetlands will be converted to shrub wetlands. Temporal losses will be mitigated in accordance with the permitting requirements for Section 404 permits issued by USACE. Specifically, USACE permitting process will identify the need for any compensation for both temporary impacts due to construction in addition to the conversion of habitat associated with the linear facilities as part the permitting process.

**JW-13: NEPA RESPONSIBILITIES TO DISCUSS ALTERNATIVES**

**EPA ALTERNATIVES ANALYSIS IGNORED**

Comprehensive analysis of project alternatives is the very heart of the NEPA process, according to the Council on Environmental Quality. In fact, the Federal EPA explicitly warned the DEIS preparers in writing that a broad range of alternatives should be provided, **including a minimum of three alternative sites. EPA plainly asked that the alternative of expanding an existing generating plant should be discussed, and alternative coal technologies designs should be discussed. (DEIS V2., Appx. A, EPA letter dated 12/11/08.)**

Tragically the DEIS ignored these plain, written requests from an important federal agency.

Alternatives analysis in a NEPA document should clearly indicate why and how the particular range of project alternatives was developed, including what kind of public and agency input was used. In addition, alternatives analysis should explain why and how alternatives were eliminated from consideration. The DEIS must make clear what criteria were used to eliminate alternatives, at what point in the process the alternatives were removed, who was involved in establishing the criteria for assessing alternatives, and the measures for assessing the alternatives' effectiveness.

**Response:** A discussion of various project alternatives is provided in Section 2.7, including those identified in EPA scoping comments. In addition, Section 1.6 discusses other project benefits, which would not be realized at another site.

**JW-14:** In this instance the DEIS fails to candidly explain how and why the proposal was suddenly limited to a single project alternative of being sited next to a lignite deposit, what criteria dictated that choice, at what point were other coal fuel alternatives removed from consideration, since other coals were plainly considered as alternatives just two years ago, who decided to limit the project site to lignite deposit areas, and who decided this limitation increased the effectiveness of serving the DOE's purpose and need.

**Response:** Subsection 2.7.4.2 addresses the choice of fuel. As discussed in response to JW-08, the comment misapprehends the application of NEPA to federal financial assistance programs. Once DOE selects projects for an award, the range of reasonable alternatives becomes the project as proposed by the applicant, any alternatives still being considered by the applicant or that are reasonable within the confines of the project as proposed (e.g., the particular location of the generating plant on the applicant's site or the rights of way for linear facilities), and a no-action alternative. DOE may also consider mitigation of impacts from the proposed action as a condition of the ROD.

**JW-15:** In preparing NEPA documents, project sponsors should be candid about the rationale for generating, evaluating, and eliminating alternatives. Being as specific as possible is important. If an alternative is eliminated from further consideration because it "does not meet the purpose and need," the DEIS must adequately explain how or why this alternative doesn't meet the purpose and need.

In this instance, the rejection of any other coal types or plant sites that are not next to a lignite deposit was dismissed in one paragraph of discussion, even though this limitation was partly responsible for driving the selection of a plant and mine site that contain thousands of acres of wetlands.

**Response:** The applicant decided on the Kemper County project approximately 2 years prior to requesting DOE funds for the project. Subsection 2.7.3.2 discusses why lignite was chosen for this project.

**JW-16:** During the draft EIS stage all reasonable alternatives, or the reasonable range of alternatives, should be considered and discussed at a comparable level of detail to avoid any indication of a bias towards a particular alternative.

But this DEIS lacks that comparable level of discussion of alternative coal types and other subjects as discussed below.

The very text of the NEPA regulations states that an "...agency must ... study, develop, and describe appropriate alternatives ... in any proposal." (40 CFR 1501.2 (c)).

But the Kemper DEIS does not provide or even discuss a single alternative location, alternative project size, alternative coal suppliers, alternative pollution control methods, or alternative water

use reduction methods, among the many other factors that could be altered to provide plain reductions in the project's adverse environmental impacts.

DOE claims that the enabling legislation for the so-called clean coal grants restricted its ability to even discuss alternative project sites, although the DEIS did not cite any specific legislative language to support this claim.

Aside from DOE's claims, the Army Corps, which is a cooperating agency in the NEPA review process, still has a plain regulatory responsibility to require the permit applicants to consider alternative mine and power plant sites which have fewer impacts on wetlands. This DEIS is also supposed to fulfill the Army Corps' requirements of reviewing potential alternative project sites. (DEIS, p. 1-5)

**Response:** As discussed in response to JW-08, the comment misapprehends the application of NEPA to federal financial assistance programs. Once DOE selects projects for an award, the range of reasonable alternatives becomes the project as proposed by the applicant, any alternatives still being considered by the applicant or that are reasonable within the confines of the project as proposed (e.g., the particular location of the generating plant on the applicant's site or the rights of way for linear facilities), and a no-action alternative.

Alternative sites are discussed in Subsection 2.7.3.2 of the EIS. Appendix T also addresses alternatives considered by the applicants. DOE may also consider mitigation of impacts from the proposed action as a condition of the ROD.

**JW-17: ALTERNATIVE SITES TO PRESERVE WETLANDS NOT DISCUSSED**

These omissions render the DEIS legally deficient for several reasons. The project will cause massive losses of wetlands exceeding 2000 acres. These losses can clearly be mitigated by exploring for alternative plant and mine sites that include far less wetlands.

For instance the project's original Stanton site had only about 4 acres of wetlands. While the DEIS states that an adjoining landowner to Stanton decided not to participate in the project at some point, there was no explanation why the Stanton site was still available for a redesigned project, which would have avoided these wetlands losses at Kemper.

**Response:** The Stanton site is not a reasonable alternative to the Kemper site; it is not available for the project.

**JW-18: ALTERNATIVE LIGNITE MINE SITES**

The opening of a new lignite strip mine to supply the Kemper IGCC is responsible for 90% of the wetlands losses. The DEIS dismissed in a single paragraph the alternative of supplying coal from an existing mine that would degrade less wetlands, to avoid the wetlands losses caused by the proposed new strip mine.

For instance, the DEIS failed to compare and describe, even briefly, the impacts from supplying the Kemper project for its entire life from the existing Red Hills mine, or siting the project next to, or closer to the Red Hills mine. The Red Hills mine owner admits in its web site that Red Hills has over 200 million tons of reserves, which is enough coal to mine at its current rate, plus service the Kemper plant for the next 40 years.

The power plant could also be sited next to the Red River or Oxbow lignite mines near Coushatta, Louisiana, or the Dolet Hills Lignite Mine, both within 180 miles of Mississippi. Likewise,

there are existing lignite mines in Texas, including Sabine, Texas. Alternatively, lignite could be shipped to Kemper from these or other mines.

These alternatives would avoid many of the wetlands impacts caused by the proposed action which includes new lignite strip mining in an area containing over 2000 acres of wetlands.

**Response:** Alternative designs that minimize wetland impacts are addressed. DOE does not have the authority to direct Mississippi Power to locate its plant in Texas or Louisiana. Mississippi Power's decision to site its project in its proposed location is discussed in Subsection 2.7.3.2 and Appendix T. For more information on the alternative of supplying lignite from the Red Hills Mine for the life of the project, please refer to the response to JW-20.

**JW-19:** **ALTERNATIVE SITES NEARER THE RED HILLS MINE**

Google aerials of the Red Hills mining site vicinity seem to show considerable cleared, level areas, perhaps including reclaimed mined areas, adjacent or near to the existing mine and power plant. Those alternative sites would degrade fewer wetlands because a new mine would not have to be developed, and this location might not require the large acreage of additional clearance of new utility corridors needed for the Kemper site.

The existing (formerly Reliant) Choctaw gas-fired power plant near French Camp also has large cleared areas nearby, probably has infrastructure already constructed, is underutilized, and is only a few miles from the existing Red Hills Mine. Mississippi Power has other power plants in Mississippi that may have adjacent vacant land. Other gas-fired power plants in Mississippi are underused. These and other alternative sites should have been discussed and considered.

**Response:** The basis for selection of the proposed site is described in the EIS. The Red Hills Mine location is at too great a distance from Mississippi Power's service territory to be a reasonable alternative. Furthermore, DOE does not have the authority to force Mississippi Power to consider a site near the Red Hills Mine (please refer to the response to JW-08). Regarding the use of existing natural gas resources, please refer to the response to RL-02.

**JW-20:** **TRANSPORT OF LIGNITE IS A FEASIBLE ALTERNATIVE**

The DEIS, and DOE persons at the December 1, 2009 hearing stated that lignite is not economic to ship, therefore only a lignite mine mouth location is suitable for Kemper.

This is untrue. NAAC, the operator of several existing lignite mines, currently ships lignite considerable distances to several power plants that presumably operate profitably, since these arrangements are ongoing and have existed for many years.

The NAAC Freedom mine in North Dakota ships lignite 38 miles to the 656 MW Lehman Olds Electric Generation Station, The Freedom mine also ships lignite 38 miles to the 177 MW Stanton Power Station, owned by the United Power Association.

The Falkirk Mine in North Dakota also ships lignite two miles to the 1100 MW Coal Creek Power Station.

The Dolet Hills mine ships lignite at least seven miles to the CLECO power plant near Mansfield, Louisiana. CLECO just purchased the Red River Mining Oxbow Mine near Armistead, Louisiana, which also ships lignite to the CLECO plant from about 20 miles.

These and other examples were discussed in the CISVEST Int'l Visit to the NAAC Operating Subsidiaries, August, 1995. (<http://kkypartners.com/NAACCO%20trip%20report%20August%201995.pdf>)

These five examples plainly illustrate the economic and physical reality that off-site lignite mines could supply the Kemper plant while avoiding the 2000 acres of wetlands impacts. The DEIS should have discussed this alternative.

**Response:**

Based on information supplied by NACC, DOE understands that the lignite shipped out of the mines mentioned (other than Red River) is a secondary market that NACC was able to develop, only because NACC happened to have a lignite mine that was supported by a mine mouth power plant. In other words, if there was not an existing mine with a convenient transportation route, a *greenfield* lignite mine would certainly not have been built to serve that market. For cases referenced, NACC has advised DOE as follows:

1. NACC Freedom Mine is a mine mouth installation. It was constructed to feed Basin Electric's Antelope Valley Station and the Great Plains Gasification Plant.
2. The Lehman Olds Electric Station was also a mine mouth installation that ran out of lignite reserves. In addition, there was rail service to the Great Plains Gasification Plant for the delivery of byproducts out of the plant. When Lehman Olds was looking for an alternative fuel supply, NACC was able to "incrementally price" the increased tonnage out of the Freedom Mine by expanding from 12 to 16 million tons per year (tpy). Only through this incremental pricing mechanism was Freedom able to compete with PRB coal. The tonnage being shipped to Stanton Station is part of the incrementally priced lignite.
3. The 2-mile shipment referenced at Falkirk is a mine mouth distance. The Falkirk Mine was built to serve Coal Creek Station. NACC actually hauls up to 10 miles on private roads at Falkirk to a primary crusher. From that point the lignite is conveyed, through the lignite handling system, approximately 2 miles. At Kemper County, haulage distances will reach 10 miles over the 40-year life and conveyor lengths, through the lignite handling system, will be approximately 0.75 mile.
4. The Oxbow Mine was built as a secondary fuel source to the Dolet Hills Mine. The 7-mile haul from the Dolet Hills Mine to the CLECO Power Plant is a mine mouth haul. Dolet Hills uses a combination of truck haul and conveyor haul to move their lignite from the active pit the power plant. Again, the Dolet Hills Mine was built solely to serve the CLECO Power Station. When mining conditions got difficult at Dolet Hills, Red River was built solely to augment Dolet Hills production. The 20-mile haul at Red River was marginally economic, and eventually CLECO decided their best option was to purchase the Oxbow Mine and incorporate those reserves into the Dolet Hills Mine. Once incorporated, CLECO will construct a private haul road/conveyor from Oxbow to the CLECO Power Station, reducing the 20-mile public road haul. Again, NACC would classify both of these mines as mine mouth operations.

In addition, the heating value of lignite referenced in North Dakota and Louisiana is 6,800 and 7,000 British thermal units per pound (Btu/lb), respectfully. The total cost of *landed* coal is essentially the cost of mining and transporting that coal. The higher the Btu value, the further one can transport it at a competitive price. Since the heating value of lignite in North Dakota is relatively high and mining costs are quite low, NACC has found it can transport lignite 38 miles at a price that is still cost effective to the utility. The heating value of Mississippi lignite is only

5,300 Btu/lb, and the mining costs are projected to be higher than that of North Dakota; thus, transporting this lignite any distance becomes cost prohibitive.

Finally, there are no existing lignite mines within a 38-mile radius of Kemper County. The Red Hills Mine is 65 miles away, and the mine does not have enough reserves to serve both its current contract and the Kemper project. Even if Red Hills did have enough reserves to supply the Kemper project, mining and transportation costs out of Red Hills are projected to be twice as high as what is being projected at the Kemper location.

**JW-21: ALTERNATIVE TRANSPORT OF LIGNITE**

Transport of lignite to Kemper or an alternate location from other mines by rail, slurry pipeline, or conveyor would not cause the same amount of environmental impacts as would trucking the lignite.

**Response:** Please refer to the response to JW-20.

**JW-22: DEIS DID NOT DISCUSS USE OF MORE COMMON AND ECONOMICALLY AVAILABLE, ALTERNATIVE GRADES OF COAL**

One example of how Southern Power's distorted the purpose and need of this project to suit its own profitability, and to undermine the DOE's purpose and need, is the sudden appearance of a "project need" to site the Kemper plant next to an unmined lignite deposit, even though this siting does not serve DOE's purposes and needs.

Demonstrating IGCC technology on lignite coal does not fulfill the DOE's purpose and need to "... demonstrate advanced coal-based technologies ... that can be readily replicated in commercial practice within the electric power industry." This is because lignite makes up only 9% of US coal reserves and is mainly available in only three states, according to the DOE's own Energy Information Administration.

It is wasteful and inefficient to spend over \$300 million of taxpayer money to prove out a technology on a low grade fuel that makes up a tiny fraction of US coal reserves. Since lignite is such a poor fuel, new lignite-fired IGCC power plants will have to be next to, or near lignite mines, and the future of IGCC development would be limited to a mere handful of potential locations, essentially in only three states, two of which collectively contain less than 1% of the US population.

The DEIS does not explain how proving up IGCC on lignite coal would demonstrate a technology that is commercially and readily applicable and capable of being replicated on other types of coal or other fuels. In fact the DEIS language on page 1-8 states the purpose of this project is to prove up use of lignite in an IGCC unit.

At page 1-8 the DEIS claims that the project's primary benefit include demonstrating that IGCC-combusted lignite is an attractive alternative to bituminous coal and one of the project's benefits is to demonstrate the viable use of lignite as a fuel source in an IGCC unit. The DEIS states on page 2-6 that the Kemper project will be designed to operate on lignite coal.

At DEIS page 1-7 the DEIS states that the "basic project purpose ... is to construct and operate an IGCC power plant facility co-located with a lignite fuel supply." The Southern Power tax credit application apparently states it will use lignite fuel but the DEIS fails to explain if that application can be amended.

This stunted project purpose of using only lignite undermines the DOE's own purpose and need. It also thwarts meaningful discussion of alternative sites by cobbling the requirement of an adjacent lignite mine onto any prospective plant site.

This claimed insistence on the lignite fuel supply is highly suspect since lignite was not a project feature just two years ago. The original Stanton project at least would have demonstrated the viability of IGCC on sub-bituminous coal, which would include 37% of US reserves. Even proving up IGCC on this type of coal, while an improvement over the lignite scheme, would still only establish IGCC for just over 1/3<sup>rd</sup> of the US coal supplies. As previously stated, the belated late arrival of this lignite criteria for the project appears extremely suspicious, especially in light of DOE's written prejudice in favor of this project.

Selection of uneconomic lignite as the exclusive project fuel will meet only Mississippi Power's purpose and need, and will undermine the DOE's own purpose and need. The Kemper plant will demonstrate the suitability of this particular IGCC technology only for the consumption of lignite coal, and only one type of lignite coal, which in turn can only be used for mine-mouth operations, and not for other types of coal.

This very limited demonstration of fuels appropriate for IGCC technology does not fulfill the purpose and need of DOE to "demonstrate advanced coal-based technologies ... that can be readily replicated in commercial practice within the electric power industry." (DEIS p. 1-3)

Demonstration of Mississippi lignite as an IGCC fuel does not provide a technology that can be readily replicated because lignite cannot economically be shipped according to the DEIS, it is found mostly in only 3 states and makes up only 9% of US coal reserves, and therefore is not readily available, in contrast with the widely available sub-bituminous coal that would have fueled the Stanton facility. (DEIS, p. 2-72, 77)

The DOE should explain why if the Stanton proposal did not include a co-located lignite mine as part of the project purpose and need, for what reason, suddenly only two years later, the Kemper Purpose and Need Statement lives and dies on the need for a co-located lignite mine.

**Response:**

As stated in the response to JW-08, the range of reasonable alternatives is limited under financial assistance agreements, such as the cooperative agreements under CCPI. While demonstration of the proposed technology with other coals would satisfy DOE's purpose and need, DOE does not have the authority to specify the type of coal to be used by the industrial participant.

Once DOE selects projects for an award, the range of reasonable alternatives becomes the project as proposed by the applicant, any alternatives still being considered by the applicant or that are reasonable within the confines of the project as proposed (e.g., the particular location of the generating plant on the applicant's site or the rights of way for linear facilities), and a no-action alternative. DOE may also consider mitigation of impacts from the proposed action as a condition of the ROD.

The commenter's assertion that this project would only demonstrate TRIG's<sup>TM</sup> feasibility for use on lignite is incorrect. Commercialization of the TRIG<sup>TM</sup> technology at the Kemper site would demonstrate its feasibility for use on all low rank coals such as sub-bituminous (e.g., coal from the Powder River Basin [PRB]), not just lignite. Even though on an as-received basis, the coals look quite different; once dried, PRB and lignite perform similarly in the gasifier.

The primary differences on an as received basis are in the moisture, ash, and sulfur content. For the TRIG<sup>TM</sup> technology, the coal is fed on a dry basis (versus slurry), and both coals are dried to the same moisture content. Therefore, a lignite unit would require a coal-drying system that can

handle the larger drying duty than with PRB, but the drying technologies are fundamentally the same. Once dried, the coal feed and gasification systems are almost identical for PRB or lignite. The fuel portion of the coal (carbon, hydrogen, etc.) has essentially the same composition, so the gasifier would perform well on either coal.

The higher coal ash content of lignite requires a larger particulate control device and ash handling system. But the particulate control and ash handling technologies for low rank coals would be identical. One is simply larger than the other.

The process proposed at Kemper is similar to that proposed at Stanton. The primary difference is in the commercially available ancillary equipment – coal drying and ash handling – and not with the TRIG™ technology. Therefore, this project would, in fact, demonstrate TRIG's™ feasibility on other low rank coals.

**JW-23:**

Southern Power's crabbed Purpose and Need restricted its plant site search to areas adjacent to lignite deposits. Southern's lignite-induced constraint on the plant site selection had the impact of undermining DOE's own purposes, and also undermined the NEPA responsibility to consider project alternatives, by restricting alternative sites to a tiny radius around commercial lignite deposits.

In contrast, the Stanton facility was allowed to use a more readily available coal, which produced less pollution, and better fulfilled DOE's purpose and need of demonstrating IGCC's capabilities to run on different types of coal. While the DEIS rejected discussion of alternative coals at p. 2-77, the DEIS does not explain why sub-bituminous coal was acceptable for the earlier version of this project but is suddenly not even discussed for Kemper.

The Kemper DEIS itself admits there are almost no opportunities for any other lignite power plants; because the low heat value of lignite means it is unprofitable to ship it from mines to power plants (DEIS 2-72, 77). Only lignite mine-mouth power plants will be able to replicate the Kemper results. That restriction to lignite mine-mouth operations does not fulfill DOE's purpose of establishing a technology that can be readily replicated. So this project will demonstrate a technology that may never have any other opportunities to be repeated.

In contrast, the prior Stanton project consumed sub-bituminous coal brought in by train, which is in abundant supply and is economically capable of being freighted to power plants in every corner of the United States.

The Stanton project, had it been completed, would have demonstrated use of a widely available fuel source, in sharp contrast to Kemper. Even if Kemper operates successfully, it will have only demonstrated use of a fuel that is generally uneconomic for power plants unless they are sited directly adjacent to a mine.

But the DEIS never provided an adequate discussion use of a more generally available coal fuel in the Kemper plant, claiming that the project design precluded other coal types. But consumption of other coal types would have vastly broadened the demonstration of IGCC's proven ability to use all types of coal, and also would have allowed for alternative plant and mine sites in locations that did not require destruction of over 2000 acres of wetlands.

Even if Southern Power properly restricted the project sites to locations next to lignite mines, there are still alternative locations from which the developer could supply electricity to its rate base. Any alternative location next to an existing lignite mine would cause far fewer wetlands losses because a new mine would not have to be created, causing tens of thousands of acres of new disturbances.

**Response:** Please refer to the response to JW-22.

**JW-24: KEMPER LOCATION WAS NOT ORIGINALLY CONSIDERED APPROPRIATE COMPARED TO ALTERNATIVE SITES**

During the prior NEPA process for this very project before it was originally under construction in Florida just two years ago, there were several other alternative sites that were preferable to the Kemper County site. In fact, the Kemper site was not even considered as an alternative even worth a word of discussion in the original EIS for the project that was commenced two years ago.

But the current DEIS acts as if the Kemper site is so plainly appropriate that any effort to discuss alternative sites is dismissed out of hand.

The original EIS for this project clearly stated that sites in several other states, including undeveloped sites, and co-location with existing power plants in Alabama, New Mexico, Florida, Pennsylvania, and North Dakota were initially considered. These alternative sites deserve additional discussion now, in the Kemper DEIS, to determine if any of these locations are more appropriate or provide less environmental harm than Kemper.

These and other alternative plant and mine locations may not cause losses of more than 2000 acres of wetlands and 40 miles of streams, and might not require the start-up of a new lignite mine that will strip mine tens of thousands of acres of farmland and forest over 40 years.

**Response:** Please refer to the response to JW-08 and -22.

**JW-25: ALTERNATIVE OF EXPANDING EXISTING SOUTHERN POWER PLANT SITES**

Alternative sites should have been discussed in the DEIS, especially existing power plant sites which already possess infrastructure. These alternative sites should have included but not been limited, to the existing Southern Power plant sites within and near to Mississippi, and the gas and coal-fired power plant sites in Choctaw County that are next to, and within 15 miles of the lignite mine.

While sub-bituminous coal would have to be delivered to the existing Southern Power sites, as previously described, use of that type of coal draws on 5 times the amounts of reserves, compared to lignite, and is therefore at least 5 times more beneficial in fulfilling DOE's purpose and need of developing a readily replicated method of advanced coal combustion.

Use of some of these alternative sites could have avoided the temporal degradation of the 452 acres of wetlands consumed by the Kemper infrastructure construction activities, as well as the 2000+ acres of wetlands on the Kemper plant and mine site.

These facts greatly trouble the commentators because the evidence points DOE's unseemly pro-project prejudice, and towards Southern Power completely driving this entire process, including the wholesale rewriting of the purpose and need for the project in such a way as to diminish the purpose and needs of the DOE and diminishing the benefit to the taxpayers and ratepayers who will watch more than \$300 million disappear into this project.

**OTHER SOUTHERN COMPANY POWER PLANT SITES SHOULD HAVE BEEN CONSIDERED**

Southern Company, the parent of Mississippi Power, has a mammoth service territory of 120,000 square miles that including four states and more than 20 existing sites of their own thermal power

plants that probably already possess the requisite infrastructure of roads, rail transport, transmission lines and gas lines.

Likewise, there are many other power plants and coal mines, within or near the Southern Power service territory that could accommodate siting of the IGCC plant without requiring the massive infrastructure construction, or the large scale wetlands destruction, needed by the Kemper site

The DEIS should have included, at the very least, discussion of these existing Southern Power thermal plant sites, to determine if any of those locations have adjoining vacant acreage that could house the proposed IGCC project.

After all, the original justification for rejecting the five other alternative sites in the original EIS was because the Stanton site already had a power plant with existing infrastructure, which avoided the additional costs and environmental damages resulting from construction of new infrastructure.

**Response:** The basis for the site selection was provided in the Draft EIS (see Subsection 2.7.3.2 and Appendix T of the Final EIS). As discussed in the response to JW-08, the comment misapprehends the application of NEPA to federal financial assistance programs. Once DOE selects projects for an award, the range of reasonable alternatives becomes the project as proposed by the applicant, any alternatives still being considered by the applicant or that are reasonable within the confines of the project as proposed (e.g., the particular location of the generating plant on the applicant's site or the rights-of-way for linear facilities), and a no-action alternative. DOE may also consider mitigation of impacts from the proposed action as a condition of the ROD.

**JW-26: KEMPER SITE WILL TRIGGER MASSIVE WETLANDS LOSSES BECAUSE OF THE NEED FOR A NEW MINE AND UTILITY CONSTRUCTION**

But now, in utter conflict with the rationale plainly expressed in the Stanton EIS, DOE is proposing construction at an undeveloped site, with no mine nearby, that will require a new mine which will destroy thousands of acres of wetlands. The Kemper site also has inadequate transmission and gas line access, without a word of explanation why this lack of infrastructure is acceptable now, but was not acceptable two years ago at Stanton.

This lack of infrastructure at the Kemper site is not small beer. This project deficiency will require hundreds of thousands of additional man-hours of construction labor and expenditure of additional millions of dollars for project supplies. The new transmission and pipeline routes required to service the Kemper site will themselves cause temporal degradation about 452 acres of wetlands, according to the DEIS at p. 4-70.

**Response:** The EIS discusses the reasons for locating the project at the proposed site in Subsection 2.7.3.2. The Stanton site is not an alternative to the Kemper site; it is not available for the project. The Kemper site was chosen by the project applicant before applying for the CCPI program. Potential impacts to wetlands are addressed in Subsection 4.2.9 of the EIS.

**JW-27: ALTERNATIVE, MORE EFFICIENT AIR POLLUTION CONTROL WAS NOT DISCUSSED IN THE DEIS**

**ALTERNATIVE MERCURY CONTROLS**

The commentors also feel that the DEIS is legally deficient because it fails to discuss alternative methods of reduction of airborne mercury emissions and other air pollutants, by even failing to

mention that different and more efficient air pollution control devices for mercury and other pollutants were approved for use on the original Stanton Florida project.

For instance, the Kemper project states at p 2-11 that mercury will be removed by a reactor containing alumina-based sulfide, allowing 64 lb/yr of mercury emissions according to Table 2.6-1; .016 t/y from each of two stacks.

The Stanton project, in contrast, proposed a carbon adsorption system that would have allowed on 19 lb/year of mercury emissions. (Orlando Gasification Project EIS, p. 4-14)

In other words, Kemper's mercury control allowed more than triple the amount of mercury to be emitted, than would have the Stanton mercury control technology, even though the Kemper facility will be only about twice as large.

The DEIS should have described and studied the Stanton mercury control method of carbon adsorption as a beneficial alternative to the far less efficient proposed mercury control system of an alumina-based sulfide reactor.

Also, add-on controls for Volatile Organic Compounds and Carbon Monoxide, including but not limited to catalytic oxidizers, are in common use on many power plants. The use of catalytic oxidizers was discussed in the Stanton EIS, and this alternative pollution control device to reduce pollutants from the Kemper plant should also have been presented as an alternative.

**Response:**

The option of activated carbon control technology has been added to the Final EIS. The use of oxidation catalysts has not been demonstrated on syngas-fired combustion turbines. As stated in the Orlando Gasification Project Final EIS, the CO catalyst would have been the first known application of a CO catalyst on a coal-fired power plant. FDEP specified conditions in a final air permit which included a requirement to install and operate, for evaluation purposes, an additional pollution control system to reduce emissions of CO. Also, as stated in the Orlando EIS, given the uncertainties surrounding the installation and operation of oxidation catalysts on a coal-fired IGCC, changes in emissions were not quantifiable. Oxidation catalysts are nonselective and can oxidize other compounds in addition to CO, depending upon factors such as temperature and residence time. VOCs are potentially also oxidized by the catalyst, but potential vendors are unwilling to estimate any such oxidation of VOCs for this particular application. Any oxidation of CO and/or VOC would cause a slight increase in CO<sub>2</sub> emissions. Oxidation of SO<sub>2</sub> to SO<sub>3</sub> is also possible. This could possibly cause an increase in sulfuric acid and/or particulate matter emissions.

Possible effects on other equipment as a result of the operation of oxidation catalysts include increased pressure drop through the HRSG, and increased particulate (bisulfate) deposition and/or acid corrosion of the HRSG. Increased deposition and acid corrosion have the potential for a reduction in efficiency and reliability of the HRSG. The most significant issue with oxidation catalysts is the oxidation of SO<sub>2</sub> to SO<sub>3</sub> that occurs. This conversion could severely impact plant availability. As the limiting reagent in ammonia salt formation, SO<sub>3</sub> can cause forced outages and cause corrosion damage to plant equipment at even very low concentrations. In the CO catalyst, oxidation of SO<sub>2</sub> to SO<sub>3</sub> is a function of several variables including temperature, space velocity, and catalyst formulation. The HRSG for the proposed facilities has not yet been designed and it has not yet been determined in what temperature zone within the HRSG that the CO catalyst would have to be located. Preliminary, generic data from one catalyst supplier shows that SO<sub>2</sub> to SO<sub>3</sub> oxidation can vary from approximately 5 to 65 percent between 600°F and 800°F, depending on space velocity and temperature.

Increases in particulate matter are possible primarily due to sulfate (i.e., ammonium bisulfate/ammonium salts).

Given the minor impact of CO emissions, the disadvantages of the use of an oxidation catalyst do not justify the installation of a CO catalyst in this project.

**JW-28: STANTON PROJECT DESIGN WAS ENVIRONMENTALLY SUPERIOR**

As currently proposed, the Kemper project design is environmentally inferior when compared to its immediate predecessor, the IGCC portion of the Stanton proposal. The Kemper design plant will produce much more than twice as much of some air pollutants as Stanton, even though it is almost exactly twice as large. (Stanton was 285 MW, Kemper will be 582 MW)

I am referring to the IGCC portion of the Stanton project as if it were a stand-alone project in this comparison.

Kemper will emit more than four times as much SO<sub>2</sub>; 670 t/y compared to 155 t/y from Stanton, Kemper will emit much more than twice as much NO<sub>x</sub>; 2090 ton/year vs. 855 t/y from Stanton; and more than triple the amount of PM-10; 521 t/y vs. 156 t/y from Stanton. (Table 2.1.1, Orlando Gasification Project EIS, appendix for PSD permit limits, compared to Kemper County IGCC EIS Table 3-1 In Appendix C, Table S-3, and Table 2.6-1, , p. 2-60.)

**Response:** The comparison in the comment references net generation, which does not count electric power generated by the unit but consumed onsite by the plant itself. Emissions result from not just net generation, but from the total, or gross generation. On a gross basis, the Kemper County facility would be considerably more than twice as large as the proposed Stanton unit (i.e., when including the electric power, which is used by the unit – “station service”). The net generation from the Kemper County facility would be only a little more than twice as large because the Kemper unit would itself use a substantial amount of electric power generated in order to capture 67 percent of the CO<sub>2</sub>. Carbon capture was not a feature of the Stanton unit.

**JW-29: INCOMPATIBLE EMISSIONS DATA IN DIFFERENT TABLES IN THE EIS**

The emissions figures in the Kemper EIS in Table S-3 and Table 2.6-1 conflict with each other and with Table 3-1 in Appendix C. For instance, the Kemper SO<sub>2</sub> emissions in Table S-3 are 590 t/y, in Table 2.6-1 they are claimed to be only 132 t/y, in Table 3-1, Appendix C, the SO<sub>2</sub> emissions are listed as 669.7 t/y.

**Response:** As noted in each table, the tables referenced present different scenarios. Table S-3 presents facility-wide emissions at an 85-percent capacity factor. Table 2.6-1 presents worst-case emissions from each individual HRSG stack. Table 3-1 in Appendix C presents maximum potential facility-wide emissions (100-percent capacity factor).

**JW-30: STANTON ALTERNATIVE DESIGN SHOULD HAVE BEEN DISCUSSED**

Plainly the Stanton plant design and operation are an environmentally superior alternative to the Kemper plant and design, but the Stanton design was never even mentioned in the Kemper DEIS, as an alternative project configuration with less environmental harms.

**Response:** The previously proposed Stanton plant is not a reasonable alternative available. DOE is aware that the IGCC plant proposed at Stanton had lower mass emission rates for some pollutants than would the Kemper IGCC plant. However, much of this discrepancy results from differences in size (generating capacity) and feedstock and not in design of the facilities (please refer to the

response to JW-28). Note also that DOE determined that carbon capture was not feasible for the proposed IGCC facility at Stanton.

**JW-31: THE DEIS FAILED TO ADEQUATELY ANALYZE THE LIKELY PM 2.5 IMPACTS**

- 1 Matters Involving Environmental Review of PM 2.5 Emissions and Projected Ambient Impact
  - 1.1 Because the Kemper County IGCC Draft EIS Fails to Properly Describe PM 2.5 Emissions and Associated Ambient Impacts and Further Fails to Properly Describe the Effect of Current PM 2.5 New Source Review Requirements Binding on the Facility, the Draft EIS Fails to Meet NEPA Requirements to Properly Assess Facility Emissions and the Human Health and Environmental Impacts of the Operation of the Proposed Facility

Environmental impact review under the National Environmental Policy Act (NEPA) requires that the environmental impact statement process properly presents information on facility emissions and impacts. Because of multiple erroneous characterizations and assumptions regarding PM-2.5, the Draft Kemper County IGCC EIS utterly fails to meet the required standard for accurate presentation of facility emissions and impacts. The problems regarding PM 2.5 are outlined in subsequent sections below.

- 1.1.1 The Draft EIS Erroneously Characterizes the Required New Source Review Elements Applicable to PM-2.5 Emissions from the Proposed Facility Claiming that EPA's NSR Surrogate Policy Remains In Effect

The Draft EIS contains the following passage addressing the matter of PM-2.5 emission regulation from the proposed facility:

“On May 8, 2008, [SIC] EPA issued a rule that finalizes several New Source Review (NSR) program requirements for sources that emit PM2.5; however, several other NSR program requirements were left unaddressed. The rule contains a transition policy that suggests State Implementation Plan (SIP)-approved states should continue to use PM10 as a surrogate for PM2.5 to demonstrate compliance with PSD requirements. Mississippi is an SIP approved state; therefore, MDEQ is allowed to use PM10 as a surrogate for PM2.5.

“Since 1997 it has been EPA's policy that compliance with NSR requirements for PM10 may be used as surrogate for compliance with requirements for PM2.5 (1997 Memorandum from John S. Seitz: Interim Implementation for the New Source Review Requirements for PM2.5 and 2005 Memorandum from Stephen D. Page: Implementation of New Source Review Requirements in PM2.5 Nonattainment Areas). Although this policy still remains in effect, and despite the lack of final rules regarding all of the requirements of NSR for PM2.5, the universal use of this policy for all source types has recently been questioned. For the Kemper County IGCC Project, the analysis in this EIS uses PM10 as a surrogate for PM2.5 because:

For each source type, the emissions of PM2.5 generally correlate with the PM10 emissions.

The PM2.5/PM10 ratios with and without particulate control technology applied are reasonably similar.”

The entire portrayal of the allegedly applicable requirements as discussed in the quoted passage of the Draft EIS is an erroneous rendition of the presently applicable requirements for review of PM-2.5 in for the air permit application requested by the Applicant.

While EPA did indeed publish a PM-10 surrogate grandfathering policy in its May 16, 2008 PM 2.5 NSR rulemaking at 40 C.F.R. Sec. 52.21(i)(1)(xi), on September 22, 2009 EPA published a final notice staying the effectiveness of that grandfathering provision until June 22, 2010. The effect of this EPA stay action is to deny the possibility that any air quality permit issued for this facility can use PM-10 as a surrogate for evaluating PM-2.5, including the required air quality impact review for showing attainment and maintenance with the PM-2.5 National Ambient Air Quality Standards.

The Draft EIS is defectively because of this erroneous rendition of the applicable Clean Air Act-related new source review requirements covering the NSR-regulated pollutant, PM-2.5.

With the final effective date of the PM 2.5 NSR rule on July 15, 2008 and the stay on the grandfather provision noted above, the federal regulation requires that the Mississippi State Implementation Plan be considered to provide the requirement that PSD applicants provide an air quality impact assessment that reviews the effect of permit issuance on attainment and maintenance of National Ambient Air Quality Standards (NAAQS) for all criteria pollutants listed in the regulation, including PM-2.5.

The Draft EIS narrative which indicates this facility's air permit application may rely on the previous 'PM-10 surrogate for PM-2.5' policy is in error.

**Response:**

It is DOE's understanding that MDEQ did use the surrogate policy in the technical analysis of BACT and the PSD permit for the project. Also, in the Draft EIS, the air quality impacts of PM<sub>2.5</sub> emissions were assessed by scaling the modeled PM<sub>10</sub> modeled concentrations. The scaling was based on an average ratio of PM<sub>2.5</sub> to PM<sub>10</sub> monitored concentrations of 0.11. This approach was not used in the Final EIS (see Subsection 4.2.1.2). Instead, the direct PM<sub>2.5</sub> emissions were modeled in a manner consistent with the other NAAQS analysis. All combustion source emissions were assumed to be in the PM<sub>2.5</sub> size range. The particulates for material handling and other fugitive particulate sources were estimated using current EPA (AP-42) emission factors. Cooling tower emissions were based on the TDS content of the recirculated water and the expected aerosol size distribution of emissions from the tower.

**JW-32:**

1.1.2 The EIS-Portrayed "Modeling" of Facility PM-2.5 Ambient Air Quality Impacts Can Never Be Considered a Valid PM-2.5 Predictive Ambient Air Quality Determination Because the Method Used to Address PM-2.5 Ambient Air Quality Impacts is Technically Inappropriate and Erroneous

The EIS claims to show "modeled" results for PM 2.5 ambient air quality impacts. The report of PM-2.5 ambient impacts shown in Table 4.2-4, "NAAQS Impact Analysis," has a footnote attached to the reported PM 2.5 ambient impact concentrations:

"Maximum modeled concentration from the proposed facilities and other offsite sources. PM-2.5 modeled concentrations are estimated based on the 0.11 ratio of PM-2.5 to PM-10."

Upon further reading the following admission is made:

"Current research and data indicated that the multipliers in the range of 0.06 to 0.11 can be used to infer or scale PM-2.5 concentrations for PM-10 data (EPA, 2005). The PM-2.5 modeled concentrations included in Table 4.2-4 were estimated by applying a multiplier

of 0.11 to the PM-10 modeled concentrations. When using a multiplier of 0.11 for relative PM-2.5 to PM-10, the resulting concentrations of 24-hour and annual PM-2.5 would not exceed their respective NAAQS standards.”

The year 2005 reference cited and the matter mentioned earlier in the text involving factors relating PM-2.5 to PM-10 at fugitive dust emission sources both indicate that the Applicant and the EIS authors were relying on such a scalar method to make their “modeling” determination.

“Regarding fugitive dust and material handling sources, in 2006 EPA updated the AP-42 emission factors for fugitive dust sources including paved and unpaved roads, material handling and storage piles, industrial wind erosion, material transfer operations, and construction and demolition. The uncontrolled PM-2.5 to PM-10 ratios across all of these categories ranged from 0.10 to 0.15 (EPA, 1995a).”

Both of the EPA papers cited for 1995a and 2005 are EPA emission factor data that sets forth expected ratios of fugitive dust emissions for characterizing particle sizes of emissions from a single fugitive dust source. That is the only purpose of the paper and data cited. The EPA materials about fugitive dust are not capable of discerning expected ambient air quality suspended particle size distributions attributable to background plus installation of a new, complex major emission source. Use of a scalar produced in the manner shown in the PM-2.5 air quality impact section of the Draft EIS can never be considered a valid method for determining PM-2.5 ambient impacts from PM-10 modeled impacts from a complex air pollution source.

The Draft EIS reliance on numerical fractional scalars to make PM-2.5 ambient air quality impact predictions based on a PM-10 ambient air quality modeling determination constitutes technical error and cannot be considered to be a valid air quality modeling determination. A valid air quality modeling determination must always rest on the use of an inventory of point and fugitive PM-2.5 emission source information and the use of this information as an input to approved air quality model in order to predict ambient air quality outside of the facility fence line.

When the Draft EIS makes the fundamental error of improper ambient assessment determination on PM-2.5 all other conclusions of the document relying on such a finding are also rendered suspect or unreliable, including statements about the effect of the facility on human health and environment.

**Response:** The use of the scaling factor to estimate the impacts of PM<sub>2.5</sub> was eliminated from the Final EIS. Instead, dispersion modeling of the direct PM<sub>2.5</sub> emissions was performed in a manner similar to the other Class II NAAQS analyses. Emissions from the lignite mine were included in the evaluation. For all combustion sources, PM<sub>2.5</sub> emissions were conservatively assumed to equal the PM<sub>10</sub> emissions. PM<sub>2.5</sub> emissions for material handling and storage, roadways, and fugitive particulates were estimated based on EPA (AP-42) emissions factors. In addition, the cooling tower PM<sub>2.5</sub> emissions were based on the total dissolved solids in the circulating water and the expected aerosol distribution size. The resulting predicted ambient levels of PM<sub>2.5</sub>, including conservative background levels, were below the respective NAAQS. The results are contained in Subsection 4.2.1 and in Table 4.2-4 of the Final EIS.

**JW-33:** 1.1.3 The Draft EIS Fails to Recognize Mississippi Air Regulations Requiring All Ambient Air Quality Modeling Determinations Used in Prevention of Significant Deterioration Permit Applications Must Comply with EPA Regulations at 40 C.F.R. Part 51 - Appendix W on Air Quality Models

Neither the Applicant, MDEQ nor the writers of the Draft EIS have recognized that all ambient air quality modeling determinations done in support of new source review (NSR) permit issuance

must conform to EPA guidance on air quality models at 40 C.F.R. Part 51 - Appendix W regulations. This requirement has been established by pre-existing Mississippi air quality regulations:

“B. Air Quality Models.

1. All estimates of ambient concentrations of air pollutants shall be based on the applicable air quality models, data bases, and other requirements specified in the “Guideline on Air Quality Models (Revised)” 40 CFR, Part 52, Appendix W, which are incorporated herein and adopted by reference.

2. Where an air quality impact model specified in the “Guideline on Air Quality Models (Revised)” 40 CFR, Part 52, Appendix W, is inappropriate, the model may be modified or another model substituted. Such a modification or substitution of a model may be made on a case-by-case basis or, where appropriate, on a generic basis. Written approval of the DEQ and the Administrator of EPA must be obtained for any modification or substitution. In addition, use of a modified or substituted model shall be subject to public notice and opportunity for public comment.”

Using PM-2.5 scalars in the Draft EIS as outlined and as applied to PM-10 ambient air quality predictions to make PM-2.5 ambient air quality predictions is not a method for carrying out an air quality modeling determination that complies with Appendix W or the MDEQ administrative rule. Under these authorities, all NSR air permit application must incorporate modeling that conforms to Appendix W. However no aspect of the present Appendix W provides for a PM-2.5 ambient air quality assessment to be carried out in the manner provided in the Draft EIS.

The Draft EIS must not be finalized without a requirement for submission of a PM-2.5 ambient air quality modeling study complying with Appendix W that shows the facility PM-2.5 ambient air quality impact. The determination of whether or not the proposed facility jeopardizes attainment and maintenance of the PM-2.5 National Ambient Air Quality Standards is a central requirement of the PSD permit issuance proceeding and must be conclusively addressed.

**Response:** As discussed in the response to JW-32, the use of the scaling factor to estimate PM<sub>2.5</sub> impacts was replaced in the Final EIS. Instead, a more traditional modeling analysis was performed that was consistent with the other Class II NAAQS analyses; i.e., the revised air quality analysis conforms as closely as possible to the guidance and methodology contained in 40 CFR 51, Appendix W.

**JW-34:** 1.1.4 The Site Location Selected by the Applicant for the Facility Shows a High PM-2.5 Ambient Background Concentrations Just Under the Present NAAQS Air Standards; Such Circumstances Mean the Facility Must Address Maintenance of PM-2.5 National Ambient Air Quality Standard Compliance Under a SIP-Required Appendix S Emission Offset Interpretive Ruling Procedures

Table 4.2-4 on NAAQS Impact Analysis shows PM-2.5 ambient background as 28.9 ug/M3 for the 24-hour average and 13.2 ug/M3 for the annual average. This leaves a margin of only 6.1 ug/M3 (24-hour average) and 1.8 ug/M3 (annual) underneath the present NAAQS concentration for ambient degradation allowable with the present background.

In a circumstance in which a new source in an attainment area may cause or contribute to a predicted or measured actual violation of the PM-2.5 National Ambient Air Quality Standards, such permitting circumstances must be carried out under SIP-approved procedures following guidance at 40 CFR Part 51, Appendix S procedures [ also known as . the “Emission Offset Interpretive Ruling”].

In light of the severe constraints on any PM-2.5 emissions grown in the area and the demonstrated health concerns with human exposure to PM-2.5 concentrations below the presently set PM-2.5 NAAQS ambient standards, such circumstances urgently justify carrying out an Appendix W-compliant PM-2.5 air quality modeling demonstrations to determine expected PM-2.5 air concentrations from the proposed facility. Any such demonstrations must necessarily show that the PM-2.5 NAAQS will not be exceeded at the facility fence line. Table 4.2-4 of the Draft EIS cannot suffice in this regard.

**Response:** Kemper County is currently in an attainment area for PM<sub>2.5</sub>. The project's impacts are not predicted to cause violations of PM<sub>2.5</sub> NAAQS. DOE believes it has reasonably evaluated the PM<sub>2.5</sub> impacts from the project. Whether the Appendix S Emission Offset Interpretive Ruling applies will ultimately be resolved by MDEQ. On its face, this rule only applies to nonattainment areas and would not be applicable to permitting for the proposed facility. Notably, the background concentrations used in the assessment presented in the EIS were taken from monitors located in Meridian and identified as urban/city center locations in order to be conservative. DOE agrees that those concentrations are within approximately 82 to 85 percent of the NAAQS, as suggested in the comment. Subsection 4.2.1.2 has been revised to include this statement.

**JW-35:** 1.1.5 The EIS Fails Completely on Addressing Condensable Particulate Matter Emissions and Effect of Such Emissions on Air Quality Standard Attainment and Maintenance

All of the PM-10 emission characterizations displayed in the EIS appear to be filterable PM only. The Applicant and the EIS reviewers apparently do not view they are required to consider and evaluate condensable particulate matter as inputs to air quality modeling determinations. No review was done which shows the effects of both filterable and condensable PM on maintenance of the PM 2.5 National Ambient Air Quality Standards. Such a review is necessary in order to make a proper determination of the expected facility impact upon operation.

A 2008 rulemaking by EPA had the effect of deregulating condensable particulate matter from net emission increase determination for PM-2.5 and PM-10 if condensable PM was not already regulated under the pre-existing State Implementation Plan. The Applicant, the EIS reviewers and MDEQ apparently consider that condensable PM was deregulated in Mississippi. However, such a determination and expectation regarding condensable PM is not correct.

The following rule definitions apply in Mississippi as found in Section 2 of the MS APC-S-1 air pollution control rules:

“Fly ash.’ Particulate matter capable of being gasborne or airborne or carried in the gas stream and consisting essentially of ash, fused ash, and/or unburned material.”

“Particulate matter.’ Any airborne finely divided solid or liquid material with an aerodynamic diameter smaller than 100 micrometers.”

“Particulate matter emissions.’ All finely divided solid or liquid material, other than uncombined water, emitted to the ambient air as measured by an applicable EPA Test Method, an equivalent or alternative method specified by the EPA, or by a test method specified in the approved State Implementation Plan.”

These definitions make clear that the substance of what is condensable PM is presently regulated in Mississippi as particulate matter, PM-10 and PM-2.5. Similar language in the definition of PM-2.5 and PM-10 all indicate that condensable particulate matter has been the subject of pre-existing regulation in Mississippi.

As a result, nothing about regulatory provisions of EPA's 2008 PM-2.5 NSR rule granting a condensable particle deregulation if a state has not previously regulated condensable PM in its state implementation plan applies in the state of Mississippi. MDEQ cannot merely determine by administrative fiat that all of a sudden condensable particulate matter emissions will no longer be regulated when the state's pre-existing air pollution control rules require such condensable PM regulation.

Excluding consideration of condensable PM in emission characterizations and in demonstrations of future ambient impact and PM-2.5 and PM-10 National Ambient Air Quality Standard compliance demonstrations constitutes an erroneous and understated PM-2.5 ambient air quality determination in the Draft EIS.

Excluding modeling review of condensable PM also means that the technical modeling determination of both PM-10 and PM-2.5 fundamentally misstates the actual physical relationship between condensable emissions and predicted ambient impact of the project facility. Such PM-10 and PM-2.5 air quality modeling determinations must necessarily emphasize including the physically correct emission source input determination from all emission units. Excluding condensable emissions means the modeled determination can never reflect the full measure of the actual ambient physical impact from the expected future emissions. Arbitrary source emission input exclusions are not an element of technically proficient predictive air quality modeling. Appendix W review considerations also justify requiring the use of condensable particulate matter in source emission model input determination.

**Response:** Condensable PM emissions were accounted for by doubling the filterable PM emission rates from the principal sources (the IGCC stacks) in the modeling analysis. The operation of the selective catalytic reduction (SCR) NO<sub>x</sub> control system could generate up to 21 pounds per hour (lb/hr) and 92 tpy of ammonia emissions from each combustion turbine. Some of this ammonia would contribute to the formation of secondary particulates.

DOE believes this approach reasonably accounts for all secondary PM emissions. Subsection 4.2.1.2 has been revised to clarify this.

**JW-36:** 2 The Draft EIS Failed to Provide Total Particulate Matter Emissions Data

No aspect of the Draft EIS provides total particulate matter (PM) emissions information from the proposed facility. PM is defined as an 'NSR-regulated pollutant' by EPA's Part 51 and 52 NSR regulations. As such, information about total PM emissions is an important part of the community and environmental impact from the proposed facility. Commentors assert that it is error to fail to properly and completely describe expected PM emissions and PM emission controls in the Draft EIS.

**Response:** Total PM emission estimates were inadvertently omitted in the Draft EIS and have been added to Tables S-3 and 2.5-1 in the Final EIS.

**JW-37:** **ADDITIONAL AIR QUALITY AND OTHER CONCERNS**

**Kemper County IGCC Project Draft EIS - Key Points – Air Quality**

**3 Project Facility Site-Wide Comments**

**3.1 The EIS-Provided Narrative and Pictorial Descriptions of the Certain Portions of the Proposed Process Equipment Lacks Sufficient Detail for Process and Emissions Evaluation**

The EIS contain little or no technical detail about certain portions of the planned process equipment and wastewater management activities. The EIS descriptions and emission characterization for the Acid Gas Removal (AGR) system contains few technical details and no technical schematic depictions. Process knowledge of this system is essential to environmental review and emissions assessment as perturbations of operation and malfunctions in this process area can cause exceptionally high emissions.

**Response:** The applicant intends to use an AGR system supplied by UOP, LLC. This AGR system would employ UOP's Selexol® process. Some details of the technology are proprietary, but publically available information about the technology can be found on UOP's Web site at [www.uop.com](http://www.uop.com). Published literature also discusses this Selexol® process (e.g., Gas Processing by Kohl and Nielsen and Gas Conditioning and Processing by John Campbell). A summary description of the Selexol® technology has been added to the EIS.

The facility's PSD permit requires the system to achieve the level of effectiveness analyzed in the EIS. In addition, DOE has reviewed proprietary and confidential heat and material balance and technical data and conducted an independent evaluation of the emissions estimates. Based on this independent evaluation, DOE believes the emission rates presented in the EIS are achievable and represent a basis on which to evaluate the environmental impacts.

**JW-38: BACKUP SULFUR RECOVERY NEEDED**

The present process design apparently features only a single regular disposition point for hydrogen sulfide acid gas and that is the wet sulfuric acid plant. If the facility is not sending acid gas to the wet sulfuric acid plant, it will probably send the gas to the flare. The Applicant's process must be evaluated for operating during time of certain process downtime. If the wet sulfuric acid plant is down for an extended period of time then will the facility be allowed to operate continuously venting acid gases to the flare? Such matters should have been clarified in the EIS.

For example, in petroleum refining and other industrial sectors, facilities of the nature of the Applicant's are frequently designed and constructed with backup capabilities for handling such streams that do not involve flaring uncontrolled emissions. For example, management of similar acid gas streams at a petroleum refinery may be directed to 2 or more sulfur recovery units or a dedicated acid gas incinerator rather than being sent an open flare. This process disposition backup approach should have been evaluated for the subject facility in the EIS as a project process alternative. At the very least, the facility should have been designed to allow sharing of the sulfur acid gas removal system and sulfuric acid plant disposal of sulfur-containing streams between the two gasification process trains.

**Response:** The facility would not be permitted to operate for an extended period of time if the WSA system is not operational. In the event of a sulfur recovery unit upset or malfunction, syngas would be flared for a brief period in compliance with MDEQ's SSM rule. Redundant sulfur recovery systems are not economically feasible.

**JW-39: TRANSIENT EMISSIONS, ACID GAS REMOVAL PLANT**

The EIS failed to identify the process connection and the purposes of the four listed Acid Gas Removal plant facilities and to indicate how transient emissions might occur at these stacks.

These stacks may have potential for high transient emissions of carbon monoxide, as well as some hydrogen chloride and hydrogen sulfide.

**Response:** Subsections 2.1.2.6 and 2.6.1 in the EIS have been revised to clarify the purpose of the AGR vents.

**JW-40:** **PROCESS WASTEWATER AND MERCURY**

The EIS failed to provide details and diagrams on precisely how process contact wastewater associated with syngas cleaning will be addressed. For example, syngas coming into contact with water within the post gasifier equipment may generate a cross-media-transfer to wastewater of mercury and other toxicants. The EIS contains little detail on the disposition of such wastewater. There is suggestion that some of it might be re-injected into the gasifier process. Such an operation cannot be considered the best possible process control of toxicant material. Re-injection of mercury-containing wastewater back to the gasifier will necessarily mean a high equilibrium mercury concentration in syngas burned in the IGCC turbines that would be the case without such re-injection.

**Response:** The Kemper facility would be a zero liquid discharge facility; therefore, no process wastewater would be discharged. As described in Subsection 2.1.2.7, water generated in the gasification process would be collected into a common drum and then would flow through an activated carbon bed where mercury or trace organics would be removed. This would eliminate the possibility of mercury building to a high equilibrium level. The water would then be treated in a sour water treatment facility where it would be steam stripped. The water would then be used as makeup for the plant water system and recycled back to the process.

**JW-41:** Most IGCC gas cleaning units employ low temperature processing of gas, but none of the temperature features of the process are either qualitatively or quantitatively identified. Low temperature cryogenic systems involve the use of refrigerants, such as ammonia or hydrogenated chlorofluorocarbons (HCFCs). The EIS contains no information about fugitive emissions, risks and process aspects of the equipment to produce such low temperature conditions for solvent acid gas extraction and cleanup of process-produced syngas.

**Response:** The proposed IGCC facility would employ acid gas extraction that operates below ambient temperatures. This design has the benefit of allowing lower solvent circulation rates when compared to extraction at ambient temperatures. To achieve operating temperatures, only conventional vapor compression refrigeration would be required. No cryogenic systems are proposed. Maintenance and monitoring of the equipment in this system would be part of the routine operations of the plant.

**JW-42:** **3.2 The EIS Failed to Characterize Emissions and to Show Best Available Control Technology Emission Limitations for Required NSR-Regulated Pollutants**

PM, PM-2.5, hydrogen sulfide and total reduced sulfur are NSR-regulated pollutants that must be addressed in state prevention of significant deterioration major stationary source pre-construction permit determinations, including for the present proposed facility.

The EIS does not fully characterize the emissions of these specific pollutants which must be regulated in a PSD permit.

**Response:** Table 2.6-1 has been revised to include total reduced sulfur, which includes hydrogen sulfide, carbon disulfide, and carbonyl sulfide. All PM is presumed to be PM<sub>10</sub>; PM<sub>2.5</sub> emissions would be a fraction of the PM<sub>10</sub> emissions and would, therefore, be bounded by the PM<sub>10</sub> value. Ambient impacts of PM<sub>2.5</sub> emissions are discussed in Subsection 4.2.1.2. The proposed facility would not be a major source of either total reduced sulfur or hydrogen sulfide and is, therefore, not subject to PSD review for those pollutants.

**JW-43: 3.3 Applicant's Appendix R Risk Screening Analysis Did Not Evaluate the Full Potential to Emit for All Hazardous Air Pollutants Emitted and Understated Formaldehyde Emission Inputs for Modeling Purposes**

Applicant's two risk screening analysis for the two different CO<sub>2</sub> capture scenarios both have a Table 1 showing hourly emission rates for several listed hazardous. Summing the emission rates listed shows a total of 0.476 lbs/hr and 0.429 lbs/hr of HAP emissions, or 2.08 tons/year and 1.88 tons/year. The Applicant is claiming about 18 tons per year total HAP emissions, so the risk screening analysis provided did not comprehensively review the risk of all HAP emissions from the proposed facility.

Appendix C Table 3-8 shows formaldehyde emissions as 3.10 tons/year from the two IGCC stacks; however the Applicant's risk screening reviews modeled only a formaldehyde emission of 0.442 tons/year and 0.377 tons/year for the two risk screening

**Response:** The emission rates shown in Appendix R are correct. The comment identifies a perceived gap of approximately 16 tons of HAP emissions that were not evaluated in the risk screening. As detailed in the following, the HAPs associated with syngas operations are addressed in the updated Appendix R. DOE accounts for the perceived gap as follows:

1. The total provided in the comment (approximately 2 tons) only identifies HAP emissions from a single IGCC stack; however, the assessment addresses emissions from two stacks (approximately 4 tons).
2. The reference to 18 tons in Appendix C, Table 3-8, represents the maximum potential annual HAP emissions, which include approximately 5 tons of emissions associated solely with natural gas operations. This includes the formaldehyde emissions referenced in the comment. Appendix R evaluates the risks associated only with syngas operations (including formaldehyde from syngas), which is the intended mode of operation.
3. Appendix R has been updated to evaluate approximately 8.5 additional tons of annual HAP emissions associated with potential direct venting of the captured CO<sub>2</sub> stream.

**JW-44: DEIS FAILS TO PROPERLY DESCRIBE THE PROJECT'S ADVERSE AIR QUALITY IMPACTS**

The DEIS in Chapter 4 claims that since the predicted increases in air contamination from construction and operation of the power plant are temporary, and do not cause illegally high levels of air pollution (above the National Ambient Air Quality Standards or PSD increments) then the increased air pollution is below levels of concern. (P. 4-4)

The DEIS is ignoring the plain fact that many respected scientific studies have plainly shown that increases in air pollution clearly harm human health, even those the air quality standards are not exceeded.

The DEIS is deficient for failing to disclose, for instance, that the predicted increases in PM-10 levels caused by the project, which included increases of 39 ug/M<sup>3</sup> from construction and 21.4 ug/M<sup>3</sup> from power plant operations, are much higher than the 10 ug/M<sup>3</sup> increases in PM levels that have been shown to cause measurable increases in the death rate among the exposed population.

The following studies include data demonstrating that the predicted increase of 39 ug/M<sup>3</sup> of PM-10 caused by the power plant's construction would be responsible for measurable increases in the

death rate among the exposed population, and increases in the numbers of emergency room admissions from Asthma sufferers. The Seattle study, in particular found that even a short-term exposure to increase of 30 ug/M3 of PM-10 caused a clear increase in the number of asthma sufferers seeking emergency room treatment.

That study's abstract also discusses several studies that concluded that the death rate rose .5% for every increase of 10 in PM-10, some of which are cited below. Since the power plant's PM-10 emissions will cause an increase of more than 20 ug/M3 in PM-10 concentrations, the scientific evidence indicates that the exposed population will suffer a .5 to 1% increase in their death rate. The DEIS was deficient for not discussing these and other human health impacts potentially caused by the power plant's increases in air pollution, even if the result is below the NAAQS.

This issue is especially important of the other discussions in these comments about how the mine will contribute significant amounts of PM into the ambient air, and that secondary formation of PM from ammonia emissions and other factors will also increase PM emissions about what the DEIS predicted.

**Response:** In the reanalysis of the American Cancer Society's study of particulate air pollution and mortality, it was reported that there were no significant differences in the PM<sub>2.5</sub> concentration response functions in associations for all causes of cardiovascular and lung cancer mortality. However, EPA recognizes it may be reasonable to expect that there may be thresholds for specific health responses at the low-end or below the ranges of the available studies, but that they cannot be detected due to variability in susceptibility across a population. In setting the revised PM<sub>2.5</sub> standard, and based on the uncertainties in the available evidence, the EPA Administrator was not prepared to assume that lowering the standard further would result in substantial health benefits. In addition, the CAA does not require the NAAQS to be set at a zero-risk level but rather at a level that reduces risk sufficiently to protect public health with an adequate margin of safety.

An analysis of increased mortality from all criteria pollutants and morbidity from exposure to particulates, especially PM<sub>2.5</sub>, has been added to Subsection 4.2.19.2 of the Final EIS. The analysis shows that increased mortality is expected to be less than one death per year for any criteria pollutant or cause. Also, the increased incidence of respiratory-related hospital admissions and emergency room visits from particulate (i.e., PM<sub>10</sub> and PM<sub>2.5</sub>) exposure would be less than one on an annual basis. Subsection 4.2.19.2 provides further details.

**JW-45: COAL MINE'S AIR IMPACTS UNDERESTIMATED**

The DEIS estimated that the coal mine will cause only minor increases in the levels of particulate pollution in the project area, by using theoretical "modeling." But real-life air quality testing reveals other results. The Mine Safety and Health Administration has tested air quality on-site at the Red Hills Mine, and on January 21, 2009, has discovered the mine is emitting particulate concentrations at or above 160 ug/M3 (.160 mg/M3), which exceeds the National Air Quality standards. If the air quality standards are actually exceeded on the mine site itself, it is likely that air quality will be measurable and significantly degraded in the immediate vicinity of the mine also. The DEIS should have described the likely offsite air quality impacts at times with the NAAQS is being exceeded on the mine property. (<http://www.msha.gov/drs/ASP/MineAction.asp>)

**Response:** The air quality analysis for PM included in the Draft EIS includes estimated mine emissions as secondary emissions and demonstrates that offsite concentrations are predicted to be below the NAAQS. The reason modeling is done is to account for dispersion which may not be reflected in onsite, close proximity measurements.

The MSHA testing results cited in the comment cannot be compared to the NAAQS. MSHA, whose focus is miner safety, monitors the level of respirable dust mine personnel are exposed to over a period of 8 hours in accordance with 30 CFR 71.201. Monitors (cartridges) are attached to mine personnel, who then carry out their normal daily activities across the mine site (e.g., working in the pit or in confined spaces at the shop and lignite handling facilities). NACC reports that since the Red Hills Mine's inception, no concentrations of respirable dust have been detected above MSHA's 2.0-milligrams-per-cubic-meter ( $\text{mg}/\text{m}^3$ ) action level. The level cited in the comment is actually less than 10 percent of this action level.

**JW-46: THE DEIS SHOULD HAVE DESCRIBED THE COAL MINE AND POWER PLANT AS A SINGLE AIR POLLUTION SOURCE**

The coal mine's sole purpose will be to feed lignite into the maw of the Kemper facility. As such, the regulatory agencies consider the mine a support facility of the power plant and its air emissions are combined with the power plant's air emissions. The DEIS improperly bifurcated the mine's air emissions from Kemper's emissions, causing the illusion that each source had lesser impacts. The DEIS should have described the mine and power plant as a single industrial entity with combined air emissions, as required by the federal EPA New Source Review Handbook. The NSR Handbook describes precisely the situation of a coal mine and an adjacent, related pollution source, and plainly stated the two should be lumped together for regulatory purposes. See <http://www.epa.gov/ttn/nsr/gen/wkshpman.pdf> at pages A.3-4.

**Response:** The air quality analysis for PM included in the Draft EIS included estimated mine emissions as secondary emissions and demonstrates that offsite concentrations are predicted to be below the NAAQS. Table 4.2-7 specifically presents the combined impacts of the mine and the IGCC plant from  $\text{PM}_{10}$  emissions.

**JW-47: THE DEIS FAILED TO PROVIDE AN ADEQUATE DISCUSSION OF THE FATE OF THE MERCURY EMISSIONS**

The federal EPA commented on the prior EIS for the Stanton plant that the DEIS was deficient because it failed to provide an adequate discussion of the fate of that plant's mercury emissions. The Final EIS responded by including considerable discussion about the potential fate of that plant's mercury emissions, including references to several scientific studies on mercury deposition.

Now the Kemper plant proposed to emit over 60 lb/year of mercury, as compared to the 19 lb/yr that would have been emitted from Stanton, so the mercury deposition discussion is even more important for this DEIS. Indeed, the Federal EPA asked for special consideration of this issue in their scoping letter, published in the DEIS Appendix. But the Kemper DEIS has neglected to provide a comprehensive discussion of the fate of the mercury emissions, including but not limited to bioaccumulation.

**Response:** Appendix R has been revised to include an additional study addressing the fate and transport, including bioaccumulation, of mercury emissions from the IGCC facility.

**JW-48: AN ALTERNATIVE DESIGN OF AIR COOLING INSTEAD OF WATER COOLING WAS NOT DISCUSSED**

The DEIS also failed to discuss alternative designs that would vastly reduce water use by 90%, such as air cooling which is in widespread use in the USA and worldwide at scores of power plants including thousands of megawatts of coal fired units.

Air cooling typically involves the piping of heated water which is cooled by large fans before being returned to the plant cooling system, which comparatively minor water losses of around 100,000 gallons/day for a plant the size of Kemper.

Air cooling is less efficient during hot summer months, although it is still used in searing climates such as South Africa, southern Nevada, and Wyoming. In some instances, power plants have hybrid systems that use air cooling during cooler seasons, and water cooling during hot seasons.

Water cooling, which is proposed for Kemper, essentially allows the conversion and losses of millions of gallons of water daily into steam which is ejected out of cooling towers.

Air cooling also would greatly reduce the thirty thousand pounds/year of PM emissions that otherwise would be emitted from the Kemper cooling towers.

The DEIS should have comprehensively discussed alternative designs of the facility that would reduce water use and discharge, including air cooling, or a hybrid system of both air and water cooling, depending on the season.

### **MANY POWER PLANTS USE AIR COOLING**

This alternative would include air cooling or hybrid cooling systems, rather than water cooling, for the facility. The commentors are aware of many existing and proposed power plants including but not limited to coal-fired units that are air cooled. Currently operating air cooled coal fired units including the Neil Simpson plants, the Wyodak plant, and the three Wygen coal-fired power plants, all in Wyoming. Black Hills Power, operator of the Wygen plants, states it saves 93% on water use by air cooling. <http://www.blackhillscorp.com/wygen.htm>

Other permitted or operating air-cooled power plants, and their fuel, include the (coal-fired) Matimba and Kendal powerhouses in South Africa, the Rosebud coal-fired plant in Montana, the Linden and Sayreville plants in New Jersey, the proposed dry-cooled 420 MW Dry Forks PC in Wyoming, Colorado Springs near Fountain, Colorado, Chehalis Power (natural gas) facility in the State of Washington, Diamond Generating, near Goodsprings, Nevada, the Doswell facility in Virginia, Duke, and Miriant, both near Las Vegas, Reliant's Choctaw County plant near French Camp, Mississippi, and its Hunterstown, Pennsylvania, project, Taiyuan #2 in China, Trakya in Turkey, Uran III in India, Touse in Iran, the Camarillo facility in Ventura County, California, and a proposed 500 MW PRB-fired supercritical PC plant in Wisconsin. See also the March 2007 Power Engineering editorial on the use of dry cooling in new power plants.

In addition, most large power plants permitted recently in California have been exclusively air cooled, including Sutter Power, and Otay Mesa.

**Response:** Please refer to the response to JW-02 (hearing transcript).

**JW-49:** **THE KEMPER PROJECT'S ADVERSE ENVIRONMENTAL CONSEQUENCES FOR FUTURE POWER PLANT CONSTRUCTION WERE NOT DISCLOSED IN THE DEIS**

The Stanton EIS warned that the consequence of proving up IGCC technology would be that developers would keep burning coal using the IGCC design, which is cleaner than older coal plants but still not as clean as natural gas fired power plants. In effect, the IGCC technology would "displace" future use of natural gas fired power plants, causing a net increase in air emissions, in comparison with the current trend whereas natural gas fired power plants are displacing coal-

fired units. This regrettable consequence should have been discussed in the Kemper DEIS, especially since it was discussed in the Stanton EIS.

**Response:** Text has been added to Chapter 6, similar to the text in the Orlando Gasification Project EIS, discussing the effects of commercialization of IGCC technology. In summary, coal would continue to be an important part of the nation's energy mix, regardless of the success of this IGCC demonstration. However, the net effect of DOE's fossil energy R&D program would be to reduce emissions of greenhouse gases and criteria pollutants.

**JW-50:** **AMMONIA RISKS**

The Kemper facility will manufacture and use anhydrous ammonia. (p. 2-64) But some of that gaseous ammonia will escape during its handling, use, and shipping, causing and contributing to potentially significant impacts. The DEIS failed to discuss these issues, and didn't even list ammonia emissions in Table 2.6-1, although ammonia will be used in the SCR system.

**Response:** The nitrogenous compound removal/ammonia system would be a closed system, and gaseous releases are expected to be negligible in terms of frequency, duration, and quantity. Maintenance and monitoring of the equipment in this system would be part of the routine operations of the plant to minimize emissions and protect the health and safety of plant personnel and the public. Ammonia monitors would be located throughout the gasification facility and would alert plant operators in the control room if a leak is detected.

Ammonia slip from the IGCC stacks would be a function of the injection rate and the catalyst operations and would be minimized to the extent practicable. Typical ammonia slip limits from natural gas-fired combined-cycle facilities are in the range of 5 ppm or less. For both fuels, the emissions of ammonia are expected to be less than or equal to 21 lb/hr per IGCC stack.

An analysis of nitrogen deposition from ammonia slip has been added to Subsection 4.2.1.2 of the EIS. Hazards associated with accidental ammonia releases were addressed in Subsection 4.2.19.2 of the Draft EIS.

**JW-51:** **THE DEIS FAILED TO CONSIDER HOW AMMONIA SLIP WILL ADD TO PM10 EMISSIONS**

The DEIS failed to describe the reactions between SO<sub>3</sub>, NH<sub>3</sub>, and NO<sub>2</sub>, which form salts, some of which are emitted to the atmosphere. Equations can be used to estimate a portion of the secondary PM<sub>10</sub> that is formed from ammonia slip. Secondary PM<sub>10</sub> can be formed by reaction of ammonia with SO<sub>3</sub> and NO<sub>2</sub> emitted by the turbines and present in the stack gases and plume as well as additional SO<sub>3</sub> and NO<sub>2</sub> that are present downwind in the atmosphere. Additional ammonium nitrate could form from the reaction of NO<sub>2</sub> in the atmosphere with any emitted ammonia. This additional PM<sub>10</sub> may not have been included in the Project's emissions estimates. Apparently the formation of secondary PM<sub>10</sub>, ammonia nitrate, from the proposed project, was not done in the DEIS, so the combined PM<sub>10</sub> emissions will be more than what was estimated. Ammonia emissions could produce as much as 460% of their own weight as secondary particulate.

In summary, the DEIS appears to have underestimated the resulting concentrations of PM 10 from the project because of the failure to consider secondary formation.

For these reasons, the subject of the health and environmental effects of PM-10 and the plant's contribution individually and cumulatively, should have been presented in depth, as discussed elsewhere in these comments.

**Response:** The formation of secondary emissions of PM<sub>10</sub> from the ammonia present in the exhaust gas when the SCR system is operating was accounted for in the modeling. The filterable PM<sub>10</sub> emissions from the IGCC stacks were doubled in the air dispersion modeling, which was believed to be sufficiently conservative to account for the condensable fraction, as well as any sulfates or nitrates that would be formed from the ammonia. Therefore, the modeled concentrations were not underestimated.

**JW-52: PM<sub>10</sub> FORMATION CAUSES VISIBILITY REDUCTION**

The fact that ammonia/PM reactions actually occur and cause visibility impacts is well documented in the technical literature. A noted atmospheric textbook, for example, contains this vivid description of the problem ( Pitts and Pitts, 1999, p. 284):

“The formation of ammonium nitrate has some interesting implications for visibility reduction. In the Los Angeles air basin, for example, the major NO<sub>x</sub> sources are at the western, upwind end of the air basin. Approximately 40 miles east in the vicinity of the BPA and Benton County of Chino, there is a large agricultural areas that has significant emissions of ammonia...under typical meteorological conditions, air is carried inland during the day, with NO<sub>x</sub> being oxidized to HNO<sub>3</sub> as the air mass moves downwind. When it reaches the agricultural area, the HNO<sub>3</sub> reacts with gaseous NH<sub>3</sub> to form ammonium nitrate ... the particles formed by such gas-to-particle conversion processes are in the size range where they scatter light efficiently, giving the appearance of a very hazy or smoggy atmosphere even though other manifestations of smog such as ozone levels may not be highly elevated.”

**Response:** The example cited in the comment resulted from a large amount of emissions over a large, urban area, e.g., largely from automobiles and agricultural sources. DOE is unaware of any reported local visibility issues associated with combustion turbines using SCR. The emissions from the IGCC stacks would not have the ability to create regional haze.

**JW-53: AMMONIA RELATED PM<sub>10</sub> FORMATION ENDANGERS BIOTA**

The majority of the ammonia slip reacts with NO<sub>x</sub> to form ammonium nitrate, which is PM<sub>10</sub>. This PM<sub>10</sub> can be deposited on surrounding hills, located adjacent to the site.

This additional PM<sub>10</sub> would increase the Project's reported contribution to soil nitrogen. The impact of this additional ammonium nitrate has not been evaluated and must be to fully evaluate the environmental impacts of SCR. Ammonia emissions are discussed further in the following comments. These types of reactions, as described above, are a potentially significant impact that should have been discussed in the DEIS

**Response:** It should be recognized that PSD permit specifies that operation of the SCR would only occur for syngas firing for a test period that would not exceed 5 years, and firing with natural gas is expected to only occur occasionally. A screening analysis was performed to estimate an upper bound for potential nitrogen deposition resulting from ammonia slip emissions. The results showed that within 10 km of the plant site, the average deposition would be approximately 1 percent of that measured from EPA's CASTNet site at Coffeerville, Mississippi. The Coffeerville site is considered to be indicative of regional average deposition. See Subsection 4.2.1.2 of the Final EIS for further details.

**JW-54: AMMONIA**

The proposed power plant will use, handle, store and transport large amounts of ammonia (p 2-63-65). Ammonia is listed on the EPA's list of extremely hazardous chemicals. The State of Louisiana has recently tightened regulations governing handling of ammonia.

It is prudent to minimize the use and storage of any hazardous chemicals such as ammonia. Nonetheless, Plymouth Power proposes to transport, use and store large quantities of ammonia on site.

The DEIS is deficient in failing to describe and address the possible consequences of transporting, piping, storing and emitting hundreds of thousands of pounds of ammonia at this facility every year. There are two issues regarding ammonia. The first issue is the constant release of ammonia from this facility under normal operating conditions. The second issue is the risk of large scale ammonia releases from the storage and transportation of this hazardous chemical.

**Response:** Anhydrous ammonia is a widely used, widely transported chemical. The storage, handling, and transport of anhydrous ammonia by this project would be subject to federal, state, and industry standards of safety (e.g., OSHA, DOT). An assessment of hazards associated with accidental releases of ammonia can be found in Subsection 4.2.19.2 of the EIS.

**JW-55: AMMONIA EMISSIONS UNDER NORMAL OPERATING CONDITIONS**

The DEIS failed to admit that hundreds of tons of ammonia will be emitted from the project as ammonia "slip" from the SCR and other sources such as valves and tanks.

There may be other ammonia sources in this area, including feed lots and fertilizer production facilities, and agricultural users of nitrogen based fertilizer, whose applications could contribute to an ambient ammonia level. These other ammonia sources were not evaluated in the DEIS. In this case it is possible that the ammonia odor threshold could be exceeded under adverse air quality mixing conditions, such as inversions. These nearby ammonia sources should have been inventoried, because those sources may cumulatively contribute to formation of secondary particulate.

But no controls for ammonia are discussed, nor is there any modeling that accounts for potential ambient levels of ammonia that would cumulatively join with the proposed facility's emissions. The impacts of ammonia emissions on PM formation were discussed earlier.

**Response:** The SCR systems would be operated in a manner to minimize ammonia slip, i.e., excess ammonia would not normally be released. The emissions of ammonia from each CT/HRSG are not expected to exceed 21 lb/hr, or 92 tpy. The low levels of ammonia normally in the IGCC exhaust gas would not be expected to exceed the odor thresholds. Since the IGCC stacks would be 325 ft tall, elevated ground level concentrations during inversions would not be expected.

Routine ammonia leaks would be minimized through a leak detection and repair program. Any emissions from valves, flanges, and tanks, etc. would be small, and negligible offsite impacts are expected.

**JW-56: RISKS OF AMMONIA RELEASES**

The plant will store hundreds of thousand of pounds of ammonia on site, and millions of pounds of ammonia will be transported to this site every year. But the DEIS does not describe the likelihood of a transportation accident, alternative truck routes, the possible size of any ammonia releases from a truck accident, the inability of this rural area's emergency response system to react

to a large release, the neighborhoods and businesses that would be threatened by a release, or the risk and effects of a release from the ammonia tanks at the power plant, including the risk and effect of a tank failure.

In fact, the DEIS is virtually silent on this troubling subject, of large scale ammonia releases from transport and storage of large amounts of ammonia on the site, and how, or whether, emergency responses will be conducted. Ammonia releases are fairly common. A study submitted to the Congress revealed there have been over 1000 ammonia releases over one nine year period, which caused 801 injuries, 9 deaths, and 61 evacuations of over 22,000 people.

For instance, there was a release of ammonia in August, 2001 from the Pratt & Whitney power plant in East Hartford, Conn., that caused the shutdown of nearby streets for five hours and led to the evacuation of 20 people. For this reason the commentors urge that the DEIS should have discuss ammonia hazards, and the ability to respond, from storage and transport releases, and any requirements to comply with the CAA amendments governing storage and transport of ammonia and other hazardous materials.

The Project may be subject to the Title III requirements regarding storage of hazardous materials, but those requirements, including a hazard assessment and risk management program, have not yet been developed and reviewed by the public and the relevant agencies. These requirements should have been fulfilled in time for these proceedings, so that the public can evaluate this project's risks in a single round of reviews and meetings.

The DEIS evaluation should also study alternatives on the types of ammonia to be stored and used, for instance the use of urea instead of ammonia, and alternative transport methods for ammonia.

The DEIS' evaluation should also study the potential impacts of large scale ammonia releases from different site locations, and the release impacts from different types of transport accidents. The alternative of siting the plant farther from populated areas and from the State Highway, to reduce the public's exposure from ammonia releases, should have been discussed.

**SAMPLE RELEASES OF AMMONIA (not a complete list)**

evacuations	injuries	location	gallons released
36	1300	Minot, ND	about 140,000
280	4	Washington, IND	Not provided
1000	65	Quebec	“ “
1500	0	Morro Bay, CA	300
100-300	n/a	Wauwatosa, Wi	n/a
100	n/a	Columbus, IA	na
not known	15	St. Paul, MN	not provided
not known	9	Lorain, Ohio	10 pounds
230	5	Old Monroe, MO	not known

**Response:** The worst-case accidental releases from the storage and transport of ammonia are addressed in the EIS (see Subsection 4.2.19.2). The results included catastrophic releases from both the onsite storage tank and tanker trucks.

A risk management plan (see Subsection 7.1.1) would be developed in accordance with Section 112(r) of the Clean Air Act, under which responses to potential accidents would be developed in coordination with the agency responsible for local emergency planning.

**JW-57: LEGIONNAIRES DISEASE AND BIOCIDES**

The Kemper facility's cooling towers provide a potential source of Legionnaires' Disease. The DEIS failed to discuss this potential impact. Likely Kemper will use highly toxic biocides in the cooling towers to prevent discharges of Legionnaires' disease. The DEIS should have named the likely biocides to be used, discussed how those will be safely transported, stored and used, and discussed the likely concentrations at which those biocides will be discharged and their deposition rates, and the likelihood of adverse impacts from that deposition.

Please see for the following discussion of this threat: [http://www.osha.gov/dts/osta/otm/legionnaires/cool\\_evap.html](http://www.osha.gov/dts/osta/otm/legionnaires/cool_evap.html)

"Cooling towers, evaporative condensers, and fluid coolers use a fan to move air through a recirculated water system. This allows a considerable amount of water vapor and sometimes droplets to be introduced into the surroundings, despite the presence of drift eliminators designed to limit droplet release. This water may be in the ideal temperature range for Legionnaires' disease bacteria (LDB) growth, 20°-50°C (68°-122°F). Good maintenance is necessary, both to control LDB growth and for effective operation."

**Response:** Biocides are used routinely in the utility industry to control fouling of heat exchanger surfaces. Maintenance procedures would be followed, as cited in the OSHA reference, to control bacterial growth and for effective operation. DOE is not aware of any studies that have been done specifically to determine the ambient concentrations of biocides or deposition rates.

**JW-58: THE DEIS FAILED TO DESCRIBE PIPELINE DANGERS****PIPELINE IMPACTS**

The proposed power plant and its support facilities include a lengthy natural gas pipeline and lateral. There are many other natural gas pipelines around the country that were constructed according to federal standards. But pipelines have often blown up within the last few years.

A pipeline near Bonneville Dam recently exploded and burned on February 27, 1999. The roar from the explosion was heard for two miles. The 300 foot high fireball was so huge it was visible for miles. Route 14 in Washington was closed to protect the public. Press accounts state that earth movement from recent heavy rains may have been responsible for the pipeline break. The fire destroyed a resort hotel that was under construction and a nearby dwelling.

Near Kalama, Washington, a natural gas pipeline broke in February, 1997. Again, a 300 foot high fireball blazed into the sky. And just one day earlier, the same pipeline exploded and burned near Bellingham, Washington.

In March of 1995, that same pipeline had ruptured and blew up near Castle Rock, Washington. After that 1995 explosion, the company removed soil from 300 feet of the pipeline, to relieve any stress. But less than two years later, it blew up again. Again, soil movement was the cause of the pipeline breakage, according to published accounts.

Earlier this year, at least six people were killed in a natural gas pipeline explosion near Carlsbad, New Mexico, and another six were injured. Landslides in Ventura County, California ruptured several natural gas pipelines in February, 1998, again after heavy rain. Between 1965 and 1986, there have been 250 pipeline failures in the United States as a result of stress corrosion cracking, caused by a combination of water, soil types, and gas temperature within the pipelines.

Twenty-one people were killed during 1995 from natural gas pipeline accidents. A Transwestern Pipeline natural gas pipeline exploded on August 20, 1994 in New Mexico, near the Rio Grande River, damaging a bridge. An October, 1994 explosion of a pipeline in Torrance, California, injured 30. A December, 1989 pipeline rupture caused by a farmer's plow, triggered the evacuation of 600 people in Butler, Illinois.

In March, 1994, a natural gas pipeline exploded in New Jersey, killing and injuring scores of people and creating a 30 foot deep crater and a fire that destroyed eight buildings and severely damaged six more buildings.

All of these pipelines were constructed to federal standards, and monitored by federal agencies. The DEIS should explain why, with all the mitigation measures and careful engineering, pipelines, can still blow up, and the consequences of such an explosion from the proposed facilities. When these events occurred in populated areas, there may be heavy loss of life and property. These pipeline explosions are significant impacts. Additional protective measures should be discussed and implemented, and the problems that caused this explosion should be carefully explained at length in a revised DEIS.

The DEIS also did not discuss pipeline accidents, also known as "service incidents."

A service incident is reportable if there is a gas leak causing a death or serious injury, gas ignition, over \$5000 in property damage, if it occurred during a test, if it required immediate repair, or if a portion of the line was taken out of service because of the incident.

An revised DEIS should be prepared to describe the likely scenario of service incidents on the pipeline serving the power plant, perhaps by describing several of the recent explosions at similar pipelines.

Descriptions of a range of several recent incidents should be provided, so that readers and commentators can be apprised of the possible impacts of service incidents. This is appropriate because service incidents can be expected over a 50 year life span for these pipelines. The DEIS should also have discussed whether, and how local agencies in this rural area would respond to a pipeline explosion and fire.

**Response:** DOE acknowledges that accidents associated with natural gas pipelines can and do occur. This subject is addressed in general in Subsection 4.2.19.2, which presents BLS statistics for incidences of worker injuries and fatalities.

**JW-59: POWER PLANT ACCIDENTS**

The DEIS failed to discuss the potential for accidents and explosions at this proposed facility. On occasion, similar power plants have experienced fires and explosions that have damaged property and killed people. While these other facilities are not exactly the same design as Kemper, these plants share many characteristics, including coal handing facilities, and storage and use of toxic, hazardous, flammable and explosive materials.

On October 8<sup>th</sup>, 2002, a massive explosion at the Florida Power & Light natural gas fired Palm Beach plant rocked two counties, followed by a hydrogen-fed fire. The explosion shook houses and rattled windows, and was as loud as a sonic boom. In January, 2002, there was a hydrogen explosion and a resulting fire at the natural gas fired BC Hydro plant in Port Moody, BC.

On October 1, 2002, there was a nine-alarm fire at the Sithe power plant in Boston, which began in a hydrogen generator. The fire and explosion caused \$10 million in property damage.

At the Sithe blaze, 180 firefighters had to respond. The natural gas fired turbine at the Doswell power plant in Virginia also suffered a catastrophic fire and explosion. It took 75 fire fighters to quell the resulting fire. The DEIS should have discussed what will happen if hundreds of fire fighters are needed to respond to a problem at Kemper.

There were other explosions and fires at power plants. An explosion and fire rocked the Black Hills Power and Light power plant in Wyoming, in June, 2002. A back-up generator blew up and caused a “major” fire at the Allegheny Energy plant in Pennsylvania, in July, 2002. Firefighters from at least five communities had to respond to the blaze.

A pressure relief valve activation at the Mirant plant in Zeeland, Michigan in August, 2002 caused diversion of traffic, to avoid released gasses. Three workers were killed at a fire in the O’Brien Newark, New Jersey Cogeneration power plant fire. At least 20 other fires have been recorded over the last several years at power plants, causing another death and \$417 million in property damage. The most severe fires often involved the release of lube oil, which ignited.

There were 272 to 557 equipment failures and accidents per year at power boilers and pressure vessels since 1992, causing almost 200 injuries and 29 deaths, and another 145 to 387 failures, and another 270 injuries and 54 deaths, from unfired pressure vessels, according to Power Magazine, Jan-Feb., 2001, p 53.

Power plants typically store and use many materials that present a danger of fire and explosion, such as hydrogen and lube oil. Some of these hundreds of annual accidents at power plants cause injuries, and losses of life and property beyond the power plant boundaries, and require a large response of emergency personnel, as previously described.

The dangers from the use and storage of these materials to be stored at Kemper, and the ability or lack thereof of local fire departments to respond, was not discussed in the DEIS. These kinds of serious accidents are significant impacts that should be discussed in an EIS.

**Response:** DOE acknowledges that accidents can and do occur at industrial operations like power plants. This subject is addressed in general in Subsection 4.2.19.2, which presents BLS statistics for incidences of worker injuries and fatalities.

**JW-60: SOCIO-ECONOMIC IMPACTS DURING CONSTRUCTION**

The plant’s construction will require more than one thousand construction workers at peak and the job will last for four years. Kellogg Brown & Root is a partner in the project and is a heavy industrial construction contractor. KBR is based out of Texas as was Brown & Root, its predecessor. Another construction company recently merged into KBR was formerly known as BE&K, also an out-of-state company

Brown & Root and BE&K are well known for importing large percentages of out of area workers to a construction job site. The famous TV show “60 Minutes” has done at least three shows exposing Brown & Root, including a program on the large scale importation of out of area workers into other states, creating a “boom town” situation with all the attending problems.

KBR has not publicly denied that it will also use an out of area work force for the Kemper facility construction.

This writer has researched employment-related issues for the last twenty years. I was a researcher for two subcommittees of the United States Congress House of Representatives’ Education and Labor Committee.

I have participated in many private research projects on behalf of newspaper, TV stations, attorneys and public interest groups regarding the importing of out of state workers into large construction projects.

The first projects I researched in the mid-1980s involved contractors importing about 30-50% of their work force from out of the local area . Some of these projects included the BE&K company's construction of the USS-Posco steel mill 30 miles east of San Francisco, where about 30% of the workers were imported. That University of California study is especially relevant since BE&K is now part of the KBR company who reportedly will provide construction labor for the Kemper project.

Another large job was the LUZ power plant construction work in rural, southeast California, where 53% of the construction employees were imported. That job was also closely studied for its socio-economic impacts

By the 1990s, I was frequently seeing construction sites where the rate of out of area workers was frequently closer to 70%, based on license plate counts of contractor parking lots at various construction jobs in the Northwest.

In 2000, TIC, the general contractor for the Hermiston, Oregon Calpine power plant admitted to the Oregon Energy Facility Siting Council that it only obtained about 25% of its own direct hires from the local work force.

I also obtained a National Labor Relations Board list of the home addresses of construction workers on a sugar beet plant in southeast Washington. This list revealed that 87% of that construction work force was imported from outside of the local area. That contractor, Lurgi, has extensive experience in the gasification technology and could potentially be a subcontractor on the Kemper job.

This evidence indicates that a significant percentage of the Kemper construction work force could also be imported into the local area.

This will have significant socio-economic impacts that were not studied in the DEIS.

Local workers spend 95% of their paychecks locally, while out of area workers spend only about 50% of their paycheck in the local community. That extra payroll spent locally creates a "multiplier" effect, meaning that it creates additional jobs in secondary industries. But that multiplier effect will be severely diminished by out of area hires.

Many out of area workers also migrate to a job site, bringing their families, and placing an increased burden on local schools. Many children of out of area construction workers will be enrolled in local schools. That is likely in Kemper since the job will last four years.

Large numbers of imported construction workers have also caused increases in crime rates in the affected communities, as closely documented the study of the Luz power plant job. That power plant construction job by an Alabama contractor utilizing out of area labor coincided with 62% increase in all crimes and a 120% increase in violent crimes.

Private communications with law enforcement at another mine construction job in Ely, Nevada, and a hand search of arrest records in Nevada, at a mine construction job in Alaska, and a power plant construction job in Idaho, confirmed that out-of-area transient construction workers were implicated in many of these crimes.

Another factor is the unemployed construction workers who bring their families and come to Kemper from afar, but whom apply unsuccessfully for work. Those unfortunate folks will end up on the local welfare rolls, in the jails, in the hospitals, and some of their children may end up in local schools, imposing additional costs on social services.

Low-wage workers usually do not have health benefits for the first 90 days on the job. If they or their family become injured or ill, they may have to resort to hospital emergency rooms for medical care. That becomes another burden to local services.

The important number is the peak employment for the construction job, because local government must provide services for all of those people and their families. Assuming the job peaks at about 1200 workers, those folks would also bring another 1200 family members into the local area. These 2,400 new residents will cause significant burdens on public services, such as schools, health care, welfare, parks, libraries, and police services. There will be about 800 children, many of which will need to attend local schools.

These calculations are based on the findings in the University of California study “The Impact of Out-of-Area Workers in Non-Residential Construction on Contra Costa County. A Case Study of the USS-Posco Modernization.” In Association with the Institute of Industrial relations, University of California. July, 1989

The DEIS failed to take a hard look at the probable socio-economic impacts from the very likely probability of the importation of a large percentage of the construction work force. To the contrary, the DEIS’ discussion of socio-economics fell into a common error in an EIS. It became a cheerleader for what it assumed was a positive project benefit.

One book on the EIS process warned against these types of conclusory statements that could be termed “advertising claims” which are stated as fact. Claims of economic benefits are among the most common problem areas, warned the authors, and this advertising claim of economic benefit is also a problem in this DEIS. (Jain, Urban, Stacey, and Balbach. Environmental Assessment. 1993. McGraw-Hill. P. 159)

**Response:** The EIS addresses the anticipated sources of construction workers and specifically that the majority of workers would commute to the project site from the existing metropolitan areas of Meridian and Philadelphia (refer to Subsection 4.2.11.1). The number of construction workers, even at peak employment, would not create a boomtown effect in these much more populous cities. This possible effect was studied in detail through the commission of specific reports addressing the number of out-of-work potential employees in a 65-mile radius and the availability of adequate housing. A work camp arrangement is specifically not anticipated; potentially associated problems of increased crime and burden on public infrastructure would, therefore, not result.

Also, the comment presumes that KBR, BE&K, or some other project contractor would be responsible for construction. This is not accurate. While KBR would support the project with engineering and procurement, Mississippi Power affiliate Southern Company Services is leading design and engineering and would be responsible for construction of the project. Therefore, the comment regarding the performance of other entities at other locations is not relevant.

In summary, DOE believes its assessment of workforce-related impacts is reasonable.

**JW-61: ADDITIONAL DISCUSSION OF THE DEIS' INADEQUATE REFERENCES TO THE MINED LANDS RECLAMATION****ACIDIC RUNOFF**

The land to be mined contains large amounts of acid-generating materials. (p. 3-37) Many square miles of these lands will be stripped and stockpiled and exposed to wind and rain. These procedures will likely cause production of acid drainage, due to the large amounts of area rainfall (almost five feet per year, Table 3.6-1)) that will rinse and leach the acid-producing materials from the excavated soils and overburden.

Almost 1000 acres of land will be initially disturbed, left exposed and unreclaimed each year. The first year almost another 300 acres will be disturbed and only 12 acres will be reclaimed, leaving about 1200 exposed acres. Each successive year more land will be disturbed than reclaimed, leaving 1271-to 1897 acres exposed and unreclaimed, until after 43 years there are 1336.30 acres disturbed and unreclaimed until the final year. (Table 2.4-1) These areas will be reclaimed by placement of oxidized (acidic) overburden on the disturbed areas.

This means that about over 1000 acres times almost 5 feet of rainfall will wash over this disturbed lands containing acid-generating materials, producing over 5000 acre –feet of potentially acidic stormwater runoff, or well over 160,000,000 gallons of tainted stormwater runoff. Even the reclaimed areas will feature millions of gallons of stormwater rinsing through the oxidized overburden.

**Response:** With few exceptions, the soils of the project area are strongly acid to moderately acid. This refers to the surface soils in the existing mine study area, premining. The reclaimed soil procedure and quality are addressed in the EIS in Subsection 4.2.3.2.

The initial land disturbance would occur to construct sediment ponds, the mine offices and parking lots, life-of-mine haulroads, and shop facilities. These areas (the initial lands disturbed) would have these features occupying them until the conclusion of the life of mine or until no longer needed when reclamation would take place.

The oxidized overburden proposed for reclamation is not acidic and does not contain any acid-producing elements. This is explained in detail in Subsection 4.2.3.2 of the EIS.

The Final EIS has been expanded to specifically address the potential for acid mine drainage. Included in that analysis are 5 years of compliance monitoring data from the Red Hills Mine, which is extricating lignite from the same geologic formation as is proposed in Kemper County. The data demonstrates discharges from the Red Hills Mine have been mildly alkaline, rather than acidic. Based on this data and the analysis presented in the Draft EIS, DOE concludes that acid mine drainage from the proposed lignite extraction is unlikely.

**JW-62: INCREASED METALS DISCHAGES TO WATER**

This acid runoff would potentially liberate metals and toxins in the overburden and soils, washing those materials into the surface waters. While initial tests of the overburden show the presence of low levels of metals, the DEIS failed to explain if leaching tests have been performed to determine to what extent those metals can be leached by stormwater. (Table 4.2-9) These metals concentrate in the sediment runoff ponds.

Although Section 4.2.3 was touted at page 2.47 as an explanation of the impact of using oxidized overburden for reclamation, no explanation of these or other potential impacts was found at this heading.

The DEIS provided data showing currently detectable levels of metals in groundwater and surface water, indicating that metals currently entering the aquatic environment. Mining's surface disturbances and the exposure of overburden and soils to weathering will only increase these discharges of metals.

**Response:** Page 2-47 of the Draft EIS correctly identifies Subsection 4.2.3 as explaining the use of oxidized overburden and the impact of that use. In addition, Table 4.2-9 (also in Subsection 4.2.3) provides physical and chemical information to further evaluate the impact of oxidized overburden for reclamation.

DOE has analyzed the CWA Section 402 permit discharge monitoring data from the operating Red Hills Mine for calendar years 2004 through 2009. The Red Hills Mine extracts lignite from the same geologic formation as is proposed in Kemper County.

Discharges from the Red Hills Mine have been alkaline, not acidic. With few exceptions, the pH of water discharged has been above 7.0 pH. When discharges were less than 7.0 pH, the water was mildly, not strongly, acidic. Therefore, DOE disagrees with the conclusion that acidic discharges are probable.

**JW-63: ADDITIONAL METALS SOURCES--COAL ASH**

The existing North American Red Hills mine used coal ash to "pave" the on-site roads. The Kemper ash will contain elevated levels of heavy metals and selenium. Similar use of the Kemper ash as road paving material at the new Liberty Mine would cause and contribute to leaching and discharges of metals, selenium, and other toxins in addition to the releases from the acidic overburden and exposed soils. The DEIS concedes at p. 2-64 that the ash will be offered for road paving material.

Coal fired power plants have caused elevated levels of selenium at other locations which have caused wildlife mutations and birth deformities.

**Response:** Gasification ash would only be used in applications as approved by the appropriate regulatory authorities. Leachate from the gasification ash has been shown to meet regulatory limits for land-fill disposal.

**JW-64: AIR EMISSIONS**

Table 2.6-1 shows that Kemper will emit about one half-ton/year of heavy metals and selenium, some of which will fall onto the mined lands or otherwise be deposited within the watershed drainage. These emissions will add to the cumulative impacts of metals and toxins on soil and water quality.

The DEIS at 4-17 admitted that Kemper's airborne sulfur and nitrogen emissions would increase acidification of nearby soils, but incorrectly concluded that compliance with NAAQS standards would protect soil quality. A proper analysis would calculate annual tonnages of sulfur and nitrogen compounds deposited on nearby lands and determined the levels of impacts, since chemical deposition can cause adverse impacts even if a facility complies with the NAAQS. Regulators concede, for instance, that acid rain has become an intolerable impact in recent years, even while the NAAQS was not exceeded.

**Response:** A screening analysis has been added to Subsection 4.2.6 for effects of PBTs on vegetation and wildlife. All estimates were less than 1 percent of the screening thresholds. Mercury is the only toxic compound released in quantities that could have persistent, bioaccumulative effects. An analysis of mercury deposition has been added to the Final EIS.

The issue of acid rain is addressed in Subsection 4.2.1.2 of the Final EIS. Results of a screening analysis of sulfur and nitrogen deposition have been added to this discussion. The screening analysis shows that the Kemper County IGCC Project's contribution to deposition would be relatively small. Compared to representative ambient deposition measurements made at EPA's CASTNet site at Coffeeville, Mississippi (please refer also to the response to JW-53), the average predicted sulfur deposition from the IGCC plant would be approximately 4 percent of ambient within 10 km of the facility and less than 1 percent within 50 km of the facility. Similarly, the maximum nitrogen deposition, estimated to occur 20 km from the Kemper site, was estimated to be less than 2 percent of the ambient background value.

**JW-65: MINE OPERATOR'S VIOLATIONS**

Published accounts state that North American, the mine owner, has several environmental violations recorded against its existing Mississippi lignite mine. The DEIS failed to disclose or discuss these violations, which directly bear on the likelihood that North American will fully avoid adverse water quality impacts from the proposed mine site.

**Response:** DOE investigated the occurrence of violations at the existing Red Hills Mine by extracting information from EPA's Enforcement & Compliance History Online (ECHO) Web site. The Red Hills Mine was listed as having CWA and RCRA permits. In the past 5 years, it was indicated that MDEQ issued four violation/warning letters. Mr. Jay Barkley of MDEQ's Environmental Compliance and Enforcement Division was contacted about these violations. He recalled that the mine did have some high chlorine levels and problems with their sanitary waste system in the past. These were characterized as minor and infrequent events that did not lead to adverse environmental impacts or formal enforcement proceedings.

DOE also contacted Mr. Stan Thieling, the Director of the Mining and Reclamation Division of MDEQ. He knew of only one violation having been issued to the Red Hills Mine, which occurred approximately 10 years ago. This was either before or at the time that the mine began operation. He characterized the violation as a minor incident with no environmental consequences (a gravel roadway leading to a retaining pond that was permitted to be 20 ft in width was 17 ft wide at one point.) The result was a \$300 fine.

Given the history of environmental compliance at the Red Hills Mine, DOE concludes that it is likely that NACC would manage the proposed new mine in an environmentally responsible manner.

**JW-66: SUMMARY**

The DEIS fails to adequately address how the mine will mitigate these potentially significant impacts of acidic runoff and metals and selenium deposition and releases, beyond general discussion about introducing buffering materials.

The disturbance of several square miles of lands, and the 40-year mine life, threaten water quality. Simple buffering would be dwarfed by this problem's magnitude, and the potential downstream impacts in Okatibbee Lake and other water bodies.

The commentors oppose issuance of a “401 Certification” for the above and below reasons and for other water-quality impacts cited in these and others’ comments on the DEIS.

**Response:** As noted in the response to JW-62, DOE’s analysis of water discharges from the Red Hills Mine concludes that discharges from the proposed Kemper County Mine are likely to be mildly alkaline, not strongly acidic. Therefore, heavy metals are not likely to be contained in the discharges at elevated levels.

Subsections 4.2.3 and 3.5.2 address the soils discussion regarding the mine. They also address how the reduced material (potentially acid forming) would be placed back into the bottom of the pit where it was originally through the spoil placement techniques. Only oxidized materials would be placed on the surface of the reclaim. In addition, postmine soil monitoring and sediment pond monitoring provides protection from potential metal issues.

Please note, this is not a 401 certification document for the surface mine. The MDEQ 401 permit for the surface coal mine will be applied for in later in 2010 or 2011.

**JW-67:** **WETLANDS MITIGATION PLAN**

Reading between the lines of the DEIS, the commentors are concerned that the descriptions of ongoing wetlands restoration plans during mining are not adequate to significantly restore wetlands functions. The “true” wetlands mitigation plan will be setting up a “wetlands mitigation bank,” to improve wetlands at some other location. But the DEIS does not tell readers anything about this mitigation bank.

**Response:** The final mitigation plan for the project will be available for public inspection once the permit application(s) detailing wetland impact, identifying functions and values of those wetland proposed for impact, and proposed mitigation for wetland functional losses has been evaluated by USACE. The final USACE action will detail wetland functional losses and requirements for mitigation to offset those losses. The final action would also detail permit conditions specifying mitigation type, amount, and monitoring requirements if not mitigated solely by a mitigation bank credit purchase.

**JW-68:** **THE DOE SHOULD HAVE DELAYED THE DEIS UNTIL THE WETLANDS MITIGATION BANK DETAILS COULD BE PROVIDED TO THE PUBLIC**

The mitigation for the project’s destruction of wetlands will not be readily accomplished by reclamation of the mine site. Instead, “an off-site mitigation area proposed to be determined in the future.” (P 2, Army Corps Notice for the Liberty Mine.) In other words, someday, somewhere, some wetlands may be restored at a “mitigation bank.”

The existence of, much less the contents of this extremely important wetlands mitigation bank are barely hinted at in the DEIS.

Army Corps persons said privately at the December, 2009, public meeting that the project developer has recently provided the Corps additional details about this proposed mitigation bank. If true, we think it was underhanded for the DOE to publish a draft EIS just a few weeks before this mitigation bank plan was available for public review. The result is we are commenting on the wetlands mitigation plan in the dark, deprived of important details. We ask that the comment deadline for this DEIS be extended until commentors can review the mitigation bank details.

Going forward prematurely with the DEIS just before the wetlands mitigation bank plans will be made available is not legal. The law is clear. A “...perfunctory description of mitigating measures is inconsistent with the ‘hard look’ [that] is required to render under NEPA. ‘Mitigation must be

discussed in sufficient detail to ensure that environmental consequences have been fairly evaluated.’ ‘A mere listing of mitigation measures is insufficient to qualify as the reasoned discussion required by NEPA.’ *Neighbors of Cuddy Mountain v. USFS*, 137 F.3d 1372, 1380 (9th Cir. 1998) (citations omitted).

Since this DEIS has provided not even a perfunctory look at, much less a perfunctory description of, the wetlands mitigation bank, this DEIS lacks the legally required “hard look” that NEPA requires.

**Response:** The EIS clearly states USACE will fully implement its NEPA and CWA Section 404 responsibilities. In Subsection 2.2.1, the EIS explains how USACE’s implementation of its responsibilities relates to DOE’s decisionmaking with respect to DOE actions. As stated therein, USACE will first evaluate impact avoidance and minimization measures. Once these evaluations are complete, evaluation of the proposed compensation for impacts to aquatic resources will be conducted as part of USACE’s Section 404 permitting process. USACE will review the proposed compensatory mitigation plan to ensure it is in compliance with and meets the requirements detailed in *Compensatory Mitigation for Losses for Aquatic Resources* (33 CFR 332) prior to final approval and permit issuance. Therefore, USACE’s permit evaluation process likely will continue past the date of DOE’s ROD on the EIS. Thus, USACE will fulfill its responsibilities under NEPA when its permit application evaluation is completed.

**JW-69: CONCERNS ABOUT MITIGATION RATIOS**

The developers in the DEIS Appendix P provide calculations about the appropriate areas of replacement wetlands that should be included in the mitigation bank. The commentors believe, as stated above, that the continuous restoration of a hundred of more acres each year, within an active mining operation, that is surrounded by highly disturbed lands, featuring high levels of acidic stormwater runoff containing metals and toxins, intermingled with toxic discharges from waste water units, will not produce useful wetlands habitat until the mining is completely ceased after 40 years.

The interim reclaimed areas will not provide retention of stormwater through natural designs, that provide wildlife habitat that possesses high levels of wetlands functions. Erosion, turbid waters, elevated metals levels, lack of vegetation, and the surrounding noise, dust, and surface disturbance of an ongoing mining operation will reduce the value of the reclaimed wetlands during the active mine life.

The commentors ask that the mine and power plant owners be required to design a scheme to avoid killing the existing wildlife and aquatic species and any rare or scarce plants during site clearance, for instance by earlier site surveys on foot. Trained personnel could perform critter and plant rescues and relocation prior to site clearance.

High quality wetlands values cannot be restored after a few years and become better-than-before after 40 years (See Appx. P, p. 8-9 for an example). The 40-year lag between wetlands destruction and restoration to high values, even if possible, is such a long temporal wetlands loss that little, if any mitigation credits would be due.

Some experts characterize wetlands mitigation as “experimental, and state that it might take several decades to restore functional equivalency in created wetlands. Many generations of organisms are lost during the establishment phases of mitigation projects. (Bill, 1991,Golet, 1986, Demgen, 1988, Rylko and Kentula, 1991, Zedler, 1984)

The developer claims that restoration, including introduction of high-value hardwoods to replace the current low-quality pines and pasturelands (Appx P, p.6-7) will achieve considerable mitigation “credits.”

**Response:** Should USACE decide to issue permits for the Kemper County IGCC Project, wetland mitigation requirements would be established in the permit to offset functional losses, including temporal lag, as required by its Mitigation Rule (see 33 CFR 332).

As stated previously, there would not be highly acidic stormwater or high levels of metals and toxins generated on the mine or discharged into wetland habitats. This is further explained in answers to previous comments and in the referenced sections of the EIS.

Threatened and endangered species baseline surveys were conducted at the mine study area and are presented in Subsections 3.8.3.3 and 3.9.3.3 of the EIS.

Mitigation credits obtained in the reclaimed areas would meet the measured requirements of USACE prior to acceptance as mitigation of wetlands and streams.

**JW-70:** However published accounts state that 95% of the reclaimed lands at the existing Red Hills mine are replanted in pines, not high quality hardwoods. For this reason the commentors oppose the award of any mitigation credits based on claims that pines and pastures will be replaced by higher-quality hardwoods in reclaimed wetlands.

Documented successful compensation for forested wetlands is rare. Some scientists feel it is virtually impossible to create functionally equivalent wetlands for these types, partly due to their sensitive long term hydrologic requirements and because they reach maturity slowly. (Golet, Walker 1986, Carothers et al, 1990, Kulser and Kentula, 1990)

Many studies show that often half or more of created/restored wetlands often lack the size, functions and replacement types needed to accomplish even a rough mitigation for the lost wetlands. For instance only 33% of wetlands replacement in the San Francisco Bay area were deemed successful in follow-up studies. (Demgen, 1988) In Oregon, later monitoring found that none of the replacement wetlands were created according to their plans or in compliance with their permit conditions.

**Response:** At least 95 percent of the reclaimed lands at Red Hills are uplands and not wetlands. Landowner preference is a factor in which type of trees are planted when a deed restriction or covenant cannot be obtained. NACC does not exercise eminent domain.

**JW-71:** **STORMWATER CONTROL BASINS ARE NOT WETLANDS**

As previously mentioned, hundreds of million of gallons of stormwater runoff will pass through the mine site. Runoff control will typically require the construction and maintenance of multi-acre open ponds, including but not limited to the ponds and diversion channels cited on p. 4-22.

These stormwater containment structures will contain turbid water that is highly contaminated with dissolved and suspended solids, and metals and toxins. The power plant site itself and other locations will produce and contribute stormwater runoff that is polluted from spills and leaks of oil and vehicle fuels, from fueling and maintenance of vehicles and equipment, and vehicle tire residues.

As one study found,

“Stormwater runoff is an important source of toxic substances to the marine environment. In this study, simulated rainfall was applied to parking lots to examine the toxicity of runoff while controlling for antecedent period, intensity, and duration of rainfall. Runoff samples were tested for toxicity using the purple sea urchin fertilization test. Every runoff sample tested was found to be toxic. The toxicity increased rapidly during the first month. No difference in toxicity was found between the different levels of use or maintenance treatments. The intensity and duration of rainfall were inversely related to degree of toxicity. For all intensities tested, toxicity was always greatest in the first sampling time interval. Dissolved zinc was most likely the primary cause of toxicity based on toxicant characterization of selected runoff samples,” (I. Greenstein, L Tiefertaler, and S. Bay. Southern California Coastal Water Research Project, 717! Fenwick Lane, Westminster, California 92683, United States)

In other words, these stormwater treatment basins are not “wetlands.’ They are pollution control treatment systems. If those basins discharge into the project’s ‘enhanced” and “created wetlands,” those wetlands will become polluted too.

The commentors urge the regulators to insure these stormwater containment basins and channels are not “counted” as wetlands because these features do not provide high quality wetlands functions, they contain polluted waters, and do not include appropriate aquatic habitat just because ducks may land on the water.

Any “reclaimed” wetlands downstream of the waste water treatment system will likely also contain water too polluted to quality as a functioning wetland also, and should not be considered eligible for mitigation credits.

**Response:** NACC does not consider stormwater control points and sediment ponds to be wetlands. These are two different items and are treated differently. The sediment ponds are to capture all water that comes in contact with mining-related activities. This water is treated to reduce sediment, sampled to be tested, and released to flow back into the streams when samples indicate it meets all state and federal criterion. These sediment ponds are temporary.

Wetlands, on the other hand, are not used to capture and treat water.

As stated previously, requirements for wetland mitigation and the management of the mitigated wetlands would be determined by USACE in the permitting process.

**JW-72: SUMMARY**

Since the premature release of the DEIS has thwarted any opportunities to review the mitigation bank plan, the commentors offer the following suggestions on wetlands replacement mitigation ratios. As stated, because of the decades of proposed wetlands losses, the likelihood that most of the area will be reclaimed to pines and pasture, the distortion of natural drainages, and the acidic runoff, no mitigation wetlands credits are due from mined lands reclamation.

The undisclosed, but likely distance between the mining site, and the unknown mitigation bank site, which may not even be within the same watershed, also requires a high mitigation ratio. It is likely that the mitigation bank area will include enhancement as part of the mitigation, but that will only allow a gain in function and not in area.

For these reason, the commentors suggest that the Record of Decision require that 5 acres of wetlands should be restored and protected within the mitigation bank area for every acre of wetlands that is disturbed during the mining.

**Response:** The mitigation ratios for any wetland disturbance authorized by USACE will be calculated by applying the requirements of 33 CFR 332. USACE's Mobile District Stream Operation Procedure will be the basis for determining the type and magnitude of stream mitigation required. As noted in the Draft EIS, however, USACE has yet to decide if any impacts will be authorized.

**JW-73: THE DEIS FAILED TO PLAINLY DISCLOSE THE CONCURRENT ARMY CORPS AND STATE 401 AND 404 PUBLIC COMMENT PERIOD**

The Army corps is a cooperating federal agency for this DEIS. But the DEIS does not plainly warn readers and commentors that their comments on this DEIS will be reviewed by Army Corps as part of their decision making process for the Section 401 and 404 permits. See for instance the discussion of the Army Corps role on page 1-5, which admits the Corps is considering whether to issue these permits, but this section does not plainly state that the Army Corps will utilize this EIS and the comments as part of its review process.

Nor does the DEIS' description of the proposed action on p. 2-1 mention that the proposed actions include issuance of the 401 and 404 permits. Less vigilant reviewers mistakenly assume that the Army Corps may have its own public comment and NEPA compliance procedures in the near future.

This failure to alert commentors that their comments will be reviewed by these other agencies as part of a related permit process, undermines the purpose of the NEPA review.

The purpose of NEPA is to "insure that environmental information is available to public officials and citizens **before** actions are taken." 40 C.F.R. § 1500.1(b)(emphasis added). *See also, Dubois v. U.S. Department of Agriculture*, 102 F.3d. 1273,1294, (1<sup>st</sup> Cir. 1996), *cert. den.* 138 L.Ed.2d. 1013 (1997) and *Kleppy v. Sierra Club*, 427 U.S. 390, 410, n. 21 (1976). To the extent that the NEPA document at issue (in this case a Draft Environmental Assessment or EA) fails to take into account such facts it is legally insufficient to satisfy this fundamental objective.

If no one knows that other agencies, including Army Corps and Mississippi DEQ, will be issuing permits whose impacts are being studied in this EIS, then environmental information, which are the commentors' concerns in this instance, will not be addressed and written to be helpful to public officials, namely the Corps and DEQ.

**Response:** To clearly notify the public of DOE's and USACE's related actions, three public notices were issued concurrently: (1) the DOE Notice of Availability of the Draft EIS; (2) the USACE Notice of Receipt of the MPC Section 404 permit application; and (3) the USACE Notice of Receipt of the NACC Section 404 permit application. USACE's administrative record for each application will include the Draft EIS, Draft EIS public comments, Final EIS, and public comments submitted directly to USACE as requested in the public notices, as well as all other information and documents as prescribed by 33 CFR 325. Subsection 1.4.2 in the EIS clearly states USACE intends to conduct its Section 404 permit application evaluations as required by its regulations in addition to the NEPA process.

USACE clearly stated in two public notices issued at the same time with the Draft EIS that all comments will be considered as part of the review process. USACE intends to use the DOE/USACE EIS as part of the review for the proposed projects for both the Mississippi Power and the NACC. The public notices identified the notice of availability for the DEIS. Additionally in a recent public hearing held by DOE, DOE noted to the public in attendance that USACE was present in the audience. In both public notices (SAM-2008-1759-DMY and SAM-2009-1149-DMY), USACE clearly identified that an EIS is being prepared to determine the potential environmental impacts associated with the actions. USACE stated that public notice-

es are being distributed to all known persons in order to assist in developing facts on which a decision by USACE can be based. USACE provided copies of the public notices to all adjoining property owners, posted copies on its Web site, and provided an e-mail response to its mailing lists. USACE stated in the public notices that any comments received will be considered by USACE to determine whether to issue, modify, condition, or deny a permit for the proposal. USACE also stated that the comments are used in the preparation of the EIS pursuant to the NEPA. Roles on behalf of USACE are outlined for the intent in Chapter 1 and other areas throughout the EIS. Therefore, USACE disagrees that the Draft EIS failed to plainly disclose the intent to evaluate a Section 404 DA permit application.

MDEQ has the responsibility of the Section 401 water quality certification review process for a proposed action. USACE public notices both clearly state that they are a joint public notice for USACE, MDEQ, and MDMR. Likewise, MDEQ conducted a series of public notices associated with their permitting process in addition to a public hearing held in January of 2010 regarding all permit applications from Mississippi Power currently under review by their agency including the Section 401 water quality certification evaluation.

**JW-74:**      **COMMENTS ON THE 401 CERTIFICATION**

These comments related to the 401 certifications requested by the proposed Liberty Mine and the Kemper IGCC power plant, described. The commentors hereby request a public hearing.

Mississippi Water Quality regulations state that the Section 401 certification application is the Army Corps public notice. The notices for these projects do not comply with these regulations because the notices do not provide a description of the applicant's future development of an off-site wetlands mitigation bank. This notice also fails to provide the necessary complete description of the mining activity that will cause the wetlands losses or a description of the materials (including oxidized overburden) used as fill, although a description is contained in the DEIS.

Our attached comments discuss why the proposed discussion of alternatives was not adequate, and vital information about the proposed wetlands mitigation bank, including its very location, was not provided in the DEIS.

Our comments on the DEIS also object to the adequacy of that discussion regarding a variety of water quality impacts including but not limited to storm water management. We also understand that the mine applicant has an environmental violation history.

We believe that the proposed activity permanently alters the aquatic system at portions of the mine site such that water quality criteria will be violated, and it will not support its existing or classified uses, for up to 40 years at various locations. Forty years of mining on 2000 acres of wetlands and scores of miles of streams will effectively destroy this water system for two decades, with no assurances that anyone alive today will be able to confirm that the aquatic system will ultimately be restored to prior uses.

Our comments on the DEIS discuss several feasible alternatives that reduce the project's adverse consequences. The project will mine with the 150-foot buffer zone for perennial streams required by Department regulations.

**Response:**      Prior to deciding whether to issue permits to Mississippi Power and NACC, USACE will evaluate this and all other comments on the Section 401 water quality certification, if and when MDEQ issues one. USACE will also consider all requests for a public hearing on the Section 404 permits in accordance with 33 CFR 327. Please note that a request for a public hearing on the MDEQ Section 401 certification must be filed with MDEQ in accordance with their rules.

USACE disagrees with the statement that the public notice does not comply with regulations. All items included in the public notices for both applicants are in accordance with the requirements set forth in 33 CFR 325. Comments provided by the public as a result of these public notices that relate to the jurisdiction of the Section 404 program are evaluated to the fullest extent by USACE. All items subject to the jurisdiction of MDEQ are provided to their agency for review and consideration as part of the process.



December 21, 2009

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**Summary of Comments**

The Draft Environmental Impact Statement for the Kemper facility (hereinafter "DEIS") is legally and technically flawed because it improperly defines the project's purpose and need and fails to consider and analyze reasonable, available, and less environmentally harmful alternatives and mitigation measures. Further, DOE failed to adequately assess all of the direct, indirect, and cumulative impacts of the project. Among other failures:

- DOE has prejudiced the NEPA process by providing funding for the proposed project before the environmental analysis has been completed. See 40 C.F.R. § 1502.2(f) ("Agencies shall not commit resources prejudicing selection of alternatives before making a final decision"); id. at § 1506.1(a).
- The DEIS has arbitrarily constrained the alternatives analysis by narrowly defining the purpose and need to a IGCC facility without assessing whether the actual generating needs could be met through renewable energy, conservation and efficiency, or other sources of fuel, such as natural gas. See *Friends of Southeast's Future v. Morrison*, 153 F.3d 1059, 1066 (9th Cir. 1998) ("An agency may not define the objectives of its action in terms so unreasonably narrow that only one alternative from among the environmentally benign ones in the agency's power would accomplish the goals of the agency's action," because "the EIS would become a foreordained formality").
- There are substantial uncommitted resources available in Mississippi to meet project power needs. In 2008, there were 5,862 MW of combined-cycle natural gas-fired capacity in Mississippi, and none of the generating units operated above a 50%

SC-01

SC-02

SC-03

SC-04

capacity factor. Increased production at these facilities would more than meet the purported future increased energy needs of Mississippi, and would save ratepayers from price hikes to pay for a new IGCC facility. Given the large price tag and significant environmental impacts, the DOE should not fund an unnecessary coal plant just to prove a new technology.

SC-04 (contd.)

• The DEIS fails to consider the use of an air-cooled plant design, or even an air-water hybrid cooler, which would save millions of gallons of water every day for the operating life of the plant.

SC-05

• The DEIS failed to consider alternative locations for the IGCC facility, including next to, or in closer proximity to, the existing Red Hills Mine in Ackerman, Mississippi. The strip mine in Kemper would be responsible for 90% of the wetlands losses as a result of the project. The DEIS failed to compare and describe, even briefly, the impacts from supplying the Kemper project for its entire life from the existing Red Hills Mine, or siting the project next to, or closer to the Red Hills mine. The power plant could also be sited next to existing lignite mines in Louisiana and Texas.

SC-06

**I. Introduction**

The National Environmental Policy Act (NEPA) is our "basic national charter for the protection of the environment." 40 C.F.R. § 1500.1. Congress enacted NEPA "[t]o declare a national policy which will encourage productive and enjoyable harmony between man and his environment; to promote efforts which will prevent or eliminate damage to the environment and biosphere and stimulate the health and welfare of man; [and] to enrich the understanding of the ecological systems and natural resources important to the Nation." 42 U.S.C. § 4321. To accomplish these purposes, NEPA requires all agencies of the federal government to prepare a "detailed statement" that discusses the environmental impacts of, and reasonable alternatives to, all "major Federal actions significantly affecting the quality of the human environment." 42 U.S.C. § 4332(2)(C). This statement is commonly known as an environmental impact statement ("EIS"). See 40 C.F.R. Part 1502.

The EIS must "provide full and fair discussion of significant environmental impacts and shall inform decision-makers and the public of the reasonable alternatives which would avoid or minimize adverse impacts or enhance the quality of the human environment." 40 C.F.R. § 1502.1. This discussion must include an analysis of "direct effects," which are "caused by the action and occur at the same time and place," as well as "indirect effects which . . . are later in time or farther removed in distance, but are still reasonably foreseeable." 40 C.F.R. § 1508.8. An EIS must also consider the cumulative impacts of the proposed federal agency

action together with past, present and reasonably foreseeable future actions, including all federal and non-federal activities. 40 C.F.R. § 1508.7. Furthermore, an EIS must "rigorously explore and objectively evaluate all reasonable alternatives" to the proposed project. 40 C.F.R. § 1502.14(a).

In this case, NEPA requires the Department of Energy (DOE) to assess all impacts of the Kemper Integrated Gasification Combined Cycle (IGCC) power plant, including any associated energy generation and transmission facilities. 40 C.F.R. §§ 1502.14 & 1502.16. Specifically, the EIS must "present the environmental impacts of the proposal and the alternatives in a comparative form, thus sharply defining the issues and providing a clear basis for choice among options by the decision maker and the public." 40 C.F.R. § 1502.14. In order to adequately assess the environmental impacts of the project and of reasonable alternatives to the proposed project (including, but not limited to, the proposed project plus additional mitigation measures), DOE must assess the direct, indirect, and cumulative impacts that the proposed project and each alternative would have. For example, the DEIS must consider:

[E]nvironmental impacts of the alternatives including the proposed action, any adverse environmental effects which cannot be avoided should the proposal be implemented, the relationship between short-term uses of man's environment and the maintenance and enhancement of long-term productivity, and any irreversible or irretrievable commitments of resources which would be involved in the proposal should it be implemented.

... Possible conflicts between the proposed action and the objectives of Federal, regional, State, and local (and in the case of a reservation, Indian tribe) land use plans, policies and controls for the area concerned.

... Energy requirements and conservation potential of various alternatives and mitigation measures. Natural or depletable resource requirements and conservation potential of various alternatives and mitigation measures . . . [H]istoric and cultural resources, and the design of the built environment, including the reuse and conservation potential of various alternatives and mitigation measures. 40 C.F.R. § 1502.16.

For the reasons stated below, the Draft Environmental Impact Statement for the Kemper facility (hereinafter "DEIS") is legally and technically flawed because it improperly defines the project's purpose and need and fails to consider and analyze reasonable, available, and less environmentally harmful alternatives and mitigation measures. Further, DOE failed to adequately assess all of the direct, indirect, and

SC-07

cumulative impacts of the project. Accordingly, the Sierra Club requests that DOE concludes the Kemper IGCC facility will cause significant and irreparable environmental harm, reject the project. Alternatively, we request that DOE fully and completely address the following concerns and re-issue the DEIS for further public comment.

**II. The DEIS Fails to Reasonably Define Purpose and Need**

The definition of purpose and need in the DEIS is critically important because it determines the range of "reasonable" alternatives that may be considered. The DEIS impermissibly defines the purpose too narrowly "to demonstrate the feasibility of this selected IGCC technology at a size that would be attractive to utilities for commercial operation." DEIS at 1-6. Likewise, the DEIS's expressed need "to demonstrate advanced coal-based technologies that can generate clean, reliable, and affordable electricity in the United States" is an improperly narrow definition of need, *Id.* at 1-7.

Here, the DEIS has arbitrarily constrained the alternatives analysis by narrowly defining the purpose and need to a particular IGCC facility without assessing whether the actual generating needs could be met through renewable energy, conservation and efficiency, or other sources of fuel, such as natural gas. The purpose and need statements do not properly account for whether or not Mississippi actually needs the proposed power plant, what other power and/or conservation options are available to fulfill any projected need, and what other projects fulfill the CCPI missions. *See Friends of Southeast's Future v. Morrison*, 153 F.3d 1059, 1066 (9th Cir. 1998) ("An agency may not define the objectives of its action in terms so unreasonably narrow that only one alternative from among the environmentally benign ones in the agency's power would accomplish the goals of the agency's action," because "the EIS would become a foreordained formality") (quoting *Citizens Against Burlington, Inc. v. Busey*, 938 F.2d 190, 196 (D.C. Cir. 1991), *cert. denied*, 502 U.S. 994 (1991)) (correction in original). The DEIS purpose and need leave no room for any alternative to be reasonably considered.

Here, DOE failed to consider alternative energy solutions to satisfy any projected future need. The DEIS' narrow definitions forecloses the possibility that non-coal energy solutions such as existing natural gas plants could meet this need. The DOE must consider all reasonable alternatives, even those that are "not within the jurisdiction of the lead agency." 40 C.F.R. § 1502.14(c). *See also* Sierra Club Testimony to MS Public Utilities Commission on Kemper IGCC Certificate of Need, December 7, 2009 (attached as Exhibit to these comments), at 2:17-20 ("[Mississippi Power's] procedure for soliciting resources to meet its identified need has been heavily skewed to its preferred outcome, depriving itself, the Commission, other parties, and ultimately ratepayers of a full assessment of options to meet need." In

SC-07 (contd.)

SC-08

SC-09

SC-10

preparing the DEIS, DOE and Mississippi Power have violated the "letter and spirit" of NEPA. *Id.* at §1500.1.

SC-10  
(contd.)

In fact, DOE failed to consider any plans, save for four mining development schemes, that deviate from the proposed Kemper IGCC facility. As discussed in greater detail below, DOE rejected alternative design plans such as alternative fuel sources, locations, means of CO2 sequestration, plant layout, mining methods, power generating technologies, and plant size, simply because they deviate from Mississippi Power's plan developed during the Clean Coal Power Initiative (CCPI) process. This is a completely impermissible construction of "purpose and need" for the EIS that taints the remainder of the DEIS.

SC-11

Because of this narrow purpose and need, DOE admits that the only "reasonable alternatives available to DOE . . . would have been to select another project that applied to and met the eligibility requirements of the CCPI and loan guarantee programs." DEIS, at p. S-4. Ruling out alternatives prior to conducting the EIS, however, contravenes the entire EIS process: alternative plant designs, locations, and fuels should have been considered. Moreover, the CCPI and Energy Policy Act of 2005 (EPA 05) authorize funding for a wide range of energy solutions, not one specific plant design, which was simply all DOE considered here. If Congress mandated this specific facility was to be built, the purpose and need could be much narrower, but that is not the case here. *See e.g. City of Angoon v. Hodel*, 803 F.2d 1016, 1021 (9th Cir. 1986) ("When the purpose is to accomplish one thing, it makes no sense to consider the alternative ways by which another thing might be achieved"); *cf. Sierra Club v. Lynn*, 502 F.2d 43, 62 (5th Cir. 1974) ("alternatives . . . under NEPA . . . must be judged in light of the nature of the federal action and the underlying implementing federal legislation").

SC-12

In fact, Sierra Club's expert at Synapse Energy Economics, David Schlissel, after reviewing Mississippi Power's application for a certificate of need, concluded that "[Mississippi Power's] procedure for soliciting resources to meet its identified need has been heavily skewed to its preferred outcome, depriving itself, the Commission, other parties, and ultimately ratepayers of a full assessment of options to meet need." Schlissel Testimony, December 7, 2009, at 2:17-20.

SC-13

Even if the purpose and need of this facility to demonstrate clean coal technology for widespread commercial use is assumed proper, DOE nevertheless failed to consider the impacts of alternative facilities and their respective impacts on the environment in the DEIS. It was improper for DOE to discount any variation to the proposed Kemper IGCC plant, which, as discussed below, is in contravention of NEPA and Council on Environmental Quality (CEQ) regulations.

SC-14

**III. Proposed Action and Alternatives**

The DEIS fails to satisfy the basic function of NEPA: to inform the public and decisionmakers of the environmental consequences of the proposed action. The discussion of alternatives is at the heart of this process, yet no meaningful alternatives are provided here by DOE. There must also be an adequate no-action alternative that provides the public with a meaningful no-action benchmark, and a thorough discussion of the effects of alternative technologies and plant designs. The Sierra Club asks DOE to take into consideration the following viable and reasonable alternatives and their effects: an oxygen-blown gasifier facility, an air-cooled plant design, alternative plant locations, construction of the plant without the on-site mine, meeting energy needs through conservation and efficiency programs, using renewable energy sources, and co-firing coal with biomass or natural gas. This is a non-exhaustive list of reasonable alternatives, yet none of which were considered by DOE in the EIS process, making the DEIS legally insufficient.

SC-15

**A. The DEIS Fails to Satisfy the Basic Requirements and Function of NEPA Alternatives Analysis**

The purpose of an EIS is to "provide full and fair discussion of significant environmental impacts and shall inform decisionmakers and the public of the reasonable alternatives which would avoid or minimize adverse impacts or enhance the quality of the human environment. Agencies shall focus on significant environmental issues and alternatives . . ." 40 C.F.R. § 1502.1. The Council on Environmental Quality (CEQ) has stated the alternatives requirement is the "heart" of the environmental impact statement, 40 C.F.R. § 1502.14, and courts have found "a thorough study and a detailed description of alternatives . . . is the linchpin of the [EIS]." *Monroe County Conservation Council, Inc. v. Volpe*, 472 F.2d 693, 697-98 (2nd Cir. 1972). This is not the case here.

SC-16

According to CEQ regulations, "[t]he text of final environmental impact statements . . . shall normally be less than 150 pages and for proposals of unusual scope or complexity shall normally be less than 300 pages." 40 C.F.R. § 1502.7. The substantive portion of this DEIS is 132 pages,<sup>1</sup> yet alternatives are dismissed in only eighteen pages. *See* DEIS, Ch. 2.7. The environmental consequences of "alternatives" are covered in an incredibly meager five pages. *See id.* Ch. 4, at pp. 131-135. The length of this DEIS denotes "unusual scope or complexity," but its analysis suggests anything but that – this discussion of alternatives falls impermissibly short of NEPA requirements.

SC-17

The DEIS must "serve as the means of assessing the environmental impact of proposed agency actions, rather than just justifying decisions already made." 40

SC-18

<sup>1</sup> The DEIS is much longer if one includes substantive materials included in the nineteen appendices, some of which should arguably be included in the main body of the DEIS itself.

C.F.R. §1502.2; yet the DEIS does not provide an environmental analyses of alternatives to compare the proposed facility to, save for alternative mining sites and taking no action. DOE admits that it really only “analyze[d] in detail the project as proposed . . . and the no-action alternative.” DEIS, at p. S-4. The DEIS only describes environmental effects of Mississippi Power’s plan. This fails to meet the basic functions and requirements of NEPA.

SC-18  
(contd.)

**B. The Lack of Alternatives Fails to Provide Essential Information to the Public**

The main purpose of NEPA is to ensure that “high quality” “environmental information is available to public officials and citizens before decisions are made and before actions are taken.” 40 C.F.R. § 1500.1(b). A “touchstone for [a court’s NEPA sufficiency] inquiry is whether an EIS’s selection and discussion of alternatives fosters informed decision-making and informed public participation.” *Westlands Water Dist. v. United States DOI*, 376 F.3d 853, 868 (9th Cir. 2004) (quoting *Calif. v. Block*, 690 F.2d 753, 767 (9th Cir. 1982)). The lack of a described alternative, here, deprives the public of the ability to participate in the decision-making process because of the lack of quality information.

SC-19

“The purpose of the alternatives requirement is [also] to assure that the government agency as a decision-making body has considered methods of achieving the desired goal other than the proposed action. *Piedmont Heights Civic Club, Inc. v. Moreland*, 637 F.2d 430, 436 (5th Cir. 1981) (quoting *Sierra Club v. Morton*, 510 F.2d 813, 815 (5th Cir. 1975)). “Consideration of other realistic possibilities for action forces an agency to consider the environmental effects of a project and evaluate those effects against the effects of alternatives.” *Id.* The DEIS wholly fails to provide any substantive environmental impact comparisons, largely because no alternative courses of action were considered. The public is, therefore, left with no basis of comparison on which to make informed decisions and participate in the decisionmaking process, which is the pinnacle purpose of NEPA. *See Friends of the Earth v. Coleman*, 513 F.2d 295, 298 (9th Cir.1975) (“we . . . caution those charged with preparing impact statements against too heavy a reliance on a conclusory form of presentation, lest [NEPA’s] purpose of adequately informing the public of probable significant environmental impacts be undermined”). As such, the DEIS is legally insufficient to properly inform the public and interested parties.

SC-20

**C. The DEIS Fails to Consider Any Feasible Alternative Courses of Action**

As previously stated, DOE is required to evaluate reasonable alternatives in the EIS. 40 C.F.R. § 1502.14. DOE failed entirely to fulfill this requirement in the DEIS. DOE even stated that the following alternatives were dismissed from consideration by *Mississippi Power*, and not DOE: “alternative project size, alternative fuels, alternative plant layout on the site (the location of the plant

SC-21

footprint within the site boundaries), alternative mining methods, and options for CO2 sequestration.” DEIS, a p. S-12. This is alone is enough to render the DEIS insufficient.

SC-21  
(contd.)

1. DOE Failed to Adequately Provide a No-Action Benchmark

As required by law, the DEIS includes a “no-action” alternative. 40 C.F.R. § 1502.14(d). This “provides the standard by which the reader may compare the other alternatives’ beneficial and adverse impacts related to the applicant doing nothing.” *Kilroy v. Ruckelshaus*, 738 F.2d 1448, 1453 (9th Cir. 1984). To fulfill this requirement, DOE must “compare the potential impacts of the proposed major federal action to the known impacts of maintaining the status quo.” *Custer County Action Assn v. Garvey*; 256 F.3d 1024, 1040 (10th Cir. 2001), which DOE has not done in the DEIS. As DOE concedes, even if the project is not funded (which is the no-action alternative), there is the possibility that “the direct, indirect, and cumulative impacts would be essentially the same as the proposed action that is analyzed in this EIS.” DEIS at p. 2-68. There is therefore no benchmark with which to substantively compare the environmental effects of the proposed plant and the plant not being built.

SC-22

2. DOE Failed to Consider and Address the Environmental Impacts of and Improperly Rejected the No-Action Alternative

DOE failed to adequately consider the effects of its no-action alternative. According to DOE, the effect of it not providing Mississippi Power with federal funding is unknown. The plant would either be constructed as planned, or Mississippi Power would choose not to pursue the project. DEIS at 2-68.

SC-23

The DEIS provides an inadequate analysis of the environmental impacts of its no-action alternative by not addressing any environmental impacts of the plant not being constructed at this site. It simply concludes the environmental impacts will be “adverse or beneficial.” DEIS, at p. 2-68, 4-130. For example, DOE does not address subsequent use of the land if the Kemper facility is not constructed. DOE must fully address the environmental impacts of the no-action alternative, including all the impacts evaluated in DEIS Chapter 4 for the proposed plant (air, water, wetlands, soil, human health and safety, land use, etc.)

The no-action option was also improperly rejected because DOE determined it would not fulfill the purpose and need of Mississippi Power to construct the Kemper IGCC facility. The purpose and need are impermissibly narrow and do not properly account for whether or not Mississippi needs the proposed power plant, what other options are available to fulfill any projected need, and what other projects can fulfill the CCPI missions. The faulty purpose and need lead to an improper conclusion that the no-action alternative does not fulfill them.

SC-24

3. DOE Failed to Sufficiently Analyze the Effects of Alternative Technologies that Could Receive CCPI Funding

NEPA requires federal agencies to consider reasonable and feasible alternatives to the proposed action. The DEIS is flawed because it fails to consider any real and meaningful alternatives to the proposed action. The DEIS only considers two alternatives: The "no action alternative" and the building of Mississippi Power's proposed IGCC facility.

SC-25

Because DOE has created an unreasonable purpose and need for this proposed action, no reasonable alternative technology is discussed. If the alleged analysis of alternatives "consists entirely of foregone conclusions, rather than facts, the agency has failed to fulfill the minimal requirements of NEPA. *Town of Matthews v. U.S. DOT*, 527 F. Supp. 1055, 1058 (W.D.N.C. 1981). Although the DOE claims its "role in these private projects is limited to providing cost-shared funding and a loan guarantee to a project," DOE fails to discuss alternative technologies that it could fund. The DEIS admits that the DOE selected four different energy technologies for CCPI funding, DEIS at 2-71, but it did not compare the impacts of the projects with each other in the DEIS. Such a comparison is vital to the NEPA decision-making process. It is improper that "[t]he projects not selected under the CCPI Program were DOE's alternatives prior to the time of selection and were considered at that point in DOE's decision-making process." *Id.* at 2-74.

SC-26

4. DOE Failed to Properly Consider Oxygen-Blown IGCC Systems

The KBR air-blown gasifier using "TRIG" technology is the wrong gasifier technology for DOE to fund to economically reach high levels of CO2 capture. Oxygen-blown gasification is a much better technology to reach high levels of CO2 capture because it eliminates the large amount of inert nitrogen, which serves as a large volume of dilution gas in the gasifier-produced syngas stream. The fundamental defect with TRIG technology is that air is 80% nitrogen, and this means considerably more inert gas is moving through an air-blown gasifier resulting in a more dilute stream of CO2. Oxygen-blown gasifiers produce a more concentrated stream of CO2.

SC-27

To date, the KBR gasification technology has been a complete failure in IGCC applications. The DOE spent \$168 million, out of a total project investment of \$355 million, on the 100 MW Piñon Pine IGCC plant in Nevada that incorporated a KBR (then KRW) air-blown gasifier. The plant never reached commercial operation and was permanently abandoned. The 285 MW IGCC plant that Southern Company and Orlando Utilities Commission begun constructing in Orlando, Florida would have been equipped with the same KBR air-blown gasifier proposed for the Kemper IGCC project. The Orlando IGCC project did not include CO2 capture or

SC-28

sequestration and was cancelled in November 2007. The stated reason for the cancellation was uncertainty over future CO2 control requirements in Florida.

SC-28 (contd.)

The EIS should evaluate the alternative of using oxygen-blown gasifier technologies with a proven track record on lignite and low rank coals. The Lurgi fixed-bed oxygen-blown gasifier, which has achieved proven success in capturing CO2 from lignite combustion and compressing CO2 for pipeline delivery to EOR operations, should be evaluated as an alternative to the proposed KBR gasifier. The ConocoPhillips E-Gas oxygen-blown gasifier technology is also applicable to low rank coals and has been successfully used to gasify subbituminous coal.

SC-29

The DEIS evaluated three oxygen-blown gasifiers in its "Overview Comparison of IGCC and Other Coal-Based Technologies", which is not the technology proposed in Mississippi Power's Kemper IGCC plant. DOE admits neither the DOE nor EPA comparative coal technology study "lends itself perfectly to the Kemper IGCC project" because of this technological discrepancy. DEIS, at p. 2-74. The DEIS nevertheless dismisses oxygen-blown gasifiers because "the main purpose of the CCPI program is to facilitate the movement of promising technologies to the commercial marketplace through demonstrations like Kemper, where a low-rank coal would be demonstrated in just such a promising new technology [as KBR]." *Id.* As discussed above, however, better feasible technologies already exist.

SC-30

The DEIS nowhere addresses the potential effects of adopting oxygen-blown gasifiers, a reasonable alternative, for use at the Kemper IGCC plant, and does not account for this difference in its comparison of IGCC and other coal-based technologies. DOE has not, therefore, provided adequate justification for its exclusion of oxygen-blown gasifiers in the review process.

5. DOE Failed to Consider an Air-Cooled Plant Design as an Alternative

The proposed IGCC facility will require 6.5 million gallons of water per day (MGD), which will create a serious strain on the surrounding environment as a result of the massive drawdown. The proposed plan will use reclaimed water with a 1 MGD use of the Massive Sand well. The results of this will result in significantly less drawdown to surrounding aquifers than drawing 6.5 MGD straight from wells (up to 70 ft. of drawdown), but will still have adverse environmental impacts. This would also adversely affect human users, as well. *See generally* DEIS § 4.2.5.2. The DEIS should also state what effect this might have on agricultural use of water in the area.

SC-31

The use of an air-cooled plant design, or even an air-water hybrid cooler, would save millions of gallons of water every day for forty years, the effects of which

must be analyzed in the DEIS. This feasible design alternative is one that is reasonable and should be given serious consideration in the DEIS.<sup>2</sup>

SC-31  
(contd.)

6. DOE Failed to Consider Alternative Locations

Regardless of how the purpose and need is defined, the DOE has an obligation under NEPA to consider alternative sites. DOE is required to "[r]igorously explore and objectively evaluate all reasonable alternatives, and for alternatives which were eliminated from detailed study, briefly discuss the reasons for their having been eliminated." 40 C.F.R. § 1502.14(a). Even when an agency provides seven alternative courses of action for the same tract of land, courts have found this to be insufficient for EIS purposes. *Center for Biological Diversity v. U.S. BLM*, Case 3:06-cv-04884-SI (N.D. Cal. 2009). Such possible considerations include placing the plant farther away from wetland and perennial streams, and relocating the site to an existing lignite mine. DOE can provide Mississippi Power with CCPI funding for a coal-powered facility at any number of locations with lignite reserves, none of which were considered in this DEIS.

One possible alternative location DOE failed to consider was moving the plant next to, or in closer proximity to, the existing Red Hills Mine in Ackerman, Mississippi. The strip mine in Kemper would be responsible for 90% of the wetlands losses as a result of the project. The DEIS failed to compare and describe, even briefly, the impacts from supplying the Kemper project for its entire life from the existing Red Hills Mine, or siting the project next to, or closer to the Red Hills mine. The power plant could also be sited next to existing lignite mines in Louisiana and Texas.

SC-32

While four mine development plans are discussed, the location of the mining study area and power plant do not change. As such, the DEIS does not present any meaningful alternative to the proposed action in terms of minimizing environmental impacts, *see* 40 C.F.R. § 1502.14, and the DEIS is therefore fundamentally flawed.

DOE states that Mississippi Power chose the Kemper site prior to the DEIS being issued, DEIS, at p. 2-72, but it is the purpose of NEPA for alternative locations to be identified and analyzed in the DEIS, and not just appear as a conclusion that the location chosen is the best and only one. *See generally* 40 C.F.R. § 1052.14 (the agency must "rigorously explore and objectively evaluate all reasonable alternatives"). Even if DOE actually analyzed the site selection itself, it violated CEQ regulations by failing to include any such analysis in the DEIS to

<sup>2</sup> This is a feasible, widely-used technology. There are existing coal-fired air-cooled power plants in Wyoming (two Neil Simpson plants and the Wyodak plant), and numerous other air-cooled plants around the US and the rest of the world.

adequately inform the public and interested parties. *See* 40 C.F.R. § 1505.1(e) ("[r]equiring that the alternatives considered by the decisionmaker are encompassed by the range of alternatives discussed in the relevant environmental documents and that the decisionmaker consider the alternatives described in the environmental impact statement").

Rather than providing any analysis of the site selection, DOE supported Mississippi Power's choice stating that the IRS had already "accepted the project and proposed a closing agreement with Southern Company" for tax credits, which were conditioned on "among other things, locating the project in Kemper County. Without the investment tax credits, Mississippi's Kemper County project may not be economically feasible." DEIS, at p. 2-72. This is a wholly inadequate for an EIS: an EIS must "provide full and fair discussion of significant environmental impacts," 40 C.F.R. § 1502.1, not simply provide rationales for decisions based on funding availability.

DOE also states that one reason Mississippi Power chose the Kemper location was because of its "avoidance of . . . wetlands," DEIS, at pp. 2-73 to 74. The mine site, however, is located directly on wetlands ("Wetlands comprise 27 percent of the power plant site, 19 percent of the mine study area). DEIS, at p. S-15, and the project will divert or remove 56 miles of streams, *id.* at p. S-16. This is simply one reason why DOE itself must address the decision to build and mine on the Kemper site, and not relegate this analysis to the project proponent.

The omission of any reasonable alternative locations is impermissible. The Chief of the NEPA Program Office even commented that EPA was concerned with DOE discussing alternative site locations, stating DOE's analysis should include a discussion of existing power plants and energy needs, which is entirely absent from the DEIS site analysis. *See* DEIS, App. A, at pp. 70-73.

7. DOE Failed to Consider Construction of the Power Plant without the On-Site Lignite Mine

An alternative course of action that DOE did not consider is whether the future energy needs of Mississippi can be met by the construction of the Kemper IGCC facility without the proposed on-site lignite mine. As the DEIS acknowledges, there will be substantial impacts to a large acreage of land, with the potential for severe impacts to wetland areas as a result of the mining. The economic feasibility of building the Kemper IGCC plant without the mine is not considered, and neither are the environmental consequences of the Kemper facility using an off-site mine, such as the existing Red Hill Mine. This alternative course of action is both reasonable and viable as the Kemper IGCC plant plans to get its initial lignite coal supply from this location. DEIS at p. 2-34. The EIS should consider another existing

SC-32  
(contd.)

SC-33

source of lignite because not surface mining 13,000 acres next to and on top of wetlands would certainly have a potentially less environmentally-harmful impact.

SC-33 (contd.)

8. DOE Failed to Consider Alternative Methods of Meeting Energy Needs

According to the Energy Information Agency, "demand for electricity is projected to increase by more than 30 percent by 2030." DEIS, at pp. 1-1 to 1-2. There are numerous ways to meet this need, including efficiency and conservation programs, as well as renewable sources of energy, yet DOE has chosen only one option to do so. DOE's rationale that it can only look at CCPI selections is unacceptable. See DEIS at 2-74. Acceptance of this rationale would contravene the spirit and purpose of NEPA. DOE must consider alternative methods of meeting Mississippi energy needs because it is required by NEPA. Additionally, DOE has a duty to disclose these options as alternatives to Mississippi citizens as well as federal taxpayers.

SC-34

According to the Chief of the NEPA Program Office, "[i]n addition to the IGCC technology, other power plant designs should be considered and analyzed in the EIS. Various alternative technologies for coal and coal types, as well as conservation measures, should be considered. Rejection of alternative should be substantiated, including supporting environmental data." DEIS, App. A., at p. 73. DOE failed to heed to these scoping comments in the DEIS.

SC-35

a. DOE Failed to Consider Efficiency and Conservation Programs

Prior to the DEIS, "[EPA] recommend[ed] that the DEIS include a summary section of the conservation methods (or incentives) that the applicant is proposing for use in the service area," and asked DOE to "clarify to what degree conservation would satisfy the need for additional power." DEIS, App. A., at p. 73. This consideration is entirely absent from the DEIS.

SC-36

Efficiency is the cheapest, fastest, cleanest, and safest way to generate power. That is why a number of states and power companies are investing in improving conservation and efficiency. States with high growth, such as Florida and North Carolina, are employing aggressive energy efficiency and renewable standards to meet energy needs cheaply and cleanly, while at the same time, are rejecting plans to build new coal-fired power plants. In the Carolinas, Duke and Progress have launched initiatives to generate thousands of megawatts – more than this plant would produce – from greater efficiency and renewable sources of energy.

Mississippi Power, on the other hand, is taking the opposite approach. It is proposing to build a new coal power plant rather than investing in conservation and

efficiency. This is the wrong answer for Mississippi. The state of Mississippi and its electric utility industry can introduce a number of conservation and efficiency measures that may mitigate the need for new electricity generating units.

Sierra Club's expert has testified that efficiency programs can account for an 11% in total energy consumptions by 2020. Sierra Club Testimony, at 7:6-8:2, obviating the need for a new IGCC facility, particularly the size of the Kemper plant. See also Chandler and Brown; *State Specific Summaries of the Meta-Review of Efficiency Potential Summaries and Their Implications for the South*; The School of Public Policy, available at <http://www.spp.gatech.edu/faculty/workingpapers/wp51.pdf>

The DEIS fails to consider how to meet Mississippi's power needs with demand-side management. This is a non-exhaustive list of available demand-side management options:

- switching to compact fluorescent lights (CFL) or LED lighting;
- improved insulation and weatherization;
- energy efficiency appliances, such as refrigerators, air conditioners, geothermal heating systems, and hot water heaters;
- switching from electric to natural gas appliances such as heating systems and hot water heaters;
- energy efficient improvements in industrial application such as electric motors and HVACs;
- cycling programs for heating and cooling systems;
- programmable thermostats and down comforters;
- passive solar;
- energy audits;
- general energy education on conservation and efficiency; and
- efficient mobile home purchasing.

SC-36 (contd.)

Instead of merely accepting MPC's description of its meager demand side management programs, see DEIS at 1-8 to 1-9, the EIS must undertake an independent analysis of conservation and efficiency savings that would reduce energy needs and broaden the range of reasonable alternatives.

b. DOE Failed to Consider Renewable Energy Sources

The EIS must evaluate other economically beneficial means of generating electricity in a less environmentally harmful manner – such as using renewable energy. There are many forms of renewable energy that DOE should analyze including solar (photovoltaic and thermal), geothermal, wind (both on-shore and off-

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shore), small scale hydroelectric, biomass (which includes wood wastes, agricultural waste, switchgrass and prairie grasses), and biogas.

The EIS must consider a combination of options in order to meet the theoretical demand. For example, it is inappropriate to dismiss a specific renewable energy option just because it cannot produce the entire 660 megawatts of power assumed in the DEIS. Instead, the agency should consider a bundle of renewable energy alternatives to meet the requisite demand. Renewable energy, especially when coupled with demand-side management, as discussed above, may easily meet the energy needs of Mississippi Power's service territory. According to a Synapse Energy Economics, "[a]dditional energy efficiency resources appear to be available to assist in meeting Mississippi Power Company's projected need . . . For example, an analysis by Georgia Tech found that there is the potential for 11.6 percent reductions in total consumption in Mississippi." Sierra Club Testimony, at 3:3-7.

SC-37  
(contd.)

*c. DOE Failed to Consider Co-Firing Biomass with Coal*

When considering renewable energy options, the DOE should also, and failed to, consider co-firing biomass with coal. Biomass can be co-fired with coal to substantially reduce the emissions of regulated pollutants, including carbon monoxide, as well as to reduce CO2 emissions. There are numerous examples of coal plants co-firing biomass (or natural gas.) These plants provide a roadmap for such consideration in the EIS alternatives analysis. For example, the St. Paul heating plant burns approximately 60% biomass and 40% coal. The biomass is primarily waste wood from tree trimmings and other industrial activities. The Xcel Bay Point power plant in Ashland, Wisconsin, also burns large amounts of wood waste, consisting primarily of saw dust. The DOE has urged federal facility managers to consider co-firing up to 20% biomass in existing coal-fired boilers. In the Netherlands, all four electricity-generation companies (EPON, EPZ, EZH and UNA) have developed plans to modify their conventional coal-burning plants to accommodate woody biomass as a co-fuel.

SC-38

In considering renewable alternatives, the DOE should note that baseload and dispatchability are relative concepts. For example, forced outages of large coal-fired power plants often have dramatic effects on system reliability. Renewable energy sources will not have such a dramatic impact on system reliability because these sources are distributed and it is extremely unlikely these numerous generators would all be unavailable at the same time.

SC-39

In addition, the DOE should not simply dismiss a generation option because initial capital costs are higher than other generating options. Many of these renewable energy options that sometimes have high initial costs, such as fuel cells or solar panel, are eligible for federal tax credits or have decreased transmission costs. By considering these cost benefits, these options become more viable.

SC-40

*d. DOE Failed to Consider Natural Gas Combined Cycle Facilities*

There are "substantial uncommitted resources available in Mississippi. In 2008, there were 5,862 MW of combined-cycle natural gas-fired capacity in Mississippi. None of the generating units operated above a 50% capacity factor." Sierra Club Testimony, at 2:25-26, 3:1-2 (attached as Exhibit). Increased production at these facilities would more than meet the purported future increased energy needs of Mississippi, and would save ratepayers from price hikes to pay for a new IGCC facility. Given the large pricetag and significant environmental impacts, the DOE should not fund an unnecessary coal plant just to prove a new technology. The EIS must consider purchasing power from existing natural gas merchant plants.

SC-41

The DEIS also did not consider a natural gas combined cycle (NGCC) facility as an alternative to the proposed Kemper IGCC plant or co-firing natural gas with coal at the IGCC plant. By burning a mix of natural gas with coal, the Kemper facility could lower both its pound-per-MMBtu emission rate and its hourly emission rate. Instead, DOE considered only the planned Kemper IGCC plant, which proposes to use natural gas as a backup fuel. The EIS should consider co-firing natural gas with coal as a reasonable alternative.

SC-42

An NGCC or co-firing biomass facility is especially reasonable alternative; they even fall within the impermissibly restrictive purpose and need espoused by DOE because they would both also be eligible for CCPI and EPA05 Title XVII funding (provided coal remained 50% of the plant's fuel source). These "hybrid approaches" will also save "[Mississippi Power] Company's ratepayers [from the] unnecessary risks of future cost increases" due to a "large, long-lived, capital intensive coal-fueled resources." Sierra Club Testimony, at 9:13-14.

**IV. Environmental Consequences and Human Impacts**

**A. The DEIS did not Adequately Examine Air Pollution Impacts**

On December 7, 2009, the Environmental Protection Agency formally declared that carbon dioxide from the burning of fossil fuels poses a threat to human health and welfare.<sup>3</sup> Kemper will emit 2.8 million tons of CO2, and thousands of tons of other harmful pollutants every year. The impacts of these emissions deserve considered and complete analysis by DOE in the DEIS.

SC-43

Mississippi Power estimates that the proposed Kemper facility will generate 2089.6 tons of ozone-forming NOx, 669.7 tons of soot-forming SO2, and 521.8 tons of lung-damaging particulate matter (PM) every year. DEIS, App. C, at p. 3-7. (The

<sup>3</sup> Available at <http://epa.gov/climatechange/ endangerment.html>

EIS should also rectify or explain the discrepant TPYs given for the above pollutants found in Table 3-1 and other tables in the DEIS, as discussed below.) The DEIS states that the Kemper facility's NOx and SO2 emissions will comprise, by themselves, 45% of total emissions for both Lauderdale and Kemper counties. DEIS, at p. 4-12. This significant increase in pollution needs to be addressed in greater detail; a conclusory statement that the Kemper plant's emissions are less than other coal plants will not suffice. *Id.*

SC-43  
(contd.)

The EIS process should evaluate the air pollution impacts of the proposed facility as compared with the impacts of other alternatives evaluated; but because no alternatives were discussed, this evaluation is entirely missing from the DEIS.

SC-44

This EIS process should consider impacts to sensitive populations, such as children and the elderly, as well as impacts to the general public. DOE recognizes the increased risks to these populations. DEIS, at pp. 3-206 to 207, but does not address them in the impact analysis. While this analysis should include the criteria pollutants (sulfur dioxide, nitrogen oxide, particulate matter, and sulfuric acid mist), it should also examine the impacts from all other pollutants that would be emitted, including hazardous air pollutants, diesel exhaust, and both RGM and elemental mercury. The boilers themselves and other units, such as on-site diesel emissions from stationary, mobile sources, and construction equipment, must be considered. Fugitive emissions from haul roads, coal piles, and coal moving must also be considered. The DEIS should also consider air impacts from the life cycle of the fuel.

SC-45

As for the criteria pollutants, the analysis should not simply end because some impacts may be below the current National Ambient Air Quality Standards (NAAQS) for several reasons. First, EPA is currently in violation of its legal obligation to update and revise the NAAQS (except for particulate matter) and an EIS should not rely on out-dated information. In addition, NAAQS do not always protect public health. For instance, the EPA has acknowledged that adverse impacts, including premature mortality, are observed from ambient levels of PM 2.5 below the NAAQS. In fact, the EPA has concluded that it could not find any threshold below which it did not find adverse impacts.

SC-46

The DEIS also notably fails to consider the combined effect to fish and animals that subsist on the Chickasawhay River and watershed from the project's mercury and HAP emissions; climate change-induced impacts; and the cumulative emissions from all of the power plants in the region. The cumulative analysis should be both environmental and economic. EPA's analysis prepared for the remedy phase of its New Source Review enforcement action against the Baldwin power plant could serve as a useful model for such analysis.

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**B. The DEIS did not Adequately Analyze Mercury Emissions Impacts**

Mercury is an extremely hazardous neurotoxin that is dangerous at very low levels. Coal power plants are the single largest source of mercury air emissions in the nation, and deposition of these air emissions causes an accumulation of mercury in soils and water bodies. Coal plants can create mercury hotspots in the vicinity of the plant.<sup>4</sup> EPA has identified coal-fired utility boilers as the largest source of domestic anthropogenic mercury emissions to the atmosphere and has noted a causal link between these releases and the presence of methylmercury in fish tissue.<sup>5</sup> Mercury emitted from coal plants becomes methylmercury in the environment, where it becomes toxic even in minute amounts. Methylmercury is readily absorbed by living tissues, and can cause serious birth defects, central nervous system and brain damage, diminished intelligence, and, as recent evidence suggests, autism. EPA has found that one in six women has levels of mercury in her blood above the safe standard, putting their future children at risk for learning and behavioral problems associated with mercury poisoning. According to the FDA, it would only take one pound of methylmercury to contaminate 500,000 pounds of fish, which, when consumed by humans and wildlife, increases their own mercury levels. The Kemper facility will emit 64.4 pounds of mercury every year. App. C at 3-13.

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These harmful health effects result in billions of dollars in healthcare and costs due to lost productivity. A Mt. Sinai Medical School study has quantified the economic impacts of mercury exposure, specifically on lost productivity due to reductions in IQ. The cost in lost productivity from methylmercury exposure (largely through the consumption of contaminated fish) is estimated to be \$8.7 billion annually, with \$1.3 billion of this cost attributable to U.S. power plants.

DOE, however, only evaluated the risk of reactive gaseous divalent mercury (RGM) (6.32 lbs/yr will be emitted by the Kemper plant) and not elemental mercury (56.94 lbs/yr), the latter of which will account for 90% of mercury emissions from Kemper's stacks. DOE failed to provide any analysis on elemental mercury emission impacts. DOE's rationale was that "[e]lemental mercury has a long residence time in the atmosphere . . . before it is ultimately deposited on the earth's surface . . . The dispersion of elemental mercury is evaluated on regional and global scales and, therefore, was not considered for this analysis . . . ." A regional or global analysis is even nowhere to be found in the DEIS. The direct impacts to a neighboring state, such as Alabama, due to mercury deposition must be included in the DEIS.

<sup>4</sup> See generally, David C. Evers, et al., *Biological Mercury Hotspots in the Northeastern United States and Southeastern Canada*, BioScience, Vol. 57 No. 1 (January 2007), available at <http://www.aibs.org/bioscience-press-releases/resources/Evers%20final.pdf>

<sup>5</sup> Gerald J. Keeler, et al., *Sources of Mercury Wet Deposition in Eastern Ohio, USA*, Environ. Sci. & Technology at A, (citing *Mercury Study Report to Congress*, EP A-452/R-97-005; Office of Air Quality Planning and Standards, Office of Research and Development: Washington, DC, 1997), available at <http://pubs.acs.org/cgi-bin/abstract.cgi/esthag/2006/40/19/abs/est060377q.html>

EPA cautioned DOE to fully analyze the effects of mercury emissions, including the concerns to both "human health and ecological receptors near the proposed facility." DEIS, App. A, at p. 75. DOE did not take heed of this instruction, and the DEIS failed to adequately discuss the potential effects of mercury emissions from the proposed IGCC facility. This is an impermissible omission from the DEIS because of the potential effects to the surrounding waters and wetlands that will be in close proximity to the plant. EPA suggested that DOE

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evaluate the potential for mercury emissions to deposit onto the local landscape, accumulate in biota, and move up the food chain. In particular, inclusion of mercury fate and transport modeling, (for elemental, divalent and particulate forms), will enhance the EIS by accounting for potential impacts to watersheds, people who fish in those watersheds, and enhance any associated total maximum daily load (TMDL) assessments for impaired waterbodies.

DEIS, App. A, at p. 75. DOE only considered impacts resulting from RGM emissions, which, as mentioned above, are a mere fraction of elemental mercury emissions. No impact analysis of fish or surrounding animals is even provided in the DEIS. Moreover, DOE's use of an airport in Florida to compare mercury emissions to is a poor means of analysis – it only shows how at risk the people and animals are near that airport in Florida, which is not the focus of this EIS.

DOE admits that some of the mercury emissions could end up in surface waters, which people use for recreation and to fish from, but concludes that because of control measures, the plant will not "contribute substantially to surface water mercury concentrations in the vicinity of the site." DEIS, at 4-26 (emphasis added). DOE, however, states it did not analyze the local effects of elemental mercury depositions, and failed to analyze the regional effects, as well.

SC-50

A full analysis of all mercury depositions and emissions caused by the Kemper IGCC facility is critical to protect the health of people in Mississippi and surrounding states. Even if the mercury particles are deposited miles away, their impact can be quite severe. Mississippi already has numerous waterbodies that the Mississippi Department of Environmental Quality has placed Tissue Advisory and Fishing Bans on due to dangerous mercury concentrations.<sup>6</sup>

A thorough analysis of the impact of mercury on the outlying areas is also particularly important because of the presence of several federally-listed animals in surrounding counties and waterbodies, including the Lagniappe crayfish, yellow-blotched map turtle, Gulf sturgeon, pearl darter, gopher tortoise, and black pine

<sup>6</sup> See MDEQ, *Mississippi Fish Tissue Advisories and Commercial Fishing Bans August 2001*, available at [http://www.deq.state.ms.us/MDEQ.nsl/page/FS\\_Fish\\_Tissue?OpenDocument](http://www.deq.state.ms.us/MDEQ.nsl/page/FS_Fish_Tissue?OpenDocument).

snake. The affected areas are also home to bald eagles, which are protected by the Migratory Bird Treaty Act and the Bald and Golden Eagle Protection Act. These potential impacts need to be analyzed and discussed in the DEIS in sufficient detail to adequately inform the public.

SC-50 (contd.)

The DEIS should also analyze mitigation measures and alternatives that would reduce mercury emissions to the lowest possible level. For instance, a double bed carbon adsorber would reach 99% mercury control for little extra money and operating expense.<sup>7</sup> The proposed control technology for the Kemper plant will only remove a purported 92% of mercury. Moreover, renewable energy sources, conservation and efficiency would produce zero mercury emissions. The DOE should consider all of these options in the DEIS, which it has failed to do.

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**C. The DEIS Failed to Adequately Assess Health Impacts of Handling Emissions**

The Kemper facility is expected to emit a range of pollutants that have serious health consequences. For example, it would emit 33.2 TPY of Particulate Matter (PM) emissions from material handling emissions alone. The DEIS does not adequately address these non-air emission sources of pollution and their effects on human health. This includes ash and coal transportation and storage, and general pollution from vehicles. There will be eighty diesel trucks running for sixteen hours per day, every day, for six months during the startup of the facility. The impacts of and increased health risks from handling emissions must be discussed to inform the public of the risks posed by increased level of PM and other pollutants ("51 TPY of PM10, 2,030 TPY of NOx, 7,860 TPY of CO, 660 TPY of VOC, 0.02 TPY of SO2, and 264,500 TPY of CO2" from the trucks alone). DEIS, at p. 4-13.

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Additionally, lignite is susceptible to spontaneous combustion because of its high content of volatile matter and its high moisture content. This susceptibility can cause problems in transportation and storage. The EIS must analyze this possibility and precautionary measures to ensure safe transport of the coal.

SC-53

**D. The DEIS Fails to Consider Emissions from the Coal Mine Part of the Facility, As Required by Law**

The DEIS and the air permit must consider the air emissions from the facility and the coal mine together according to the Clean Air Act and its regulations. The facility and the coal mine must have a BACT demonstration and be a part of the major stationary source permit.

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<sup>7</sup> The Stanton project included a carbon adsorption system that would have allowed only 19 lb/year of mercury emissions. (Orlando Gasification Project EIS, p. 4-14)

**E. The DEIS Failed to Consider the Risks of PM2.5**

In 2006, EPA stated, after conducting its review of the National Ambient Air Quality Standards for PM10 and PM 2.5, that PM 2.5, sometimes referred to as "fine particulate matter" has a variety of adverse health effects including premature mortality, increased hospital admissions, emergency room visits, and chronic respiratory disease. 71 Fed. Reg. 2,620 (Jan. 17, 2006). EPA has also stated:

The research on which EPA based the 1997 standards did not identify a specific threshold concentration below which individuals have no PM related health effects, meaning that emissions reductions resulting in reduced concentrations below the level of the standards may continue to provide additional health benefits to the local population.

70 Fed. Reg. 65,983, 65,988 (Nov. 1, 2005).

In EPA's most recent review of the PM10 and PM2.5 National Ambient Air Quality Standards, EPA was unable to find evidence supporting the selection of a threshold level of PM2.5 under which the death and disease associated with PM 2.5 would not occur at the population level. 71 Fed. Reg. 2,620, 2,635 (Jan. 17, 2006). EPA also noted that in "the extended ACS [American Cancer Society] study, the authors reported that the associations for all-cause, cardiovascular and lung cancer mortality "were not significantly different from linear associations." *Id.* A linear relationship means that more pollution causes more health impacts. These health risks should not only be identified, but should be analyzed in greater detail in the DEIS.

**F. The DEIS Should not Have Used PM10 as a Surrogate for PM2.5**

The DEIS fails to make the necessary demonstration that the facility will not violate Clean Air Act requirements for PM2.5. Particulate matter is made up of particles of varying sizes, and particle size determines, to a large extent, its health impacts. Prior to 1997, EPA regulated all particulate matter up to 10 microns in diameter under its PM10 standards. The fine particle component of PM10 – those up to 2.5 microns in diameter – are the most harmful to health. Accordingly, EPA promulgated a separate NAAQS for PM2.5 in 1997 because it found that the PM10 standards did not adequately protect public health and welfare. See 62 Fed. Reg. 38,652, 38,667 (July 18, 1997).

The controlling law requires a BACT limit "for each regulated NSR pollutant that [a new major stationary source] would have the potential to emit in significant amounts...." 40 C.F.R. § 52.21(j)(2) (incorporated by reference into MCEQR APC-5). Such pollutants include "[a]ny pollutant for which a [NAAQS] has been promulgated" and therefore include PM2.5. 40 C.F.R. § 52.21(b)(50)(i). EPA has

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acknowledged that "[t]he obligation to implement PSD [is] triggered upon the effective date of the NAAQS." Rule to Implement the Fine Particle National Ambient Air Quality Standards, Notice of Proposed Rulemaking, 70 Fed. Reg. 65,984, 66,043 (Nov. 1, 2005). Because PM2.5 is regulated pollutant that will be emitted in a significant amount, a BACT limit for PM2.5 is required. 42 U.S.C. § 7475(a)(4); 40 C.F.R. § 52.21(j).

The DEIS improperly concludes that MDEQ may use PM10 as a surrogate for PM2.5. DEIS at 4-8. This conclusion is based on a misinterpretation of EPA's now-defunct PM10 surrogate policy. The surrogate policy has always been governed by D.C. Circuit law on surrogates, which requires a case-by-case reasonableness inquiry. *See, e.g., National Lime v. EPA*, 233 F.3d 625, 639 (D.C. Cir. 2000) (surrogates may only be used in limited circumstances, and only after a thorough reasonableness inquiry demonstrates that use of the surrogate satisfies legal requirements for the original pollutant). This interim policy, announced over twelve years ago in the EPA's Seitz Memo, advised that permitting authorities could use PM10 as a surrogate for PM2.5 only as long as it proved "administratively impracticable" to directly address PM2.5 due to "technical and informational deficiencies." Memorandum from John S. Seitz at 2 (October 21, 1997), available at <http://www.epa.gov/nsr/documents/nsrmemo.pdf>. Those deficiencies of twelve years ago present no difficulties today – as EPA has recognized.

Consistent with this applicable law, EPA's surrogate policy has always required MDEQ to perform a thorough reasonableness analysis. *In re Louisville Gas & Electric Co.*, Order Responding to Issues raised in April 28, 2008 and March 2, 2008 Petitions, and Denying in part and Granting in Part Requests For Objection to Permit (August 12, 2009) ("*Trimble*"), at 43-44, at 43 ("this case law governs the use of EPA's PM10 Surrogate Policy, and thus that the legal principle from the case law applies where a permit applicant or state permitting authority seeks to rely upon the PM10 surrogate policy in lieu of a PM2.5 analysis to obtain a PSD permit.")

*Trimble* provides detailed instructions for state permitting authorities on how to show PM10 provides a reasonable surrogate for PM2.5 in a particular case.

First, the source or the permitting authority establishes in the permit record a strong statistical relationship between PM10 and PM2.5 emissions from the proposed unit... A strong statistical relationship could be established in a variety of ways... [but] a simple ratio of AP-42 emissions factors... would not appear to be sufficient...

Second, the source or the permitting authority demonstrates that the degree of control of PM2.5 by the control technology selected in the PM10 BACT analysis will be at least as effective

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as the technology that would have been selected if a BACT analysis specific to PM2.5 emissions had been conducted... The first [possible method] would be to perform a PM2.5 -specific BACT analysis, in which case the requirement is met if the control technology selected through the PM10 BACT analysis is physically the same as what is selected through the PM2.5 BACT analysis... The second path would be to perform a PM2.5 -specific BACT analysis, and show that while the type and/or physical design of the control technology may be different, the efficiency for PM2.5 control of the technology selected through the PM10 BACT analysis is equal to or better than the efficiency of the technology selected through the PM2.5 BACT analysis...

*Trimble*, at 45. The reasonableness analysis must be demonstrated in the permit record. *Id.*

The DEIS conducts a wholly inadequate analysis of reasonableness and erroneously concludes that PM10 is an appropriate substitute at the Kemper facility. First, the DEIS admits that it did not establish a strong statistical relationship between PM10 and PM2.5 because "definitive particle size distribution data were unavailable for these sources [the IGCC stacks, gasifier startup stacks, auxiliary boiler, and flare systems]." DEIS at 4-9. Additionally, for fugitive dust and material handling sources, in direct contradiction of the EPA's instructions in *Trimble*, the DEIS relies on AP-42 emission factors. *Id.* AP-42 provides a constant, fixed ratio of PM10/ PM2.5 for estimation purposes only. See EPA, AP 42, Fifth Edition Compilation of Air Pollutant Emission Factors, Volume 1: Stationary Point and Area Sources. (Jan. 1995), available at <http://www.epa.gov/ttnchie1/ap42/> at 1 ("An emission factor is a representative value that... facilitate[s] estimation of emissions from various sources of air pollution"). For this reason, *Trimble* explicitly stated "a simple ratio of AP-42 emissions factors... would not appear to be sufficient [to demonstrate the statistical relationship between PM10 and PM2.5]." *Trimble* at 45.

Second, the DEIS dismisses that any new PM2.5 controls would be used because postcombustion controls "would not be economically feasible." DEIS at 4-9. At the first step of the BACT analysis, all potential control technologies must be considered, without regard for cost. The DEIS therefore wrongfully dismisses postcombustion controls, which also makes the reasonableness analysis insufficient.

Before issuing a PSD air permit to Kemper, MDEQ is also required to demonstrate that its fine particulate emissions would not "cause or contribute" to air pollution in excess of the PM2.5 air quality standards. The PM2.5 ambient prediction done for this facility was not done with a modeling technique approvable under EPA's Air Quality Modeling Guidance in Appendix W, available at

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[http://www.epa.gov/scram001/guidance/guide/appw\\_05.pdf](http://www.epa.gov/scram001/guidance/guide/appw_05.pdf). The background concentrations of PM2.5 in the area are very high and close to the NAAQ standard. DEIS at p. 4-8, Table 4.2-4. The background PM2.5 concentrations are 38.9 and 12.8 µg/m3 for annual and 24-hour periods respectively. The NAAQ standards are 35 and 15 µg/m3. Because of the high PM 2.5 area background and the likelihood that the facility could therefore jeopardize NAAQs, it is very important that the modeled impact predictions of PM2.5 from the facility are precise.

**G. The DEIS Failed to Adequately Address Impacts on Wildlife**

1. DOE Failed to Explain its Conclusion that Wildlife Would Acclimate to Plant Operations

According to the DEIS, DOE concludes "most wildlife species would soon become acclimated to the presence of the power plant and would reestablish in suitable adjacent habitats." DEIS, at p. 56. The conclusion that most animals would get used to the power plant's presence is unfounded based on the material presented in the DEIS. The plant would consist of constant human presence, routine vehicular traffic, noise, vibrations, air pollutant emissions, and artificial lighting, all of which will adversely affect animal habitats, and have the potential to drive animals away. The surrounding areas will also be strip mined, which will de facto remove suitable habitat.

The noise of plant operations would extend to the boundary of the mining study area, where reclamation would take place and where displaced animals would quickly return to, according to the DEIS. Operation of the dragline alone creates 119 db, about the same as a jackhammer. While the noise levels are plainly stated, the DEIS fails to analyze the impact of the large increase in noise levels on the surrounding wildlife, particularly in regards to their re-acclimatization to the mine and plant area.

2. DOE Failed to Adequately Discuss Impacts to Wildlife due to Mining

According to DOE, mining operations could benefit many wildlife species due to reclamation. This reclamation process, however, takes three years to complete for every 275 acre parcel. DOE acknowledges that the strip mining will result in a "temporary loss of wildlife from the mining area," and a temporary increase of wildlife in surrounding areas, but concludes that wildlife will return to the refurbished land "relatively quickly." No impacts are provided on the temporary influx of wildlife to surrounding areas; and what brief analysis was undertaken was done under the assumption the reclamation process will be beneficial to the habitat, and that animals will return to the reclaimed areas, even while the power plant is operating and the surrounding areas are also being strip mined.

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3. DOE Failed to Adequately Discuss Impacts to Protected Species

DOE has conducted an impermissibly cursory analysis of the impact of the Kemper IGCC facility on species that are under State or federal protection. Despite the U.S. Fish and Wildlife Services' (FWS) concerns that the plant will have direct and indirect impacts on a number of listed species, DOE concludes in three paragraphs that the mining operations will not have an adverse effect on any federally-listed species. DOE concludes the mine will adversely affect State-protected species, but does not say to what extent, which is problematic.

There are several federally-listed species that might be affected by this facility. According to FWS, the following federally-listed species can be found on or near the proposed site: Price's potato bean, Lagniappe crayfish (both can be found in Kemper County), yellow-blotched map turtle, Gulf sturgeon, pearl darter, gopher tortoise, and black pine snake. Additionally, the bald eagle uses the habitat in this area. DOE has itself identified two other birds listed by the State whose habitat will be affected (the barred owl and sharp-skinned hawk), the latter of which is designated as critical. A critical designation in Mississippi means "extreme rarity (5 or fewer occurrences or very few remaining individuals or acres) or because of some factor(s) making it vulnerable to extirpation." DEIS, App. F, at p. 3. Despite this designation, no impact analysis was provided beyond its "[h]abitat . . . may also be adversely affected." DEIS, at p. 4-59.

DOE has stated it is discussing potential impacts on the Price's potato bean with FWS, but no impacts are laid out in the DEIS. DOE also states that the sharp-skinned hawk (considered critically imperiled by Mississippi) and barred owl will be adversely affected by mining operations. To what extent is unknown. This is an impermissible environmental analysis and is alone is a fatal flaw to the DEIS. Furthermore, the remainder of the abovementioned species identified by FWS were not even discussed in the DEIS, save for the gopher tortoise. Of particular concern to FWS was the loss of "numerous miles of riparian habitat" that could affect the Lagniappe crayfish, whose designation, according to FWS, might need to be reassessed following construction of the Kemper facility. DEIS, App. A, at pp. 31-33. This crayfish is not discussed at all in the DEIS. The Lagniappe and the remainder of the species identified by FWS must be addressed by DOE, even if surveying did not locate any of them on the proposed mine site. The direct and indirect impacts of the IGCC facility extend beyond its immediate periphery. *42* 50 C.F.R. § 402.02 (CEQ regulations broadly define the "action area" as "all areas to be affected directly or indirectly by the Federal action and not merely the immediate area involved in the action").

The analysis of the impact on listed species must be critical, comprise more than a mere "recitation" of the activities, and consider the "total impact" to listed species. *Defenders of Wildlife v. Babbitt*, 130 F. Supp. 2d 121, 128 (D.D.C. 2001).

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*See also* 16 U.S.C. § 1536(a)(2) (federal agencies are required, for all discretionary activities, to "insure" that its actions neither "jeopardize the continued existence" of any of the nation's listed species nor "result in the destruction or adverse modification" of listed species' "critical habitat"). DOE has failed to do this in the DEIS.

DOE also failed to address Mississippi Wildlife Federation's concern over the state-listed red salamander, which only is active in the winter and would not have been viewed by a survey during other seasons. DEIS, App. A, at p. 28. DOE should address this before a final decision is issued.

4. DOE Failed to Consider Effects of the Mine on Wildlife Habitat and Adequately Explain Mitigating Measures

The Lagniappe crayfish exemplifies the flaw of the DEIS regarding the attention given to the facility's impact on the surrounding environment. Even if the crayfish is not located on the mining site, its habitat can still be adversely impacted. FWS stated its concern that the coal mine would impact wildlife offsite, which could have adverse impacts associated with the Chickasawhay River and all aquatics found in that watershed. DEIS, App. A, at p. 33. This river contributes to the habitat of the Lagniappe crayfish, yellow-blotched map turtle, and Gulf sturgeon – none of which are mentioned in the aquatic ecology impact assessment, even though DOE states "stream diversions would result in the loss of habitats and the aquatic life in the existing stream channels." DEIS, Ch. 4, at p. 4-63.

Such potential adverse impacts include increased soil acidity, increased nutrient levels, algal blooms, water toxicity, general pollution, and removal of riparian vegetation. The Army Corps also lists "changes in either the normal water conditions for clarity, chemical content, nutrient balance, dissolved oxygen, pH, temperature, salinity, current patterns, circulation and fluctuation, or the physical removal of habitat," as additional factors that adversely affect wildlife. DEIS, App. A, at p. 47. Although DOE claims the impacts can be minimized using mitigating measures, no such measures are described, much less listed or identified. As a bare minimum, an EIS must contain "a reasonably complete discussion of possible mitigation measures." *N. Alaska Env'tl. Ctr. v. Kempthorne*, 457 F.3d 969, 979 (9th Cir. 2006) (quoting *Robertson v. Methow Valley Citizens Counsel*, 490 U.S. 332, 352 (1989)). The mitigation must "be discussed in sufficient detail to ensure that environmental consequences have been fairly evaluated." *Id.* (quoting *City of Carmel-By-The-Sea v. U.S. Dept. of Transp.*, 123 F.3d at 1142, 1154 (9th Cir. 1997)). *See also* 40 C.F.R. § 1502.16(h); *id.* at § 1502.14(f) (the EIS must identify the means to mitigate adverse environmental impacts). Courts have also found that a "mere listing" of mitigation measures, without supporting analytical data, "is insufficient. *League of Wilderness Defenders/Blue Mountains Biodiversity Project v. Forsgren*, 309 F.3d 1181, 1192 (9th Cir. 2002).

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Simply stating the effects will be minimal because mitigating measures will be required if the Army Corps dredge and fill permit is approved is wholly inadequate for the NEPA process. *See e.g.* DEIS, at p. 4-134 (“using 6.5 MGD of ground water from the Massive Sand aquifer could adversely impact some users of water from that same aquifer, yet such impacts could be mitigated”). This type of perfunctory statement fails to satisfy the requirements of NEPA. *Winter v. NRDC*, 129 S.Ct. 365, 376 (2008) (“Part of the harm NEPA attempts to prevent in requiring an EIS is that, without one, there may be little if any information about . . . potential mitigating measures”). According to the Supreme Court, a discussion of mitigation measures is essential to the NEPA process: “omission of a reasonably complete discussion of possible mitigation measures would undermine the ‘actionforcing’ function of NEPA. Without such a discussion, neither the agency nor other interested groups and individuals can properly evaluate the severity of the adverse effects.” *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 352, 371 (1989).

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Appendix P states that mining impacts on streams and waterways will be mitigated by relocating and diverting streams and reclamation following mining. The DEIS also states, however, that system functions could be lost for up to five years after reclamation, and diverted streams could lose some function for up to two years – the effects of which are not discussed in any detail. DEIS, App. P, at p. 3.

Furthermore, mitigation measures such as reclamation and reconstruction of streams does not lessen the environmental impacts associated with filling natural streams. Impacts on streams from strip mining include the increase in discharge of chemicals that are carried downstream, thereby reducing aquatic biodiversity.<sup>5</sup> Stream chemistry monitoring has shown significant increases in conductivity, hardness, sulfate, and sedimentation concentrations downstream of strip mining operations.<sup>6</sup> These environmental consequences must be assessed and given a greater amount of attention in the DEIS.

**VI. Cumulative Effects**

**A. The EIS Must Examine Climate Change Impacts**

The U.S. Department of Interior Director’s Order No. 3226 (U.S. Dep’t of Interior, Jan.19, 2001) acknowledges that “[t]here is a consensus in the

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<sup>5</sup> *Ohio Valley Environmental Coalition v. U.S. DOE of Engineers*, 479 F Supp 2d 607, 637 (S.D. V VA 2007), citing, U.S. DOE of Engineers, *Combined Decision Document for Republic No. 2 Surface Mine Application*, 17 (July 6, 2006).

<sup>6</sup> U.S. Environmental Protection Agency, *Mid-Atlantic Mountaintop Mining Draft Programmatic Environmental Impact Statement*, 2003 at III.D-9.

international community that global climate change is occurring and that it should be addressed in government decisionmaking.” That Order further instructs “[e]ach bureau and office of the Department [of Interior] [to] consider and analyze potential climate change impacts . . . when making major decisions regarding the potential utilization of resources under the Department’s purview.”<sup>10</sup> The same standard should apply to the DOE.

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DOE’s analysis of the effects of the Kemper IGCC facility on climate change is entirely inadequate for NEPA purposes. Although DOE admits the Kemper facility would increase the atmosphere’s concentration of GHGs (greenhouse gases), thereby contributing to global warming, DOE states the specific effects of the plant on the surrounding area are unknown. NEPA calls for more analysis.

There are two preliminary problems with the analysis. First, the DEIS assumes the plant would be designed to capture and sequester 50 to 67 percent of CO2. However, there is no enforceable requirement for the Kemper facility to capture any CO2. Therefore the DEIS cannot assume any CO2 emissions will be captured and must analyze the impact of the full amount of CO2 emissions from the facility.

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Second, the DEIS’s conclusion that it need not assess Kemper’s emissions because dirtier plants could be built is entirely inappropriate. The DEIS concludes that “it cannot be assumed that, if the Kemper County IGCC Project were not built, these additional emissions would be avoided – other less efficient and/or more CO2 emitting fossil fuel power plants might be constructed in its stead, or existing plants might produce more power, thereby increasing their CO2 emissions.” DEIS at 6-6. This conclusion is all the more unsupportable since the DEIS failed to evaluate cleaner sources of energy, such as renewables, demand side management or natural gas.

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DOE concludes that “emissions of GHGs from the proposed power plant by themselves would not have a direct impact on the environment in the proposed plant’s vicinity; neither would these emissions by themselves cause appreciable global warming that would lead to climate changes.” DEIS at 6-6. DOE also states there is “no methodology that would allow DOE to estimate the specific impacts (if any) this increment of warming would produce in the vicinity of the plant or elsewhere.” DEIS, at p. 6-6. These conclusory statements fall desperately short of sufficient NEPA analysis. *See* 40 C.F.R. § 1508.7 (an agency must assess the “impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions”); *Ocean Advocates v. U.S. Army Corps of Engrs.*, 361 F.3d 1108, 1128 (9th Cir. 2004) (“[g]eneral statements about possible effects and some risks do not constitute a hard look absent a justification why more definitive

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<sup>10</sup> [http://elaps.doi.gov/app\\_so/act\\_getfiles.cfm?order\\_number=3226](http://elaps.doi.gov/app_so/act_getfiles.cfm?order_number=3226)

information could not be provided” and the analysis “must be more than perfunctory; it must provide a useful analysis of the cumulative impacts of past, present, and future projects”). Aside from stating the Kemper plant will emit GHGs, DOE provides no analysis of the cumulative effects of GHG emissions vis-à-vis climate change.

However difficult the local effects of the Kemper plant might be to articulate, NEPA requires governmental agencies to consider impacts on the global environment, as well as local and regional impacts. NEPA Section 102(F) requires that the federal government “recognize the world-wide and long-range character of environmental problems and, where consistent with the foreign policy of the United States, lend support to initiatives, resolutions, and programs designed to maximize international cooperation in anticipating and preventing a decline in the quality of mankind’s world environment.” This includes global climate change. DOE states that stabilizing atmospheric concentrations of GHGs will require societies to reduce their annual emissions – and the construction of major emitting facilities will not accomplish this task.

Moreover, precision and certainty are not required under NEPA, and it is, in fact, accepted that “[r]easonable forecasting and speculation is . . . implicit” in NEPA analysis. *Kern v. U.S. BLM*, 284 F.3d 1062, 1072 (9th Cir. 2002). *See also Conner v. Burford*, 848 F.2d 1441, 1450 (9th Cir. 1988) (“the government’s inability to fully ascertain the precise extent of the effects . . . is not . . . a justification for failing to estimate what those effects might be before irrevocably committing to the activity”). Inherent uncertainties regarding climate change does not allow DOE to “shirk [its] responsibilities under NEPA.” *Kern v. BLM*, 284 F.3d at 1072 (quoting *Save Our Ecosystems v. Clark*, 747 F.2d 1240, 1246 n. 9 (9th Cir. 1984)); *cf. NRDC v. Kempthorne*, 506 F. Supp. 2d 322, 369 (E.D. Cal. 2007) (rejecting agency position characterizing global warming’s effects to endangered fish as speculation or “sheer guesswork”).

DOE claims that “there is much uncertainty regarding the extent of global warming caused by anthropogenic GHGs,” DEIS at p. 6-4, and that “climate change cannot be avoided.” *Id.* at p. 6-5. DOE is nonetheless required to assess “to the greatest extent possible” how climate change is currently impacting the environment, and how the Kemper IGCC plant will combine with the effects of climate change to impact resources in the project area. *See Davis v. Coleman*, 521 F.2d 661, 671 (9th Cir. 1975).

Regardless of the mere lack of absolute certainty, scientific knowledge regarding global warming is not completely veiled in uncertainty, either. In February 2007, the Intergovernmental Panel on Climate Change (“IPCC”) released a summary of the contribution of Working Group I to its Fourth Assessment Report. The Summary concludes, in part:

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- The global atmospheric concentration of CO<sub>2</sub> has increased from a pre-industrial value of about 280 ppm to 379 ppm in 2005;
- The atmospheric concentration of CO<sub>2</sub> in 2005 exceeds by far the natural range over the last 650,000 years;
- The primary source of the increased atmospheric concentration of CO<sub>2</sub> since the pre-industrial period results from fossil fuel use;
- Warming of the climate system is unequivocal, as is now evident from observations of increases in global average air and ocean temperatures, widespread melting of snow and ice, and rising global average sea level;
- At continental, regional, and ocean basin scales, numerous long term changes have been observed. These include changes in arctic temperatures and ice, widespread changes in precipitation amounts, ocean salinity, wind patterns and aspects of extreme weather including droughts, heavy precipitation, heat waves, and the intensity of tropical cyclones;
- There is greater than a 90% likelihood that most of the observed increases in global average temperatures since the mid-20th century are due to the observed increases in anthropogenic greenhouse gas emissions;
- For the next two decades, warming of about 0.2 Degrees Celsius per decade is projected for a range of emission scenarios;
- There is a greater than 90% likelihood that hot extremes, heat waves, and heavy precipitation events will continue to become more frequent; and

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In April 2007, the IPCC released a Summary of the Contribution of Working Group II to its Fourth Assessment Report. The Summary concludes, among other things:

- There will be a significant increase in damage to coastal areas from floods and storms and approximately 30% of the coastal wetlands are projected to be lost. Millions more people could experience coastal flooding each year;
- Cities that currently experience heat waves are expected to be further challenged by an increased number, intensity, and duration of heat waves during the course of the century, with potential for adverse health impacts;
- Sea level rise under global warming is inevitable. An increase in sea levels will result in salinisation of irrigation water, estuaries, and fresh water systems, and also cause flooding and costly efforts to rebuild or relocate after flooding; and
- In North America, major challenges are projected for crops that are near the warm end of their suitable range or depend on highly utilized water resources.

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On or about May 4, 2007, the IPCC released a Summary of the contribution of Working Group III to its Fourth Assessment Report. The Summary concludes, among other things:

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the Kemper Facility's CO<sub>2</sub> emissions on the health, welfare, economy, and environment of the state of Mississippi, the nation, and the planet as a whole as described in the IPCC report, the EIS should examine alternatives and mitigation measures designed to eliminate or minimize CO<sub>2</sub> emissions.

The EIS should also include findings from the EPA's CO<sub>2</sub> endangerment finding. Available at <http://epa.gov/climatechange/endangerment.html>

The DOE also failed to assess the impacts of global warming pollution on different environmental receptors such as wildlife, vegetation, water resources, humans, and land. The EIS process should also analyze the local, regional, and global environmental impacts of CO<sub>2</sub> emissions from the Kemper facility. DOE should pay particular attention to the impact of global warming on Mississippi, a coastal state that is especially vulnerable to rising sea levels and more intense tropical storms. Climate change is affecting the intensity of Atlantic hurricanes, and hurricane damage will likely continue to increase because of greenhouse warming.<sup>13</sup> The DOE should also consider the economic impacts of CO<sub>2</sub> emissions from the Kemper facility. In addition, the EIS should analyze the cumulative impacts of this significant new source of CO<sub>2</sub> emissions in combination with other existing and proposed CO<sub>2</sub> sources.

#### B. The EIS Must Consider the Economic Impact of Emitting Greenhouse Gases

The DEIS did not evaluate the economic impacts of emitting 2.8 million tons of CO<sub>2</sub> annually, and 112 million tons of CO<sub>2</sub> over the commercial life of the facility. Peer reviewed studies have been performed which model the economic costs of global warming and CO<sub>2</sub> emissions.<sup>14</sup> Synapse Energy Economics predicts that CO<sub>2</sub> costs could rise to \$68/ton by 2030 – less than two decades into the life of the proposed Kemper plant. Sierra Club Testimony, at 12:5. Other studies have estimated that each ton of CO<sub>2</sub> emitted causes approximately \$85 in damage. *Id.* In either case, the \$30/ton considered by Mississippi Power as the upper level of CO<sub>2</sub> costs is woefully inadequate. The DOE cannot turn a blind eye to these damages and the EIS process must analyze the economic impact of emitting over 2.8 million tons of CO<sub>2</sub> annually, DEIS at 6-6 (although, as explained above, the DEIS should evaluate the impact of the full amount of CO<sub>2</sub> that would be emitted from Kemper without Kemper). Even Southern Co.'s former business partner, Orlando Utilities Commission (OUC), recognized economic costs of operating power plants that emit large amounts of GHGs. OUC "withdrew from the [Florida] project because of uncertainty regarding regulation of greenhouse gas (GHG) emissions," DEIS, at p.

<sup>13</sup> American Geophysical Union, "Establishing a Connection Between Global Warming and Hurricane Intensity," (Aug. 15, 2006) available at [http://www.agu.org/sci\\_soc/pr1/pr10629.html](http://www.agu.org/sci_soc/pr1/pr10629.html).

<sup>14</sup> Stern, N., Stern Review on the Economics of Climate Change, Cambridge University Press. Available at [http://www.hm-treasury.gov.uk/independent\\_reviews/stern\\_review\\_economics\\_climate\\_change/sternreview\\_index.cfm](http://www.hm-treasury.gov.uk/independent_reviews/stern_review_economics_climate_change/sternreview_index.cfm).

- Global GHG emissions have grown since pre-industrial times, with an increase of 70% between 1970 and 2004;
- The largest growth in global GHG emissions between 1970 and 2004 has come from the energy supply sector (an increase of 145%);
- With current global climate change mitigation policies and related sustainable development practices, global GHG emissions will continue to grow over the next few decades;
- There is substantial economic potential for the mitigation of global GHG emissions over the coming decades that could offset the projected growth of global emissions or reduce emissions below current levels;
- There are mitigation opportunities with net negative costs, in other words, for which the benefits such as reduced energy costs and reduced emissions of pollutants equal or exceed their costs to society, excluding the benefits of avoided climate change;
- Fuel switching from coal to gas, renewable heat and power (hydropower, solar, wind, geothermal and bioenergy), and early applications of carbon capture and storage (*e.g.* storage of removed CO<sub>2</sub> from natural gas) are key mitigation technologies and practices currently commercially available;
- Near-term health co-benefits from reduced air pollution as a result of actions to reduce GHG emissions can be substantial and may offset a substantial fraction of mitigation costs;
- It is often more cost-effective to invest in end-use energy efficiency improvement than in increasing energy supply to satisfy demand for energy services. Efficiency improvement has a positive effect on energy security, local and regional air pollution abatement and employment;
- Renewable energy generally has a positive effect on energy security, employment and on air quality; and
- In order to stabilize the concentrations of GHGs in the atmosphere, emissions would need to peak and decline thereafter.

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Hansen and others have stated that global emissions of CO<sub>2</sub> and other global warming pollutants must be immediately reduced to avoid exceeding the 475ppm ceiling for significant irreversible impacts.<sup>11</sup> The World Health Organization has estimated that approximately 154,000 human lives are lost each year as a result of global warming.<sup>12</sup>

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The DOE should consider the entirety of the Fourth Assessment Report and make it part of the administrative record for the FEIS. Due to the severe impacts of

<sup>11</sup> Hansen, et al. *Global Temperature Change*, *PNAS* published online September 25, 2006, doi:10.1073/pnas.0606291103. See also, Hansen, et al. 2006, *Dangerous Human-made Interference with Climate: A GISS modelE study*; available at <http://arxiv.org/abs/physics/0610115>.

<sup>12</sup> World Health Organization (WHO) 2002, *The World Health Report*, available at <http://www.who.int/whr/2002/en/index.html>.

1-1, "apparently as a result of the possibility that new coal-fueled power plants would be required to install carbon capture and sequestration," *id.* at p. 1-4. CO2 prices are only likely to increase, as well: "CO2 emissions allowance prices [would likely] result from the adoption and implementation of the major greenhouse gas regulatory legislation that has been introduced in the current U.S. Congress." Sierra Club Testimony, at 13:12-15. *See also* Direct Testimony of Kimberly D. Flowers, filed January 16, 2009, at page 45 and Mississippi Power Company's response to Data Request No. MPUS 1-5 (laws regulating GHG emissions are "imminent").

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Of particular significance to Mississippi, climate change is affecting the intensity of Atlantic hurricanes, and hurricane damage will likely continue to increase because of greenhouse warming.<sup>15</sup> Greater CO2 emissions from coal-burning power plants would lead to more significant atmospheric warming and larger and more frequent storms. In addition, global warming will lead to rising sea levels. The EIS should consider the impacts to Mississippi from rising sea levels and violent hurricanes that will accompany global warming.

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**C. The DEIS Fails to Adequately Discuss Totality of Environmental Consequences**

The DEIS environmental consequences are evaluated in Chapter 4, but are done so in a deceptively piecemeal way. The effect of this is that no ultimate environmental impact is easily derived from this section. For example, while mine and power plant construction might not significantly affect the critically-listed sharp-skinned hawk, mine operations might adversely affect the species. The cumulative effects of all facility operations on the hawk are nowhere to be found. Such an analysis does not provide the public with quality information regarding the ultimate effects of the proposed action.

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**D. The DEIS Fails to Adequately Analyze and Discuss the Totality of Socioeconomic Consequences**

The DEIS fails to consider adverse socioeconomic impacts caused by the Kemper facility. For example, the DEIS fails to consider the impact to the local economy, such as lost fishing opportunities caused by loss of springs and surface waters. The DEIS also fails to consider the impact to the local economy as a result of adverse impacts to fisheries caused by air pollutants, such as acid rain and mercury.

SC-80

SC-81

<sup>15</sup> American Geophysical Union, "Establishing a Connection Between Global Warming and Hurricane Intensity," (Aug. 15, 2006), available at [http://www.agu.org/sci\\_soc/prj/prj10679.html](http://www.agu.org/sci_soc/prj/prj10679.html).

The DEIS also fails to consider adverse economic impacts to human health as a result of emission of massive quantities of air pollutants from the Kemper IGCC plant. For example, the DEIS fails to consider the cumulative impacts to economics resulting from lost work days, medical visits, and premature death as a result of the air pollutants emitted from the related coal plants.

SC-82

**E. Failure to Adequately Analyze Totality of Unavoidable Impacts**

The DEIS fails to provide necessary information regarding the surface water impacts as result of the Kemper facility. The DEIS should be re-issued after providing a complete quantitative analysis of the following pollutants on surface waters: acid-rain generating pollutants (acidification from NOx and SO2), nitrogen deposition (algae blooms), and mercury emissions (a bio-persistent and bio-accumulative pollutant).

SC-83

**VII. DOE'S NEPA Decisionmaking Process Has Been Improperly Pre-Determined**

**A. DOE Improperly Limited the Choice of Alternatives By Committing Significant Resources to the Kemper Project**

DOE has prejudiced the NEPA process by providing funding for the proposed project before the environmental analysis has been completed. The agency must not make any commitment of resources prior to completing the NEPA analysis that would prejudice the decision making process, such as taking an action that would cause environmental harm or limit the choice of reasonable alternatives available to the agency. *See* 40 C.F.R. § 1502.2(f) ("Agencies shall not commit resources prejudicing selection of alternatives before making a final decision"); *id.* at § 1506.1(a).

SC-84

The DOE has already committed significant resources in this case that prejudice the decision-making process. DOE provided \$24.4 million to Southern Company for the preliminary design of the Orlando project, which was passed onto the Kemper project when the Orlando project. DEIS at 1-4. This is a substantial investment, which certainly has the potential to affect the choosing of the technology and its potential environmental impact. Additionally DOE has already made public comments that it has already awarded \$293 million dollars to the Kemper project. DOE Comments at p. 4 (attached as Exhibit to these comments).

The "appropriate time for preparing an EIS [therefore] *prior* to a decision, when the decisionmaker retains a maximum range of options." *Sierra Club v. Peterson*, 717 F.2d 1409, 1414 (D.C. Cir. 1983) (citing *EDF v. Andrus*, 596 F.2d 848, 852-53 (9th Cir. 1979) (emphasis in original)). *Accord Part of Astoria v. Hodel*, 595 F.2d 467, 478 (9th Cir. 1979) (NEPA requires that an EIS be prepared "at an early

stage when alternative courses of action are still possible"). Completing the NEPA process prior to awarding funding helps ensure that the agency takes the requisite "hard look" at the environmental impacts of a project rather than rubber stamping the proposal and turning the EIS "into promotional document in favor of the proposal, at the expense of a thorough and rigorous analysis of environmental risks." *Brooks v. Volpe*, 380 F.Supp. 1287, 1292 (C.D. Wash. 1974). *Accord Metcalf v. Daley*, 214 F.3d 1135, 1143 (9th Cir. 2000) (the appellants argued that "by making a commitment to authorize and fund the . . . plan, and then drafting a NEPA document which simply rubber-stamped the decision . . . , defendants eliminated the opportunity to choose among alternatives, . . . and seriously impeded the degree to which their planning and decisions could reflect environmental values' . . . We [agree]"); *id.* at 1145 (an agency "should not . . . commit[] to support the . . . proposal before [conducting an environmental assessment] because doing so probably influenced their evaluation of the environmental impact of the proposal").

NEPA emphasizes up-front environmental analysis so that an agency does not act on incomplete information, "only to regret its decision after it is too late to correct." *Blue Mountains Biodiversity Project v. Blackwood*, 161 F.3d 1208, 1216 (9th Cir. 1998) (quoting *Marsh v. ONRC*, 490 U.S. 360, 371 (1989)). This helps prevent an agency from making too large an "irretrievable investment": "Once there has been . . . 'an irretrievable commitment of resources' in the technology development stage, the balance of environmental costs and economic and other benefits shifts in favor of ultimate application of the technology." *Scientists' Inst. For Public Info., Inc. v. Atomic Energy Commn.*, 481 F.2d 1079, 1090 (D.C. Cir. 1973).

**B. DOE's Comments to the MS Public Utilities Commission Evidence DOE's Disingenuous Decision-making Process and Improperly Influenced the State Utility Approval Process**

The Mississippi Public Utilities Commission is currently considering Mississippi Power's request for a certificate of need for the Kemper IGCC facility. Docket 2009-UA-14, available at [http://www.insite.psc.state.ms.us/publicinsiteweb/cts\\_wv/](http://www.insite.psc.state.ms.us/publicinsiteweb/cts_wv/). As a public utility, Mississippi Power must obtain a certificate of need from the state in order to pass on the costs of constructing and operating the Kemper facility to Mississippi ratepayers.

On September 30, 2009, the DOE submitted comments to the Mississippi Public Utilities Commission detailing how the Kemper project "is of significant importance to achieving DOE's goal of demonstrating clean coal technologies in the United States and, as demonstrated by DOE's significant financial commitment, we strongly support its approval." DOE Comments at p. 1 (Attached as Exhibit to these comments). The comments go so far as to state that "[t]he development of clean coal

SC-84 (contd.)

SC-85

technology, such as TRIG™ is an essential component of energy security in the United States." *Id.* at 2.

DOE's submission of comments to the Kemper certificate docket was highly improper. As described in the previous section, DOE must not reach a final decision before the NEPA process is complete. Here, not only has DOE clearly reached a final conclusion before seriously considering the impacts disclosed by the full NEPA process, DOE has also been attempting to influence the state decision-making process.

On a related note, the DEIS improperly concludes that the Kemper plant will provide Mississippi Power's customers with reliable power at a low cost. DEIS at 1-8 thru 1-10. Yet this is the precise question currently in front of the Mississippi Public Utilities Commission, and the subject of much controversy.

For example, the DOE takes Mississippi Power's word that its planning process "considers a broad range of options in a fair and balanced manner to ensure reliability, minimize costs (and thereby minimize rates)..." DEIS at 1-8. The DEIS provides no discussion of other views on MPC's planning process, which have been subject to several dockets and much controversy at the MS Public Utilities Commission.

Given the fact that DOE is funding this project as a demonstration of new technology, its interests are somewhat in conflict with Mississippi ratepayers, who would ultimately have to bear the costs of implementing this new technology, no matter how much it ultimately costs.

**C. DOE Violated NEPA by Failing to Undertake Environmental Assessment Prior to Granting Southern Co. Millions in R&D Funding Through Connected Actions**

The DOE's comments to the MS Public Utilities Commission and the DEIS evidence how DOE's prior investments in TRIG™ technology in Alabama and Florida are connected actions to the current Kemper IGCC plant, and the environmental consequences of these related actions should have been assessed from the start. "Following more than a decade of design, engineering, and testing of Transport Integrated Gasification (TRIG)...in Wilsonville Alabama, the DOE has been working closely with Southern Company Services, Inc. (SCS) and Mississippi Power Company (MPC) [on Kemper development]." DOE Comment Letter, attachment, at p. 1-2. The DEIS also states that "[t]he gasifier design is based on a technology that Southern Company, Kellogg Brown & Root LLC... DOE, and other industrial proponents have been developing since 1996..." DEIS at 1-6. The DOE comments further explain how DOE has invested over \$400 million in the development of TRIG™ and other related technologies.

SC-85 (contd.)

SC-86

NEPA defines a connected actions are ones that "[a]re interdependent parts of a larger action and depend on the larger action for their justification." 40 C.F.R. § 1508.25(a)(1)(iii). The development of the gasifier technology and the building of an IGCC plant using that technology are inherently related and connected actions. The gasifier technology development is only justified by using it eventually in a larger facility, and the total environmental impacts should have been assessed together.

DOE failed to make the necessary connections between development of the TRIG technology and when it awarded millions of dollars to develop this technology without first undertaking an environmental assessment of an IGCC project. The DEIS recognizes connections between the lignite mine, pipelines and transmission lines, but neglects the previous connected actions developing the gasifier technology. For example, before irretrievably committed resources to coal gasification technologies, DOE should have generally assessed the global warming, pollution and mining impacts from coal power plants as compared with alternative technologies and energy efficiency programs. See *In re Katrina Canal Breaches Consol. Litig.*, 2009 U.S. Dist. LEXIS 107836, slip op. at 466-467 (E.D. La. 2009) ("where 'proceeding with one project will, because of functional or economic dependence, foreclose options or irretrievably commit resources to future projects, the environmental consequences of the projects should be evaluated together'") (quoting *O'Reilly v. United States Army Corps of Engrs.*, 477 F.3d 225, 236 (5th Cir. 2007)). See also 40 C.F.R. § 1508.25 ("Cumulative actions, which when viewed with other proposed actions have cumulatively significant impacts and should therefore be discussed in the same impact statement"); *id.* at § 1508.7 ("Cumulative impact is the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions . . . Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time").

**D. Loan Guarantees Cannot be Awarded Prior to NEPA Completion**

The NEPA process must be completed before Mississippi Power is awarded any loan guarantee under EPAct05, Title XVII. According to DOE, "DOE's loan guarantees are considered major Federal actions and are subject to NEPA review . . . NEPA compliance is integrated into DOE's Loan Guarantee Program Office (LGPO) decision-making procedures to ensure that environmental impacts are considered throughout the loan guarantee process. The NEPA review must be completed before a loan guarantee can be issued." <http://www.lgprogram.energy.gov/NEPA-4.html>.

**VIII. DEIS Failed to Provide Adequate Information Regarding Property Rights**

SC-86 (contd.)

SC-87

SC-88

According to the DEIS, there are existing structures on the facility location that will have to be removed, DEIS, Ch. 2, at p. 2-65. The DEIS does not, however, specify what rights, if any, individuals have regarding these structures. The DEIS also failed to give a legal description of the mining areas or a list of property owners and mineral right holders with legal descriptions of property boundaries. The DEIS also did not contain information regarding how many residences presently exist within the proposed mine's boundary, and how the mine will acquire that land (*i.e.* buy-out, eminent domain, existing mining rights). If eminent domain will be used, the EIS should describe what entity will exercise that power. The EIS must evaluate what will happen to local landowners that refuse to sell their land for the mine. The EIS should contain information regarding the number of houses, churches, and cemeteries within the proposed area that will be mined. The EIS should contain information describing how structures will be removed from the area and who will pay for removal of structures.

**IX. The EIS Must Consider the Local Economic Impact of the Different Alternatives.**

Renewable energy sources, energy efficiency and conservation produce *more local jobs* than a highly automated plant burning dirty imported fuel. DOE failed to consider these impacts on the local economy in the DEIS by simply concluding the construction of this facility will be socio-economically superior to the status quo because it is a *possible source* of revitalization for an economically depressed part of Mississippi." DEIS, Ch. 9, at p. 1. DOE should take into consideration, however, alternative sources of energy that provide even greater socio-economic benefits sans significant environmental degradation. Additionally, this facility might increase local energy rates, discussed below in Section XV, which should be taken into consideration by DOE in the DEIS, as this could have a particularly adverse effect on the existing environmental justice population in Mississippi.

**X. DOE Should Have Considered the Alternative Stanton Facility**

As currently proposed, the Kemper project design is environmentally inferior when compared to its immediate predecessor, the IGCC portion of the Stanton proposal. The Kemper design plant will produce much more than twice as much of some air pollutants vis-à-vis the Stanton plant, even though it is almost exactly twice as large. (Stanton was 285 MW, Kemper will be 582 MW)

For example, Kemper will emit more than four times as much SO<sub>2</sub> (670 TPY compared to 155 TPY); significantly more than twice as much NO<sub>x</sub> (2214 TPY rather than 855 TPY); and more than triple the amount of PM<sub>10</sub> (521 TPY versus 156 TPY). See Table 2.1.1, Orlando Gasification Project EIS, appendix for PSD permit limits, compared to Kemper County IGCC EIS, App. C, Table 3-1, Table S-3, and Table 2.6-1, at p. 2-60.

SC-88 (contd.)

SC-89

SC-90

**XI. DOE Failed to Adequately Explain Conclusions Statements**

**A. Effects of Acid Rain**

DOE claims that, "[e]ven though the [Kemper] facility's emissions are significant in relation to those of the surrounding counties, total emissions of acid-producing pollutants would still be lower than most conventional coal-fired power plants," and ergo, "appreciable adverse impacts related to acid rain would be limited." DEIS, at p. 4-12. This conclusory statement fails to fully explain what those appreciable impacts would be.<sup>16</sup> The adverse effects of acid rain from the power plant would only be compounded by the increased pH levels in soils and groundwater from strip mining and soil erosion from the lignite mine. These combined effects were not addressed in the DEIS. This could be especially problematic for the Lagniappe crayfish, which cannot tolerate water more acidic than pH 5.5.<sup>17</sup>

SC-91

EPA states it "is critical that acid deposition be reduced."<sup>18</sup> The emission of SO<sub>2</sub> and NO<sub>x</sub> (both would be emitted in a great quantity by the Kemper facility – 669.7 and 2089.6 TYP, respectively) are the root causes of acid rain. EPA has identified that "acid rain formation result[s] from . . . man-made sources, primarily emissions of sulfur dioxide (SO<sub>2</sub>) and nitrogen oxides (NO<sub>x</sub>) resulting from fossil fuel combustion," from "burning fossil fuels, like coal."<sup>19</sup>

**B. Soil Erosion from Lignite Mine**

According to the DEIS, there will be "short-term adverse effects from land disturbance by accelerating soil erosion," but the DEIS fails to state what those effects would be. DEIS, at p. 4-16. The DEIS must identify what these effects will be to adequately inform the public. 40 C.F.R. § 1502.1.

SC-92

**XII. The DEIS Does Not Specify How all Lands are to be Reclaimed**

The Kemper facility will gut 12,275 acres of land – up to 375 acres a year for forty years. DEIS, at p. S-11. DOE must clarify how much of this land will be reclaimed subsequent to mining. The DEIS provides that, "[f]ollowing lignite

SC-93

<sup>16</sup> According to EPA, "Acid rain causes acidification of lakes and streams and contributes to the damage of trees at high elevations (for example, red spruce trees above 2,000 feet) and many sensitive forest soils. In addition, acid rain accelerates the decay of building materials and paints, including irreplaceable buildings, statues, and sculptures that are part of our nation's cultural heritage. Prior to falling to the earth, sulfur dioxide (SO<sub>2</sub>) and nitrogen oxide (NO<sub>x</sub>) gases and their particulate matter derivatives—sulfates and nitrates—contribute to visibility degradation and harm public health." Available at <http://www.epa.gov/acidrain/effects/index.html>.

<sup>17</sup> Available at [http://www.epa.gov/acidrain/effects/surface\\_water.html](http://www.epa.gov/acidrain/effects/surface_water.html).

<sup>18</sup> Available at <http://www.epa.gov/acidrain/reducing/index.html>.

<sup>19</sup> Available at <http://www.epa.gov/acidrain/what/index.html>.

removal, approximately 275 acres per year of mined land would be graded to the approximate premining land surface elevations and planted with various types of vegetative cover. Physical completion of land reclamation would occur approximately 3 years after lignite extraction. Upon completion of mining operations, all mine support structures and facilities would be demolished and reclaimed as well." This conflicts with the mitigation plan in the appendix which states that "leased lands will be replanted in accordance with contractual rights of the property owner." DEIS, App. P, at p. 7. This is a problematic and ambiguous mitigation measure for two reasons.

Firstly, DOE must specify what "replanted in accordance" means. This could mean no replanting will be done at all. It could also mean exotic and environmentally-harmful species might be introduced to the ecosystem. Such consequences would need to be addressed in the DEIS. Secondly, while a complete mitigation plan is not required, the DEIS does require a "reasonably complete discussion of possible mitigation measures," and a "mere listing" of mitigation measures, without supporting analytical data, "is insufficient." *League of Wilderness Defenders/Blue Mountains Biodiversity Project v. Forsgren*, 309 F.3d 1181, 1192 (9th Cir. 2002) (quoting *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 352 (1989)), let alone merely listing exceedingly ambiguous mitigation measures.

**XIII. DOE Should Explain Discrepancies Among Levels of NOx Emissions Stated in DEIS**

The DEIS contains several different proposed levels of NOx emissions. The Summary states NOx emissions will be 1800-1900 TPY, DEIS, Table S-3; Chapter 4 states the operation of the power plant alone will emit 2214, *id.*, at p. 4-5; and Appendix C lists the facility-wide total NOx emissions as 2089.6 TPY, *id.* App. C, Table 3-1. DOE should account for the 400 TPY discrepancy between the PTE for NOx emissions stated in the Summary and the PTE listed in Chapter 4. This level of ambiguity fails to rise to the required high quality of environmental information. 40 C.F.R. § 1500.1(b). DOE should also clarify whether or not these emissions levels are from the power plant alone, or include emissions from mining operations. If not, DOE should explain.

**XIV. DOES Should Consider the Cost of the Kemper IGCC Facility as Being In Excess of the Projected \$2.2 Billion**

According to Sierra Club's expert, costs of the Kemper project might "increase significantly over time." *Sierra Club Testimony*, at 36:7. The costs of building coal power plants have risen 233% since just 2002. *Id.*, at 36:13-14. In Ohio, a power plant was scrapped after cost estimates increased by 37% in just thirteen months. *Id.*, at 36:18-21. Xcel Energy abandoned a Colorado IGCC facility plan for similar reasons. *Id.*, at 37:20-22. The Minnesota Public Utility Commission forbade Xcel

SC-93 (contd.)

SC-94

SC-95

from purchasing energy from an IGCC facility because it would "result in unreasonably high prices for Xcel and unreasonably high rates for Xcel's ratepayers." *Id.*, at 38:16-17. Duke Energy Indiana announced that its proposed Edwardsport IGCC unit would cost \$1.985 billion in April of 2008, but a year later that price had jumped to over \$2.34 billion – an 18% increase. *Id.*, at 39:17-20. These are market realities DOE and Mississippi Power must face, and these increases should be accounted for in the DEIS, particularly in regard to the existing environmental justice population in Mississippi.

**SC-95  
(contd.)**

Thank you for the opportunity to comment on the DEIS and please keep us informed of developments in this process. In addition, thank you for your attention to our concerns.

Sincerely,

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The attachments referenced in this letter are available to the public through the Mississippi Public Service Commission, Docket No. 2009-UA-014.

**SC-01:**      **Summary of Comments**

The Draft Environmental Impact Statement for the Kemper facility (hereinafter “DEIS”) is legally and technically flawed because it improperly defines the project’s purpose and need and fails to consider and analyze reasonable, available, and less environmentally harmful alternatives and mitigation measures. Further, DOE failed to adequately assess all of the direct, indirect, and cumulative impacts of the project. Among other failures:

**Response:**      DOE disagrees with the conclusion that the Draft EIS is legally and technically flawed. The commenter confuses the DOE purpose and need with the project purpose and need. The definition of purpose and need for DOE action in this EIS is consistent with the definition of purpose and need that DOE has used in NEPA documents for other projects involving financial assistance by DOE. Further, the range of reasonable alternatives considered in the EIS is consistent with DOE’s purpose and need. DOE considered all reasonable alternatives and mitigation measures suggested in comments on the Draft EIS. Responses to such specific comments are provided in this Final EIS.

**SC-02:**

- DOE has prejudiced the NEPA process by providing funding for the proposed project before the environmental analysis has been completed. See 40 C.F.R. § 1502.2(f) (“Agencies shall not commit resources prejudicing selection of alternatives before making a final decision); id. at § 1506.1(a).

**Response:**      Consistent with NEPA regulations, the funding provided by DOE prior to completion of the NEPA process has not and will not have an impact on the environment or limit the range of reasonable alternatives. DOE has provided cost-shared funding for preliminary design for the project. Funding for detailed design, construction, and demonstration activities would not be provided until after the NEPA process has been completed.

**SC-03:**

- The DEIS has arbitrarily constrained the alternatives analysis by narrowly defining the purpose and need to a IGCC facility without assessing whether the actual generating needs could be met through renewable energy, conservation and efficiency, or other sources of fuel, such as natural gas. See *Friends of Southeast’s Future v. Morrison*, 153 F.3d 1059, 1066 (9th Cir. 1998) (“An agency may not define the objectives of its action in terms so unreasonably narrow that only one alternative from among the environmentally benign ones in the agency’s power would accomplish the goals of the agency’s action,” because “the EIS would become a foreordained formality”).

**Response:**      The purpose and need has not been arbitrarily defined narrowly as suggested by the commenter. The agency’s goal is not to address the need for power but rather to demonstrate the technology selected during a competitive solicitation. The solicitation in turn was issued to meet a congressional mandate to select and fund promising technologies using coal as a fuel. Therefore, the technologies suggested by the commenter do not “accomplish the goals of the agency’s action.”

**SC-04:**

- There are substantial uncommitted resources available in Mississippi to meet project power needs. In 2008, there were 5,862 MW of combined-cycle natural gas-fired capacity in Mississippi, and none of the generating units operated above a 50% capacity factor. Increased production at these facilities would more than meet the purported future increased energy needs of Mississippi, and would save ratepayers from price hikes to pay for a new IGCC facility. Given the large pricetag and significant environmental impacts, the DOE should not fund an unnecessary coal plant just to prove a new technology.

- Response:** The availability of other resources to meet the need for power is being considered by the Mississippi PSC. DOE has no authority to determine which resources should be considered by the PSC. Please refer to the response to RL-02. DOE's purpose is to demonstrate the technology; it is the jurisdiction of the PSC to determine whether the proposed plant is necessary to meet the need for power.
- SC-05:**
- The DEIS fails to consider the use of an air-cooled plant design, or even an air-water hybrid cooler, which would save millions of gallons of water every day for the operating life of the plant.
- Response:** Please refer to the response to JW-02 (transcript).
- SC-06:**
- The DEIS failed to consider alternative locations for the IGCC facility, including next to, or in closer proximity to, the existing Red Hills Mine in Ackerman, Mississippi. The strip mine in Kemper would be responsible for 90% of the wetlands losses as a result of the project. The DEIS failed to compare and describe, even briefly, the impacts from supplying the Kemper project for its entire life from the existing Red Hills Mine, or siting the project next to, or closer to the Red Hills mine. The power plant could also be sited next to existing lignite mines in Louisiana and Texas.
- Response:** Please refer to the responses to JW-08, JW-19, and JW-20. Note that the response to JW-20 states that the "Red Hills Mine...does not have enough reserves to serve both its current contract and the Kemper project." Supplying the Kemper project for its entire life from the Red Hills Mine would not be feasible.
- SC-07:** For the reasons stated below, the Draft Environmental Impact Statement for the Kemper facility (hereinafter "DEIS") is legally and technically flawed because it improperly defines the project's purpose and need and fails to consider and analyze reasonable, available, and less environmentally harmful alternatives and mitigation measures. Further, DOE failed to adequately assess all of the direct, indirect, and cumulative impacts of the project. Accordingly, the Sierra Club requests that DOE concludes the Kemper IGCC facility will cause significant and irreparable environmental harm, reject the project. Alternatively, we request that DOE fully and completely address the following concerns and re-issue the DEIS for further public comment.
- Response:** DOE disagrees with the conclusion that the Draft EIS is legally and technically flawed. Responses to the specific comments are provided in the following.
- SC-08:** **II. The DEIS Fails to Reasonably Define Purpose and Need**
- The definition of purpose and need in the DEIS is critically important because it determines the range of "reasonable" alternatives that may be considered. The DEIS impermissibly defines the purpose too narrowly "to demonstrate the feasibility of this selected IGCC technology at a size that would be attractive to utilities for commercial operation." DEIS at 1-6. Likewise, the DEIS's expressed need "to demonstrate advanced coal-based technologies that can generate clean, reliable, and affordable electricity in the United States" is an improperly narrow definition of need. *Id.* at 1-7.
- Response:** DOE disagrees with the statement that the stated purpose and need in the Draft EIS is improperly narrow. As stated previously, the definition of purpose and need for DOE action in this EIS is consistent with the definition of purpose and need that DOE has used in NEPA documents for other projects involving financial assistance by DOE.
- SC-09:** Here, the DEIS has arbitrarily constrained the alternatives analysis by narrowly defining the purpose and need to a particular IGCC facility without assessing whether the actual generating needs

could be met through renewable energy, conservation and efficiency, or other sources of fuel, such as natural gas. The purpose and need statements do not properly account for whether or not Mississippi actually needs the proposed power plant, what other power and/or conservation options are available to fulfill any projected need, and what other projects fulfill the CCPI missions. *See Friends of Southeast's Future v. Morrison*, 153 F.3d 1059, 1066 (9th Cir. 1998) (“An agency may not define the objectives of its action in terms so unreasonably narrow that only one alternative from among the environmentally benign ones in the agency’s power would accomplish the goals of the agency’s action,” because “the EIS would become a foreordained formality”) (quoting *Citizens Against Burlington, Inc. v. Busey*, 938 F.2d 190, 196 (D.C. Cir. 1991), *cert. denied*, 502 U.S. 994 (1991)) (correction in original). The DEIS purpose and need leave no room for any alternative to be reasonably considered.

**Response:** DOE disagrees with the statement that the alternatives are arbitrarily constrained. The determination of a need for power and the resources to be considered to meet that need are appropriately within the jurisdiction of the Mississippi PSC.

**SC-10:** Here, DOE failed to consider alternative energy solutions to satisfy any projected future need. The DEIS’ narrow definitions forecloses the possibility that non-coal energy solutions such as existing natural gas plants could meet this need. The DOE must consider all reasonable alternatives, even those that are “not within the jurisdiction of the lead agency.” 40 C.F.R. § 1502.14(c). *See also* Sierra Club Testimony to MS Public Utilities Commission on Kemper IGCC Certificate of Need, December 7, 2009 (attached as Exhibit to these comments), at 2:17-20 (“[Mississippi Power’s] procedure for soliciting resources to meet its identified need has been heavily skewed to its preferred outcome, depriving itself, the Commission, other parties, and ultimately ratepayers of a full assessment of options to meet need.” In preparing the DEIS, DOE and Mississippi Power have violated the “letter and spirit” of NEPA. *Id.* at §1500.1.

**Response:** The determination of a need for power and the resources to be considered to meet that need are appropriately within the jurisdiction of the Mississippi PSC.

DOE does not consider the alternative energy solutions suggested by the commenter to be reasonable alternatives to the proposed action. The question is not whether these alternatives are within the DOE’s jurisdiction but rather whether these are reasonable alternatives to the proposed action that can meet the DOE’s purpose and need.

**SC-11:** In fact, DOE failed to consider any plans, save for four mining development schemes, that deviate from the proposed Kemper IGCC facility. As discussed in greater detail below, DOE rejected alternative design plans such as alternative fuel sources, locations, means of CO<sub>2</sub> sequestration, plant layout, mining methods, power generating technologies, and plant size, simply because they deviate from Mississippi Power’s plan developed during the Clean Coal Power Initiative (CCPI) process. This is a completely impermissible construction of “purpose and need” for the EIS that taints the remainder of the DEIS.

**Response:** The basis for rejection of the alternative design plans suggested in this comment is provided in Section 2.7 of the EIS.

**SC-12:** Because of this narrow purpose and need, DOE admits that the only “reasonable alternatives available to DOE . . . would have been to select another project that applied to and met the eligibility requirements of the CCPI and loan guarantee programs.” DEIS, at p. S-4. Ruling out alternatives prior to conducting the EIS, however, contravenes the entire EIS process; alternative plant designs, locations, and fuels should have been considered. Moreover, the CCPI and Energy Policy Act of 2005 (EPA 05) authorize funding for a wide range of energy solutions, not one specific plant design, which was simply all DOE considered here. If Congress mandated this spe-

cific facility was to be built, the purpose and need could be much narrower, but that is not the case here. *See e.g. City of Angoon v. Hodel*, 803 F.2d 1016, 1021 (9th Cir. 1986) (“When the purpose is to accomplish one thing, it makes no sense to consider the alternative ways by which another thing might be achieved”); *cf. Sierra Club v. Lynn*, 502 F.2d 43, 62 (5<sup>th</sup> Cir. 1974) (“alternatives . . . under NEPA . . . must be judged in light of the nature of the federal action and the underlying implementing federal legislation”).

**Response:** The commenter is correct that Congress did not mandate that this specific facility be built. The congressional mandate to DOE in the enabling legislation was to conduct a solicitation for projects to demonstrate the commercial viability of technology advancements related to coal-based power generation to reduce the barriers to continued and expanded use of coal. Other technologies that cannot serve to carry out the goal of the CCPI program are not relevant to the DOE decision on whether or not to provide financial assistance to the Kemper County IGCC Project. Similarly, when DOE issues a solicitation for renewable energy technologies, selection and funding of a fossil energy project is not a reasonable alternative. The CCPI selection process involved evaluation of all proposals received in response to the solicitation, which collectively represented the reasonable alternatives to this project at that time. The selection process was conducted consistent with DOE procurement and NEPA regulations. It is not reasonable for DOE to prepare an EIS for each proposal submitted in response to any solicitation, including the CCPI solicitations.

**SC-13:** In fact, Sierra Club’s expert at Synapse Energy Economics, David Schlissel, after reviewing Mississippi Power’s application for a certificate of need, concluded that “[Mississippi Power’s] procedure for soliciting resources to meet its identified need has been heavily skewed to its preferred outcome, depriving itself, the Commission, other parties, and ultimately ratepayers of a full assessment of options to meet need.” Schlissel Testimony, December 7, 2009, at 2:17-20.

**Response:** This comment is in reference to the Mississippi Public Service Commission process, not the Draft EIS.

**SC-14:** Even if the purpose and need of this facility to demonstrate clean coal technology for widespread commercial use is assumed proper, DOE nevertheless failed to consider the impacts of alternative facilities and their respective impacts on the environment in the DEIS. It was improper for DOE to discount any variation to the proposed Kemper IGCC plant, which, as discussed below, is in contravention of NEPA and Council on Environmental Quality (CEQ) regulations.

**Response:** DOE disagrees with the statement that DOE failed to consider impacts of reasonable alternatives. The comment misapprehends the application of NEPA to federal financial assistance programs that make awards on the basis of a competitive selection process. It also misrepresents the content and purpose of DOE’s filing before the Mississippi PSC (please refer to the response to JW-08).

**SC-15:** **III. Proposed Action and Alternatives**

The DEIS fails to satisfy the basic function of NEPA: to inform the public and decisionmakers of the environmental consequences of the proposed action. The discussion of alternatives is at the heart of this process, yet no meaningful alternatives are provided here by DOE. There must also be an adequate no-action alternative that provides the public with a meaningful no-action benchmark, and a thorough discussion of the effects of alternative technologies and plant designs. The Sierra Club asks DOE to take into consideration the following viable and reasonable alternatives and their effects: an oxygen-blown gasifier facility, an air-cooled plant design, alternative plant locations, construction of the plant without the on-site mine, meeting energy needs through conservation and efficiency programs, using renewable energy sources, and co-firing coal with

biomass or natural gas. This is a non-exhaustive list of reasonable alternatives, yet none of which were considered by DOE in the EIS process, making the DEIS legally insufficient.

**Response:** Responses are provided in the following regarding the specific alternatives suggested.

**SC-16: A. The DEIS Fails to Satisfy the Basic Requirements and Function of NEPA Alternatives Analysis**

The purpose of an EIS is to “provide full and fair discussion of significant environmental impacts and shall inform decisionmakers and the public of the reasonable alternatives which would avoid or minimize adverse impacts or enhance the quality of the human environment. Agencies shall focus on significant environmental issues and alternatives . . . .” 40 C.F.R. § 1502.1. The Council on Environmental Quality (CEQ) has stated the alternatives requirement is the “heart” of the environmental impact statement, 40 C.F.R. § 1502.14, and courts have found “a thorough study and a detailed description of alternatives . . . is the linchpin of the [EIS].” *Monroe County Conservation Council, Inc. v. Volpe*, 472 F.2d 693, 697-98 (2<sup>nd</sup> Cir. 1972). This is not the case here.

**Response:** DOE believes the EIS provides a full and fair discussion of significant environmental impacts and informs decisionmakers and the public of the reasonable alternatives to avoid or minimize adverse impacts or enhance the quality of the human environment.

**SC-17:** According to CEQ regulations, “[t]he text of final environmental impact statements . . . shall normally be less than 150 pages and for proposals of unusual scope or complexity shall normally be less than 300 pages.” 40 C.F.R. § 1502.7. The substantive portion of this DEIS is 432 pages, yet alternatives are dismissed in only eighteen pages. *See* DEIS, Ch. 2.7. The environmental consequences of “alternatives” are covered in an incredibly meager five pages. *See id.* Ch. 4, at pp. 131-135. The length of this DEIS denotes “unusual scope or complexity,” but its analysis suggests anything but that – this discussion of alternatives falls impermissibly short of NEPA requirements.

**Response:** DOE believes the reasonable alternatives are adequately discussed. The comment misapprehends the application of NEPA to federal financial assistance programs that make awards on the basis of a competitive selection process. It also misrepresents the content and purpose of DOE’s filing before the Mississippi PSC (please refer to the response to JW-08).

**SC-18:** The DEIS must “serve as the means of assessing the environmental impact of proposed agency actions, rather than just justifying decisions already made,” 40 C.F.R. §1502.2; yet the DEIS does not provide an environmental analyses of alternatives to compare the proposed facility to, save for alternative mining sites and taking no action. DOE admits that it really only “analyze[d] in detail the project as proposed . . . and the no-action alternative.” DEIS, at p. S-4. The DEIS only describes environmental effects of Mississippi Power’s plan. This fails to meet the basic functions and requirements of NEPA.

**Response:** The full text of the statement in the Draft EIS is as follows: “Therefore, this EIS analyzes in detail the project as proposed (proposed action), the proposed action as modified by the applicant or in response to conditions such as mitigation, and the no-action alternative.” DOE believes this meets the requirements of NEPA for this proposed action.

**SC-19: B. The Lack of Alternatives Fails to Provide Essential Information to the Public**

The main purpose of NEPA is to ensure that “high quality” “environmental information is available to public officials and citizens before decisions are made and before actions are taken.” 40 C.F.R. § 1500.1(b). A “touchstone for [a court’s NEPA sufficiency] inquiry is whether an EIS’s selection and discussion of alternatives fosters informed decision-making and informed public

participation.” *Westlands Water Dist. v. United States DOI*, 376 F.3d 853, 868 (9<sup>th</sup> Cir. 2004) (quoting *Calif. v. Block*, 690 F.2d 753, 767 (9<sup>th</sup> Cir. 1982)). The lack of a described alternative, here, deprives the public of the ability to participate in the decision-making process because of the lack of quality information.

**Response:** DOE disagrees with the conclusion that the range of reasonable alternatives considered in this EIS has limited the ability of the public to participate in the decisionmaking process. DOE also disagrees with the statement that the EIS is lacking in quality information.

**SC-20:** “The purpose of the alternatives requirement is [also] to assure that the government agency as a decision-making body has considered methods of achieving the desired goal other than the proposed action. *Piedmont Heights Civic Club, Inc. v. Moreland*, 637 F.2d 430, 436 (5<sup>th</sup> Cir. 1981) (quoting *Sierra Club v. Morton*, 510 F.2d 813, 815 (5<sup>th</sup> Cir. 1975)). “Consideration of other realistic possibilities for action forces an agency to consider the environmental effects of a project and evaluate those effects against the effects of alternatives.” *Id.* The DEIS wholly fails to provide any substantive environmental impact comparisons, largely because no alternative courses of action were considered. The public is, therefore, left with no basis of comparison on which to make informed decisions and participate in the decisionmaking process, which is the pinnacle purpose of NEPA. *See Friends of the Earth v. Coleman*, 513 F.2d 295, 298 (9<sup>th</sup> Cir.1975) (“we . . . caution those charged with preparing impact statements against too heavy a reliance on a conclusory form of presentation, lest [NEPA’s] purpose of adequately informing the public of probable significant environmental impacts be undermined”). As such, the DEIS is legally insufficient to properly inform the public and interested parties.

**Response:** DOE considered the range of reasonable alternatives—both before and after the competitive selection process—that would meet its purpose and need, which is to implement Congress’ objectives for the CCPI program. Requiring agencies to analyze alternatives that would not meet the statutory objectives of a financial assistance program is unreasonable, would require agencies to analyze an unbounded set of alternatives, and would impose unnecessary delays on financial assistance programs such as this one and those funded by the American Recovery and Reinvestment Act.

**SC-21: C. The DEIS Fails to Consider Any Feasible Alternative Courses of Action**

As previously stated, DOE is required to evaluate reasonable alternatives in the EIS. 40 C.F.R. § 1502.14. DOE failed entirely to fulfill this requirement in the DEIS. DOE even stated that the following alternatives were dismissed from consideration by Mississippi Power, and not DOE: “alternative project size, alternative fuels, alternative plant layout on the site (the location of the plant footprint within the site boundaries), alternative mining methods, and options for CO2 sequestration.” DEIS, a p. S-12. This is alone is enough to render the DEIS insufficient.

**Response:** The commenter fails to understand the nature of financial assistance in general and financial assistance under CCPI. Congress not only prescribed a narrow goal for the CCPI, but also directed DOE to use a process to accomplish that goal that would involve a more limited role for the federal government. Instead of requiring government ownership of the CCPI demonstrations, Congress provided for cost sharing in a project sponsored by the private parties as a means to provide incentive for accelerated deployment. Therefore, rather than being responsible for the siting, construction and operation of the projects, DOE is in the more limited role of evaluating CCPI project applications to determine if they meet the requirements and national goals embodied in the CCPI. The same is true of the DOE role with regard to applications under the federal loan guarantee program. It is well established that an agency should take into account the needs and goals of the applicant in determining the scope of the EIS for the applicant’s project. When an applicant’s needs and goals are factored into the deliberations, a narrower scope of alternatives

may emerge than would be the case if the agency is the proprietor responsible for all project-related decisions.

**SC-22:** 1. DOE Failed to Adequately Provide a No-Action Benchmark

As required by law, the DEIS includes a “no-action” alternative. 40 C.F.R. § 1502.14(d). This “provides the standard by which the reader may compare the other alternatives’ ‘beneficial and adverse impacts related to the applicant doing nothing.’ *Kilroy v. Ruckelshaus*, 738 F.2d 1448, 1453 (9<sup>th</sup> Cir. 1984). To fulfill this requirement, DOE must “compare the potential impacts of the proposed major federal action to the known impacts of maintaining the status quo,” *Custer County Action Assn v. Garvey*, 256 F.3d 1024, 1040 (10<sup>th</sup> Cir. 2001), which DOE has not done in the DEIS. As DOE concedes, even if the project is not funded (which is the no-action alternative), there is the possibility that “the direct, indirect, and cumulative impacts would be essentially the same as the proposed action that is analyzed in this EIS.” DEIS at p. 2-68. There is therefore no benchmark with which to substantively compare the environmental effects of the proposed plant and the plant not being built.

**Response:** The Draft EIS states that, although Mississippi Power could decide to build the project without DOE involvement, “this option is not likely given the cost and financial risk associated with such large-scale demonstration projects.” Accordingly, DOE analyzed a no-action alternative in which there would be no development at the site, which provides an appropriate benchmark against which the impacts of the proposed action can be compared.

**SC-23:** 2. DOE Failed to Consider and Address the Environmental Impacts of and Improperly Rejected the No-Action Alternative

DOE failed to adequately consider the effects of its no-action alternative. According to DOE, the effect of it not providing Mississippi Power with federal funding is unknown. The plant would either be constructed as planned, or Mississippi Power would choose not to pursue the project. DEIS at 2-68.

The DEIS provides an inadequate analysis of the environmental impacts of its no-action alternative by not addressing any environmental impacts of the plant not being constructed at this site. It simply concludes the environmental impacts will be “adverse or beneficial.” DEIS, at p. 2-68, 4-130. For example, DOE does not address subsequent use of the land if the Kemper facility is not constructed. DOE must fully address the environmental impacts of the no-action alternative, including all the impacts evaluated in DEIS Chapter 4 for the proposed plant (air, water, wetlands, soil, human health and safety, land use, etc.)

**Response:** Under the no-action alternative, DOE assumed there would be no development at the site, since there are no other reasonably foreseeable plans for development. Therefore, the impacts under the no-action alternative (i.e., no development) are evaluated and compared to the proposed action.

**SC-24:** The no-action option was also improperly rejected because DOE determined it would not fulfill the purpose and need of Mississippi Power to construct the Kemper IGCC facility. The purpose and need are impermissibly narrow and do not properly account for whether or not Mississippi needs the proposed power plant, what other options are available to fulfill any projected need, and what other projects can fulfill the CCPI missions. The faulty purpose and need lead to an improper conclusion that the no-action alternative does not fulfill them.

**Response:** The Draft EIS identifies the proposed action as the preferred alternative. The no-action alternative has not been rejected. Until an ROD has been issued, both the no-action and the proposed

action are under consideration. However, it is clear to DOE that the no-action alternative does not fulfill the DOE purpose and need.

**SC-25:** 3. DOE Failed to Sufficiently Analyze the Effects of Alternative Technologies that Could Receive CCPI Funding

NEPA requires federal agencies to consider reasonable and feasible alternatives to the proposed action. The DEIS is flawed because it fails to consider any real and meaningful alternatives to the proposed action. The DEIS only considers two alternatives: The “no action alternative” and the building of Mississippi Power’s proposed IGCC facility.

**Response:** As stated previously, the CCPI selection process involved evaluation of all proposals received in response to the solicitation, which collectively represented the reasonable alternatives to this project at that time.

**SC-26:** Because DOE has created an unreasonable purpose and need for this proposed action, no reasonable alternative technology is discussed. If the alleged analysis of alternatives “consists entirely of foregone conclusions, rather than facts,” the agency has failed to fulfill the minimal requirements of NEPA. *Town of Matthews v. U.S. DOT*, 527 F. Supp. 1055, 1058 (W.D.N.C. 1981). Although the DOE claims its “role in these private projects is limited to providing cost-shared funding and a loan guarantee to a project,” DOE fails to discuss alternative technologies that it could fund. The DEIS admits that the DOE selected four different energy technologies for CCPI funding, DEIS at 2-71, but it did not compare the impacts of the projects with each other in the DEIS. Such a comparison is vital to the NEPA decision-making process. It is improper that “[t]he projects not selected under the CCPI Program were DOE’s alternatives prior to the time of selection and were considered at that point in DOE’s decision-making process.” *Id.* at 2-74.

**Response:** Consistent with the CEQ NEPA regulations (40 FR 1500-1508) and DOE regulations (10 CFR 1021), DOE reviews preliminary environmental, health, safety, and socioeconomic information during the evaluation and selection process, particularly with respect to technical merit and feasibility. Program policy factors are also considered to ensure that the portfolio of demonstrations selected represents the most appropriate mix to achieve program objectives.

These factors include program budget constraints, technological diversity, diversity of United States coals, and representation from a broad geographical cross-section of the country. After the selection has been made, the other proposed projects submitted under the CCPI solicitation are no longer reasonable alternatives to the selected project.

**SC-27:** 4. DOE Failed to Properly Consider Oxygen-Blown IGCC Systems

The KBR air-blown gasifier using “TRIG” technology is the wrong gasifier technology for DOE to fund to economically reach high levels of CO<sub>2</sub> capture. Oxygen-blown gasification is a much better technology to reach high levels of CO<sub>2</sub> capture because it eliminates the large amount of inert nitrogen, which serves as a large volume of dilution gas in the gasifier-produced syngas stream. The fundamental defect with TRIG technology is that air is 80% nitrogen, and this means considerably more inert gas is moving through an air-blown gasifier resulting in a more dilute stream of CO<sub>2</sub>. Oxygen-blown gasifiers produce a more concentrated stream of CO<sub>2</sub>.

**Response:** This comment is directed at the selection process, rather than the Draft EIS. The merits of air-blown versus oxygen-blown gasification were appropriately considered at that time.

The project proposed for cost-shared funding and loan guarantees is an air-blown gasifier. DOE’s alternative of funding or not funding or providing the loan guarantees does not extend to defining the applicants choice of technology. Regardless, DOE is satisfied that the TRIG™ gasifier is an

appropriate choice for this application. TRIG™ is an advanced circulating fluidized bed system that offers many advantages over other gasifiers. These include high carbon conversion with a variety of fuels, a small footprint with a high thermal throughput, and the ability to easily process high ash, high melting point fuels. Since TRIG™ uses a dry feed and does not slag its ash, it is particularly well suited for high moisture and ash fuels such as subbituminous coal and lignite. Southern Company and DOE have been developing the TRIG™ technology at the Power Systems Development Facility (PSDF) where the TRIG™ gasifier has achieved greater than 13,000 hours of runtime over the past 13 years. DOE is comfortable with this technology and believes it is ready for commercial demonstration.

Importantly, air-blown TRIG™ was specifically designed for power production. Other, oxygen-blown gasifiers (i.e., ConocoPhillips, GE Energy, and Shell) were developed for chemical production. In chemical production applications, it is preferred that the synthesis gases produced not be diluted with nitrogen. Accordingly, these industries use an air separation unit to remove atmospheric nitrogen prior to gasification. These oxygen-blown gasifiers can be used for power production, but there are extra capital and operating costs associated with separating nitrogen from the air. Further, in oxygen-blown operations the nitrogen removed from the process cannot be used to produce additional high-pressure steam from the gasifier. In air-blown configurations, the extra air separation unit is avoided and additional steam generated from the heated nitrogen flow can be directed to the steam turbine where power is generated.

Although air blown technology would require larger CO<sub>2</sub> removal equipment than oxygen-blown systems, the additional costs associated with the gas cleanup systems would be more than offset by removing the capital costs for the air separation unit and significantly increased steam production. To make up for this steam loss, oxygen-blown systems would need to increase the operation of duct burners to generate the same amount of electricity. The duct burners would emit CO<sub>2</sub> beyond the capture system.

**SC-28:** To date, the KBR gasification technology has been a complete failure in IGCC applications. The DOE spent \$168 million, out of a total project investment of \$355 million, on the 100 MW Piñon Pine IGCC plant in Nevada that incorporated a KBR (then KRW) air-blown gasifier. The plant never reached commercial operation and was permanently abandoned. The 285 MW IGCC plant that Southern Company and Orlando Utilities Commission begun constructing in Orlando, Florida would have been equipped with the same KBR air-blown gasifier proposed for the Kemper IGCC project. The Orlando IGCC project did not include CO<sub>2</sub> capture or sequestration and was cancelled in November 2007. The stated reason for the cancellation was uncertainty over future CO<sub>2</sub> control requirements in Florida.

**Response:** The previous experience with the selected gasification technology, including operation at the Wilsonville PDU, was appropriately considered during the selection process.

The commenter references the Piñon Pine IGCC project in Nevada. Although the gasifier proposed for that project was an air-blown gasifier, it was a completely different technology than is proposed for Kemper County (bubbling bed versus TRIG™). Regarding the Stanton IGCC project, the commenter is correct in stating that the reason for the cancellation was uncertainty over future CO<sub>2</sub> control requirements in Florida; it was not due to any deficiency in air-blown gasifier technology.

**SC-29:** The EIS should evaluate the alternative of using oxygen-blown gasifier technologies with a proven track record on lignite and low rank coals. The Lurgi fixed-bed oxygen-blown gasifier, which has achieved proven success in capturing CO<sub>2</sub> from lignite combustion and compressing CO<sub>2</sub> for pipeline delivery to EOR operations, should be evaluated as an alternative to the proposed KBR

gasifier. The ConocoPhillips E-Gas oxygen-blown gasifier technology is also applicable to low rank coals and has been successfully used to gasify subbituminous coal.

**Response:** The use of oxygen-blown gasification technology is not a reasonable alternative for DOE to consider in this EIS. DOE does not have the role of making fundamental changes in the technology proposed by the applicant. The cited E-Gas technology was also selected under CCPI, as proposed by a different applicant.

**SC-30:** The DEIS evaluated three oxygen-blown gasifiers in its “Overview Comparison of IGCC and Other Coal-Based Technologies”, which is not the technology proposed in Mississippi Power’s Kemper IGCC plant. DOE admits neither the DOE nor EPA comparative coal technology study “lends itself perfectly to the Kemper IGCC project” because of this technological discrepancy. DEIS, at p. 2-74. The DEIS nevertheless dismisses oxygen-blown gasifiers because “the main purpose of the CCPI program is to facilitate the movement of promising technologies to the commercial marketplace through demonstrations like Kemper, where a low-rank coal would be demonstrated in just such a promising new technology [as KBR].” *Id.* As discussed above, however, better feasible technologies already exist.

The DEIS nowhere addresses the potential effects of adopting oxygen-blown gasifiers, a reasonable alternative, for use at the Kemper IGCC plant, and does not account for this difference in its comparison of IGCC and other coal-based technologies. DOE has not, therefore, provided adequate justification for its exclusion of oxygen-blown gasifiers in the review process.

**Response:** The Draft EIS presented available information on the environmental characteristics of IGCC and other coal-based technologies for illustrative purposes. DOE recognizes that other coal-based technologies exist, but DOE is limited to the technologies proposed by the applicants under the solicitation.

**SC-31:** 5. DOE Failed to Consider an Air-Cooled Plant Design as an Alternative

The proposed IGCC facility will require 6.5 million gallons of water per day (MGD), which will create a serious strain on the surrounding environment as a result of the massive drawdown. The proposed plan will use reclaimed water with a 1 MGD use of the Massive Sand well. The results of this will result in significantly less drawdown to surrounding aquifers than drawing 6.5 MGD straight from wells (up to 70 ft. of drawdown), but will still have adverse environmental impacts. This would also adversely affect human users, as well. *See generally* DEIS § 4.2.5.2. The DEIS should also state what effect this might have on agricultural use of water in the area.

The use of an air-cooled plant design, or even an air-water hybrid cooler, would save millions of gallons of water every day for forty years, the effects of which must be analyzed in the DEIS. This feasible design alternative is one that is reasonable and should be given serious consideration in the DEIS.

**Response:** Please refer to the response to JW-02 (transcript).

**SC-32:** 6. DOE Failed to Consider Alternative Locations

Regardless of how the purpose and need is defined, the DOE has an obligation under NEPA to consider alternative sites. DOE is required to “[r]igorously explore and objectively evaluate all reasonable alternatives, and for alternatives which were eliminated from detailed study, briefly discuss the reasons for their having been eliminated.” 40 C.F.R. § 1502.14(a). Even when an agency provides seven alternative courses of action for the same tract of land, courts have found this to be insufficient for EIS purposes. *Center for Biological Diversity v. U.S. BLM*, Case 3:06-cv-04884-SI (N.D. Cal. 2009). Such possible considerations include placing the plant farther

away from wetland and perennial streams, and relocating the site to an existing lignite mine. DOE can provide Mississippi Power with CCPI funding for a coal-powered facility at any number of locations with lignite reserves, none of which were considered in this DEIS.

One possible alternative location DOE failed to consider was moving the plant next to, or in closer proximity to, the existing Red Hills Mine in Ackerman, Mississippi. The strip mine in Kemper would be responsible for 90% of the wetlands losses as a result of the project. The DEIS failed to compare and describe, even briefly, the impacts from supplying the Kemper project for its entire life from the existing Red Hills Mine, or siting the project next to, or closer to the Red Hills mine. The power plant could also be sited next to existing lignite mines in Louisiana and Texas.

While four mine development plans are discussed, the location of the mining study area and power plant do not change. As such, the DEIS does not present any meaningful alternative to the proposed action in terms of minimizing environmental impacts, *see* 40 C.F.R. § 1502.14, and the DEIS is therefore fundamentally flawed.

DOE states that Mississippi Power chose the Kemper site prior to the DEIS being issued, DEIS, at p. 2-72, but it is the purpose of NEPA for alternative locations to be identified and analyzed in the DEIS, and not just appear as a conclusion that the location chosen is the best and only one. *See generally* 40 C.F.R. § 1052.14 (the agency must “rigorously explore and objectively evaluate all reasonable alternatives”). Even if DOE actually analyzed the site selection itself, it violated CEQ regulations by failing to include any such analysis in the DEIS to adequately inform the public and interested parties. *See* 40 C.F.R. § 1505.1(e) (“[r]equiring that the alternatives considered by the decisionmaker are encompassed by the range of alternatives discussed in the relevant environmental documents and that the decisionmaker consider the alternatives described in the environmental impact statement”).

Rather than providing any analysis of the site selection, DOE supported Mississippi Power’s choice stating that the IRS had already “accepted the project and proposed a closing agreement with Southern Company” for tax credits, which were conditioned on “among other things, locating the project in Kemper County. Without the investment tax credits, Mississippi’s Kemper County project may not be economically feasible.” DEIS, at p. 2-72. This is a wholly inadequate for an EIS: an EIS must “provide full and fair discussion of significant environmental impacts,” 40 C.F.R. § 1502.1, not simply provide rationales for decisions based on funding availability.

DOE also states that one reason Mississippi Power chose the Kemper location was because of its “avoidance of . . . wetlands,” DEIS, at pp. 2-73 to 74. The mine site, however, is located directly on wetlands (“[w]etlands comprise 27 percent of the power plant site, 19 percent of the mine study area), DEIS, at p. S-15, and the project will divert or remove 56 miles of streams, *id.* at p. S-16. This is simply one reason why DOE itself must address the decision to build and mine on the Kemper site, and not relegate this analysis to the project proponent.

The omission of any reasonable alternative locations is impermissible. The Chief of the NEPA Program Office even commented that EPA was concerned with DOE discussing alternative site locations, stating DOE’s analysis should include a discussion of existing power plants and energy needs, which is entirely absent from the DEIS site analysis. *See* DEIS, App. A, at pp. 70-73.

**Response:** The comment misapprehends the application of NEPA to federal financial assistance programs that make awards on the basis of a competitive selection process. It also misrepresents the content and purpose of DOE’s filing before the Mississippi PSC.

Since the early 1970s, DOE and its predecessor agencies have pursued R&D programs that include long-term, technically complex activities in pursuit of innovation in a wide variety of coal technologies through the proof-of-concept stage. However, helping a technology reach the proof-of-concept stage does not ensure its continued development or commercialization. Before technologies can be considered seriously for commercialization, it must be demonstrated at a sufficient scale to prove its reliability and economically competitive performance. The financial risk associated with such large-scale demonstration projects is often too high for the private sector to assume in the absence of strong incentives.

The CCPI program was established in 2002 as a government and private sector partnership to implement the recommendation in President Bush's National Energy Policy to increase investment in clean coal technology.

The Congress established criteria for projects receiving financial assistance under this program in Title IV of the Energy Policy Act of 2005 (Pub. L. 109-58) (EPAAct 2005). Under this statute, CCPI projects must "advance efficiency, environmental performance, and cost competitiveness well beyond the level of technologies that are in commercial service" (Pub. L. 109-58, § 402[a]).

DOE selects projects for its CCPI partnerships through an open and competitive process. Potential private sector partners include developers of technologies, utilities and other energy producers, service corporations, research and development firms, software developers, academia and others. DOE issues funding opportunity announcements that specify the types of projects it is seeking, and invites submission of applications. Applications are reviewed on the bases of the criteria specified in the funding opportunity announcement, and include technical, financial, environmental, and other considerations. DOE selects the projects that demonstrate the most promise when evaluated against these criteria, and enters into a cooperative agreement with the applicant. These agreements set out the project's objectives, the obligations of the parties, and other features of the partnership. Applicants must agree to provide at least 50 percent of their project's cost; for most CCPI projects, the applicant's cost share is much greater.

DOE's filing with the Mississippi PSC simply reflects DOE's reasons for selecting this project from the applications submitted for this round of funding in the CCPI program. It should not be surprising that DOE selected a project it considers promising and that would, if successful, advance the deployment of the Transportation Integrated Gasification (TRIG™) technology. The filing relates DOE's long-term involvement in the development of this technology, and its belief that the project is worthy of support. It is unreasonable to expect DOE to conduct a competitive financial assistance program designed by the Congress to achieve certain objectives without regard as to which projects can best achieve those objectives.

DOE's NEPA regulations create a special process for identifying and analyzing reasonable alternatives in the context of providing financial assistance through a competitive selection of projects proposed by entities outside the federal government. The range of reasonable alternatives in competitions for grants, loans and other financial support is defined in large part by the range of responsive proposals DOE receives. Unlike projects undertaken by DOE itself, DOE cannot mandate what outside entities propose, where they propose to do it, or how they propose to do it beyond establishing requirements in the funding opportunity announcement that meet the program's statutory objectives. DOE's decision is limited to selecting among the applications submitted by project sponsors that meet CCPI's goals.

Recognizing that the range of reasonable alternatives in the context of financial assistance and contracting are in large part determined by the number and nature of the proposals submitted, DOE analyzes the environmental impacts of the submitted projects before it selects from among them (10 CFR 1021.216). The DOE official that selects which projects DOE will pursue consid-

ers these impacts and issues, along with other aspects of the proposals (such as technical merit and financial ability). Once DOE selects projects for an award, the range of reasonable alternatives becomes the project as proposed by the applicant, any alternatives still being considered by the applicant or that are reasonable within the confines of the project as proposed (e.g., the particular location of the generating plant on the applicant's site or the rights of way for linear facilities), and a no-action alternative. Regarding the no action alternative, DOE assumes that, if it were to decide to withhold financial assistance from a project, the project would not proceed.

Under the no action alternative, DOE would not provide funding under CCPI to the Kemper project for detailed, design, construction, or operation. In the absence of further financial assistance from DOE, Mississippi Power could reasonably pursue two options. It could build the project without DOE funding; the impacts of this option would be essentially the same as those of DOE's proposed action. Or, Mississippi Power could choose not to pursue its project, and there would be no impacts from the project. This option would not contribute to the goal of the CCPI program, which is to accelerate commercial deployment of advanced coal technologies that provide the United States with clean, reliable, and affordable energy. However, DOE analyzes this option as the no-action alternative in order to have a meaningful comparison between the impacts of DOE providing financial assistance and withholding that assistance.

DOE's Draft EIS identifies and analyzes the environmental impacts of the proposed Kemper project, including the mine and linear facilities. Although DOE has identified providing continued financial assistance cost-shared funding as its preferred alternative and proposed action, it has not decided whether it will provide this continued funding. It will make a decision only after considering the potential impacts identified in the EIS, the comments submitted on the Draft EIS, and other factors. The funding DOE has provided to date is limited to project definition activities, including preparation of the EIS. These activities do not have any potential adverse environmental impacts, and they do not limit the range of reasonable alternatives (40 CFR 1506.1[a]).

The text on pages 2-73 and 2-74 cited by the commenter refers to the consideration given to the avoidance of wetlands in the selection of the location of the power plant relative to the mine.

**SC-33:** 7. DOE Failed to Consider Construction of the Power Plant without the On-Site Lignite Mine

An alternative course of action that DOE did not consider is whether the future energy needs of Mississippi can be met by the construction of the Kemper IGCC facility without the proposed on-site lignite mine. As the DEIS acknowledges, there will be substantial impacts to a large acreage of land, with the potential for severe impacts to wetland areas as a result of the mining. The economic feasibility of building the Kemper IGCC plant without the mine is not considered, and neither are the environmental consequences of the Kemper facility using an off-site mine, such as the existing Red Hill Mine. This alternative course of action is both reasonable and viable as the Kemper IGCC plant plans to get its initial lignite coal supply from this location. DEIS at p. 2-34. The EIS should consider another existing source of lignite because not surface mining 13,000 acres next to and on top of wetlands would certainly have a potentially less environmentally-harmful impact.

**Response:** Please refer to the responses to JW-02, JW-19, and JW-20 regarding alternate sites or use of an offsite mine.

**SC-34:** 8. DOE Failed to Consider Alternative Methods of Meeting Energy Needs

According to the Energy Information Agency, "demand for electricity is projected to increase by more than 30 percent by 2030." DEIS, at pp. 1-1 to 1-2. There are numerous ways to meet this need, including efficiency and conservation programs, as well as renewable sources of energy,

yet DOE has chosen only one option to do so. DOE's rationale that it can only look at CCPI selections is unacceptable. See DEIS at 2-74. Acceptance of this rationale would contravene the spirit and purpose of NEPA. DOE must consider alternative methods of meeting Mississippi energy needs because it is required by NEPA. Additionally, DOE has a duty to disclose these options as alternatives to Mississippi citizens as well as federal taxpayers.

**Response:** DOE disagrees with the commenter's statement that NEPA requires DOE to consider alternatives to meet Mississippi's energy needs. DOE's purpose and need are not based on the need for power or the resources that should be considered to meet any need for power. These decisions are appropriately within the jurisdiction of the Mississippi PSC. The Mississippi PSC has determined that there is a need for power.

On April 29, 2010, the Mississippi PSC issued its Phase II order (accessible at <http://www.psc.state.ms.us/executive/pdfs/2009-UA-14%20Proposed%20Order.pdf>). The PSC found that the proposed Kemper County IGCC Project "contains too many uncertainties to justify the ratepayers bearing the risk of all these uncertainties in full." However, the PSC provided guidance, in the form of conditions, on how to make the project "consistent with the public convenience and necessity, as required by" statute. The conditions relate to: (1) risk mitigation for construction and operating costs, (2) government incentives, (3) environmental permits, and (4) Mississippi Power's continuing obligation to ensure the project is in the public interest. The PSC gave Mississippi Power 30 days to respond to its order.

**SC-35:** According to the Chief of the NEPA Program Office, "[i]n addition to the IGCC technology, other power plant designs should be considered and analyzed in the EIS. Various alternative technologies for coal and coal types, as well as conservation measures, should be considered. Rejection of alternative should be substantiated, including supporting environmental data." DEIS, App. A., at p. 73. DOE failed to heed to these scoping comments in the DEIS.

**Response:** The discussion of alternative coal-based technologies included in the Draft EIS was provided to address this EPA scoping comment.

**SC-36:** *a. DOE Failed to Consider Efficiency and Conservation Programs*

Prior to the DEIS, "[EPA] recommend[ed] that the DEIS include a summary section of the conservation methods (or incentives) that the applicant is proposing for use in the service area," and asked DOE to "clarify to what degree conservation would satisfy the need for additional power." DEIS, App. A., at p. 73. This consideration is entirely absent from the DEIS.

Efficiency is the cheapest, fastest, cleanest, and safest way to generate power. That is why a number of states and power companies are investing in improving conservation and efficiency. States with high growth, such as Florida and North Carolina, are employing aggressive energy efficiency and renewable standards to meet energy needs cheaply and cleanly, while at the same time, are rejecting plans to build new coal-fired power plants. In the Carolinas, Duke and Progress have launched initiatives to generate thousands of megawatts – more than this plant would produce – from greater efficiency and renewable sources of energy.

Mississippi Power, on the other hand, is taking the opposite approach. It is proposing to build a new coal power plant rather than investing in conservation and efficiency. This is the wrong answer for Mississippi. The state of Mississippi and its electric utility industry can introduce a number of conservation and efficiency measures that may mitigate the need for new electricity generating units.

Sierra Club's expert has testified that efficiency programs can account for an 11% in total energy consumptions by 2020, Sierra Club Testimony, at 7:6-8:2, obviating the need for a new IGCC facility, particularly the size of the Kemper plant. *See also* Chandler and Brown; *State Specific Summaries of the Meta-Review of Efficiency Potential Summaries and Their Implications for the South*; The School of Public Policy, available at <http://www.spp.gatech.edu/faculty/workingpapers/wp51.pdf>

The DEIS fails to consider how to meet Mississippi's power needs with demand-side management. This is a non-exhaustive list of available demand-side management options:

- switching to compact fluorescent lights (CFL) or LED lighting;
- improved insulation and weatherization;
- energy efficiency appliances, such as refrigerators, air conditioners, geothermal heating systems, and hot water heaters;
- switching from electric to natural gas appliances such as heating systems and hot water heaters;
- energy efficient improvements in industrial application such as electric motors and HVACs;
- cycling programs for heating and cooling systems;
- programmable thermostats and down comforters;
- passive solar;
- energy audits;
- general energy education on conservation and efficiency; and
- efficient mobile home purchasing.

Instead of merely accepting MPC's description of its meager demand side management programs, *see* DEIS at 1-8 to 1-9, the EIS must undertake an independent analysis of conservation and efficiency savings that would reduce energy needs and broaden the range of reasonable alternatives.

**Response:** Efficiency and conservation programs do not meet DOE's purpose and need. The discussion in the Draft EIS was provided to inform the reader of the programs being carried out by Mississippi Power to address these issues. The use of these programs to meet the state's energy needs is appropriately the jurisdiction of the Mississippi PSC.

**SC-37:** *b. DOE Failed to Consider Renewable Energy Sources*

The EIS must evaluate other economically beneficial means of generating electricity in a less environmentally harmful manner – such as using renewable energy. There are many forms of renewable energy that DOE should analyze including solar (photovoltaic and thermal), geothermal, wind (both on-shore and off-shore), small scale hydroelectric, biomass (which includes wood wastes, agricultural waste, switchgrass and prairie grasses), and biogas.

The EIS must consider a combination of options in order to meet the theoretical demand. For example, it is inappropriate to dismiss a specific renewable energy option just because it cannot produce the entire 660 megawatts of power assumed in the DEIS. Instead, the agency should consider a bundle of renewable energy alternatives to meet the requisite demand. Renewable energy, especially when coupled with demand-side management, as discussed above, may easily meet the energy needs of Mississippi Power's service territory. According to a Synapse Energy Economics, "[a]dditional energy efficiency resources appear to be available to assist in meeting Mississippi Power Company's projected need . . . For example, an analysis by Georgia Tech

found that there is the potential for 11.6 percent reductions in total consumption in Mississippi.” Sierra Club Testimony, at 3:3-7.

**Response:** Renewable energy technologies do not meet the DOE purpose and need.

**SC-38:** *c. DOE Failed to Consider Co-Firing Biomass with Coal*

When considering renewable energy options, the DOE should also, and failed to, consider co-firing biomass with coal. Biomass can be co-fired with coal to substantially reduce the emissions of regulated pollutants, including carbon monoxide, as well as to reduce CO<sub>2</sub> emissions. There are numerous examples of coal plants co-firing biomass (or natural gas.) These plants provide a roadmap for such consideration in the EIS alternatives analysis. For example, the St. Paul heating plant burns approximately 60% biomass and 40% coal. The biomass is primarily waste wood from tree trimmings and other industrial activities. The Xcel Bay Point power plant in Ashland, Wisconsin, also burns large amounts of wood waste, consisting primarily of saw dust. The DOE has urged federal facility managers to consider co-firing up to 20% biomass in existing coal-fired boilers. In the Netherlands, all four electricity-generation companies (EPON, EPZ, EZH and UNA) have developed plans to modify their conventional coal-burning plants to accommodate woody biomass as a co-fuel.

**Response:** While the cofiring of biomass with coal has been considered in other projects, this is not considered feasible for this project as noted in Subsection 2.7.4.2. Technical challenges associated with material preparation and with feeding biomass into pressurized systems render the use of biomass feedstock infeasible for this project. Also, DOE’s objectives under CCPI are to demonstrate advanced coal technologies. DOE has other programs to promote the use of biomass for energy production.

**SC-39:** In considering renewable alternatives, the DOE should note that baseload and dispatchability are relative concepts. For example, forced outages of large coal-fired power plants often have dramatic effects on system reliability. Renewable energy sources will not have such a dramatic impact on system reliability because these sources are distributed and it is extremely unlikely these numerous generators would all be unavailable at the same time.

**Response:** The commenter mistakenly assumes that the issues of dispatchability and reliability are relevant to whether DOE could consider renewable energy technologies as reasonable alternatives. The point is that renewable energy technologies are not considered reasonable alternatives because they do not meet the DOE purpose and need.

**SC-40:** In addition, the DOE should not simply dismiss a generation option because initial capital costs are higher than other generating options. Many of these renewable energy options that sometimes have high initial costs, such as fuel cells or solar panel, are eligible for federal tax credits or have decreased transmission costs. By considering these cost benefits, these options become more viable.

**Response:** DOE’s selection of this project was not based on initial capital costs.

**SC-41:** *d. DOE Failed to Consider Natural Gas Combined Cycle Facilities*

There are “substantial uncommitted resources available in Mississippi. In 2008, there were 5,862 MW of combined-cycle natural gas-fired capacity in Mississippi. None of the generating units operated above a 50% capacity factor.” Sierra Club Testimony, at 2:25-26, 3:1-2 (attached as Exhibit). Increased production at these facilities would more than meet the purported future increased energy needs of Mississippi, and would save ratepayers from price hikes to pay for a new IGCC facility. Given the large pricetag and significant environmental impacts, the DOE should

not fund an unnecessary coal plant just to prove a new technology. The EIS must consider purchasing power from existing natural gas merchant plants.

**Response:** The determination of the need for power and the resources to meet that need are appropriately within the jurisdiction of the Mississippi PSC. Purchasing power from existing plants is not a reasonable alternative that meets DOE's purpose and need. Please refer also to the responses to RL-02 and SC-34.

**SC-42:** The DEIS also did not consider a natural gas combined cycle (NGCC) facility as an alternative to the proposed Kemper IGCC plant or co-firing natural gas with coal at the IGCC plant. By burning a mix of natural gas with coal, the Kemper facility could lower both its pound-per-MMBtu emission rate and its hourly emission rate. Instead, DOE considered only the planned Kemper IGCC plant, which proposes to use natural gas as a backup fuel. The EIS should consider co-firing natural gas with coal as a reasonable alternative.

An NGCC or co-firing biomass facility is especially reasonable alternative: they even fall within the impermissibly restrictive purpose and need espoused by DOE because they would both also be eligible for CCPI and EPA Act 05 Title XVII funding (provided coal remained 50% of the plant's fuel source). These "hybrid approaches" will also save "[Mississippi Power] Company's ratepayers [from the] unnecessary risks of future cost increases" due to a "large, long-lived, capital intensive coal-fueled resources." Sierra Club Testimony, at 9:13-14.

**Response:** A natural-gas fired combined-cycle unit does not meet the DOE purpose and need.

**SC-43:** **IV. Environmental Consequences and Human Impacts**

**A. The DEIS did not Adequately Examine Air Pollution Impacts**

On December 7, 2009, the Environmental Protection Agency formally declared that carbon dioxide from the burning of fossil fuels poses a threat to human health and welfare. Kemper will emit 2.8 million tons of CO<sub>2</sub>, and thousands of tons of other harmful pollutants every year. The impacts of these emissions deserve considered and complete analysis by DOE in the DEIS.

Mississippi Power estimates that the proposed Kemper facility will generate 2089.6 tons of ozone-forming NO<sub>x</sub>, 669.7 tons of soot-forming SO<sub>2</sub>, and 521.8 tons of lung-damaging particulate matter (PM) every year. DEIS, App. C, at p. 3-7. (The EIS should also rectify or explain the discrepant TPYs given for the above pollutants found in Table 3-1 and other tables in the DEIS, as discussed below.) The DEIS states that the Kemper facility's NO<sub>x</sub> and SO<sub>2</sub> emissions will comprise, by themselves, 45% of total emissions for both Lauderdale and Kemper counties. DEIS, at p. 4-12. This significant increase in pollution needs to be addressed in greater detail; a conclusory statement that the Kemper plant's emissions are less than other coal plants will not suffice. *Id.*

The emissions information in the tables of the Draft EIS is correct. The apparent discrepancies are explained in the responses to JW-29 and SC-94.

**Response:** Subsection 4.2.1.2 provides a discussion of the impacts of air emissions from the proposed facility. This includes a comparison of NO<sub>x</sub>, SO<sub>2</sub>, and PM<sub>10</sub> ambient concentrations against the ambient standards set by EPA as protective of public health with a margin of safety. There is no ambient standard for CO<sub>2</sub>. Instead, impacts from CO<sub>2</sub> emissions are considered in the context of climate change and the effect of greenhouse gas emissions on climate change, as set out in Chapter 6.

- SC-44:** The EIS process should evaluate the air pollution impacts of the proposed facility as compared with the impacts of other alternatives evaluated; but because no alternatives were discussed, this evaluation is entirely missing from the DEIS.
- Response:** As explained previously, the alternative action analyzed by DOE is the no-action alternative, under which DOE would not provide cost-shared funding or loan guarantees. Under this scenario, either Mississippi Power would not pursue the project (in which case the background conditions would persist), or the project would proceed without DOE involvement, in which case the impacts would be essentially identical to the action alternative. Section 4.3 describes the comparative impacts of the no-action alternative.
- SC-45:** This EIS process should consider impacts to sensitive populations, such as children and the elderly, as well as impacts to the general public. DOE recognizes the increased risks to these populations, DEIS, at pp. 3-206 to 207, but does not address them in the impact analysis. While this analysis should include the criteria pollutants (sulfur dioxide, nitrogen oxide, particulate matter, and sulfuric acid mist), it should also examine the impacts from all other pollutants that would be emitted, including hazardous air pollutants, diesel exhaust, and both RGM and elemental mercury. The boilers themselves and other units, such as on-site diesel emissions from stationary, mobile sources, and construction equipment, must be considered. Fugitive emissions from haul roads, coal piles, and coal moving must also be considered. The DEIS should also consider air impacts from the life cycle of the fuel.
- Response:** NAAQS are set by EPA to be protective of human health and welfare, including that of sensitive populations such as asthmatics, children, and the elderly. Subsection 4.2.1.2 has been revised to provide additional discussion of the literature regarding the health effects of PM<sub>2.5</sub> at levels below the NAAQS.
- Impacts from potential emissions of HAPs, diesel exhaust, and mercury are discussed in Subsections 4.2.1 and 4.2.19 of the EIS. DOE has consolidated this information into Subsection 4.2.19 and has referenced that discussion in Subsection 4.2.1.
- Fugitive particulate emissions from lignite mining, transportation, storage, syngas combustion, and ash handling and disposal have been considered in the modeling analysis described in Subsection 4.2.1.
- SC-46:** As for the criteria pollutants, the analysis should not simply end because some impacts may be below the current National Ambient Air Quality Standards (NAAQS) for several reasons. First, EPA is currently in violation of its legal obligation to update and revise the NAAQS (except for particulate matter) and an EIS should not rely on out-dated information. In addition, NAAQS do not always protect public health. For instance, the EPA has acknowledged that adverse impacts, including premature mortality, are observed from ambient levels of PM 2.5 below the NAAQS. In fact, the EPA has concluded that it could not find any threshold below which it did not find adverse impacts.
- Response:** DOE believes the current NAAQS are best standards available against which to evaluate the potential impacts of the proposed facility. NAAQS are set by EPA to be protective of human health and welfare, including that of sensitive populations such as asthmatics, children, and the elderly. A reference to EPA's conclusion regarding potential for PM<sub>2.5</sub> health impacts at levels below the NAAQS has been added to Subsection 4.2.19.2. Also, refer to the response to JW-44 and the mortality and morbidity analysis that has been added to Subsection 4.2.19.2 of the EIS.
- SC-47:** The DEIS also notably fails to consider the combined effect to fish and animals that subsist on the Chickasawhay River and watershed from the project's mercury and HAP emissions; climate

change-induced impacts; and the cumulative emissions from all of the power plants in the region. The cumulative analysis should be both environmental and economic. EPA's analysis prepared for the remedy phase of its New Source Review enforcement action against the Baldwin power plant could serve as a useful model for such analysis.

**Response:** Impacts to terrestrial and aquatic species are addressed in Subsections 4.2.6 and 4.2.7. No assessment of chronic impacts was deemed necessary for DOE to reach reasonable conclusions regarding the overall impacts to terrestrial and aquatic resources. It is unlikely that deposition of metals from the project would adversely affect soils, vegetation, or animals. Preliminary screening indicates that increased metal concentrations in the surrounding soil would represent much less than 1 percent of screening levels of harmful exposure to plants and animals. (EPA. 1980. A Screening Procedure for the Impacts of Air Pollution Sources on Plants, Soils, and Animals. EPA 450/2-81-078. Office of Air Quality Planning and Standards, Research Triangle Park, North Carolina. December 12). Section 6.4 of the EIS addresses cumulative economic impacts. Subsection 4.2.6.2 of the Final EIS contains the results of the screening analysis for metals.

**SC-48: B. The DEIS did not Adequately Analyze Mercury Emissions Impacts**

Mercury is an extremely hazardous neurotoxin that is dangerous at very low levels. Coal power plants are the single largest source of mercury air emissions in the nation, and deposition of these air emissions causes an accumulation of mercury in soils and water bodies. Coal plants can create mercury hotspots in the vicinity of the plant. EPA has identified coal-fired utility boilers as the largest source of domestic anthropogenic mercury emissions to the atmosphere and has noted a causal link between these releases and the presence of methylmercury in fish tissue. Mercury emitted from coal plants becomes methylmercury in the environment, where it becomes toxic even in minute amounts. Methylmercury is readily absorbed by living tissues, and can cause serious birth defects, central nervous system and brain damage, diminished intelligence, and, as recent evidence suggests, autism. EPA has found that one in six women has levels of mercury in her blood above the safe standard, putting their future children at risk for learning and behavioral problems associated with mercury poisoning. According to the FDA, it would only take one pound of methylmercury to contaminate 500,000 pounds of fish, which, when consumed by humans and wildlife, increases their own mercury levels. The Kemper facility will emit 64.4 pounds of mercury every year. App. C at 3-13.

These harmful health effects result in billions of dollars in healthcare and costs due to lost productivity. A Mt. Sinai Medical School study has quantified the economic impacts of mercury exposure, specifically on lost productivity due to reductions in IQ. The cost in lost productivity from methylmercury exposure (largely through the consumption of contaminated fish) is estimated to be \$8.7 billion annually, with \$1.3 billion of this cost attributable to U.S. power plants.

DOE, however, only evaluated the risk of reactive gaseous divalent mercury (RGM) (6.32 lbs/yr will be emitted by the Kemper plant) and not elemental mercury (56.94 lbs/yr), the latter of which will account for 90% of mercury emissions from Kemper's stacks. DOE failed to provide any analysis on elemental mercury emission impacts. DOE's rationale was that "[e]lemental mercury has a long residence time in the atmosphere . . . before it is ultimately deposited on the earth's surface . . . The dispersion of elemental mercury is evaluated on regional and global scales and, therefore, was not considered for this analysis . . . ." A regional or global analysis is even nowhere to be found in the DEIS. The direct impacts to a neighboring state, such as Alabama, due to mercury deposition must be included in the DEIS.

**Response:** Because elemental mercury is a globally transported pollutant, Subsection 4.2.19.2 has been revised to include the percent increase of global mercury emissions represented by the proposed IGCC plant. Global mercury emissions are estimated to be between 4,850 and 8,300 tons per year

(tpy). Elemental mercury emissions from the proposed IGCC facility are estimated to be 0.03 tpy, or less than 0.0006 percent of global emissions. This would be less than 0.007 percent of annual mercury emissions from North America ([http://www.epa.gov/mercury/control\\_emissions/global.htm](http://www.epa.gov/mercury/control_emissions/global.htm)). There would be an increase in deposition of elemental mercury due to emissions from this project, but this increase would be of the same order of magnitude and immeasurably small.

**SC-49:** EPA cautioned DOE to fully analyze the effects of mercury emissions, including the concerns to both “human health and ecological receptors near the proposed facility.” DEIS, App. A, at p. 75. DOE did not take heed of this instruction, and the DEIS failed to adequately discuss the potential effects of mercury emissions from the proposed IGCC facility. This is an impermissible omission from the DEIS because of the potential effects to the surrounding waters and wetlands that will be in close proximity to the plant. EPA suggested that DOE

evaluate the potential for mercury emissions to deposit onto the local landscape, accumulate in biota, and move up the food chain. In particular, inclusion of mercury fate and transport modeling, (for elemental, divalent and particulate forms), will enhance the EIS by accounting for potential impacts to watersheds, people who fish in those watersheds, and enhance any associated total maximum daily load (TMDL) assessments for impaired waterbodies.

DEIS, App. A, at p. 75. DOE only considered impacts resulting from RGM emissions, which, as mentioned above, are a mere fraction of elemental mercury emissions. No impact analysis of fish or surrounding animals is even provided in the DEIS. Moreover, DOE’s use of an airport in Florida to compare mercury emissions to is a poor means of analysis – it only shows how at risk the people and animals are near that airport in Florida, which is not the focus of this EIS.

**Response:** Please refer to the responses to EPA-12 and -16 and JW-47. The Final EIS presents additional analyses of potential impacts of mercury emissions (see Subsection 4.2.19.2 and Appendix R).

Further, the OLF site is a long-term research site for atmospheric mercury, particulate matter, and ozone. Data from this site in Florida are considered to be reasonably representative of regional mercury deposition. The OLF site is located in a suburban airshed north of Pensacola and in the vicinity of several coal-fired power plants. As such, the background mercury values developed from this site may be higher than expected in the vicinity of Kemper County.

All of the mercury was considered in assessing inhalation risk. However, only RGM mercury emissions were included in the evaluation of risk by fish ingestion, because only the RGM portion of mercury emissions is expected to contribute significantly to deposition. Elemental mercury is essentially inert because of its low solubility and reactivity. In other words, the elemental mercury would remain airborne and be transported over long distances, and, therefore, should not contribute significantly to local deposition.

**SC-50:** DOE admits that some of the mercury emissions could end up in surface waters, which people use for recreation and to fish from, but concludes that because of control measures, the plant will not “contribute substantially to surface water mercury concentrations *in the vicinity of the site.*” DEIS, at 4-26 (emphasis added). DOE, however, states it did not analyze the local effects of elemental mercury depositions, and failed to analyze the regional effects, as well.

A full analysis of all mercury depositions and emissions caused by the Kemper IGCC facility is critical to protect the health of people in Mississippi and surrounding states. Even if the mercury particles are deposited miles away, their impact can be quite severe. Mississippi already has

numerous waterbodies that the Mississippi Department of Environmental Quality has placed Tissue Advisory and Fishing Bans on due to dangerous mercury concentrations.

A thorough analysis of the impact of mercury on the outlying areas is also particularly important because of the presence of several federally-listed animals in surrounding counties and waterbodies, including the Lagniappe crayfish, yellow-blotched map turtle, Gulf sturgeon, pearl darter, gopher tortoise, and black pine snake. The affected areas are also home to bald eagles, which are protected by the Migratory Bird Treaty Act and the Bald and Golden Eagle Protection Act. These potential impacts need to be analyzed and discussed in the DEIS in sufficient detail to adequately inform the public.

**Response:** Please refer to the previous response to SC-49. Any increase in mercury levels in the local environment resulting from the Kemper County IGCC Project emissions would be relatively small in relation to the existing background exposure. See Subsection 4.2.19.2, which has been expanded in the Final EIS.

**SC-51:** The DEIS should also analyze mitigation measures and alternatives that would reduce mercury emissions to the lowest possible level. For instance, a double bed carbon adsorber would reach 99% mercury control for little extra money and operating expense. The proposed control technology for the Kemper plant will only remove a purported 92% of mercury. Moreover, renewable energy sources, conservation and efficiency would produce *zero* mercury emissions. The DOE should consider all of these options in the DEIS, which it has failed to do.

**Response:** Appendix R of the EIS has been updated to include a fate and transport analysis of mercury. As discussed in Subsection 4.2.19.2 and Appendix R, impacts from mercury emissions are expected to be small. Mercury controls proposed by the applicant would represent state-of-the-art in reducing mercury emissions. Based on the small incremental health risk associated with mercury deposition from the project, no additional mitigation is being considered by DOE.

**SC-52: C. The DEIS Failed to Adequately Assess Health Impacts of Handling Emissions**

The Kemper facility is expected to emit a range of pollutants that have serious health consequences. For example, it would emit 33.2 TPY of Particulate Matter (PM) emissions from material handling emissions alone. The DEIS does not adequately address these non-air emission sources of pollution and their effects on human health. This includes ash and coal transportation and storage, and general pollution from vehicles. There will be eighty diesel trucks running for sixteen hours per day, every day, for six months during the startup of the facility. The impacts of and increased health risks from handling emissions must be discussed to inform the public of the risks posed by increased level of PM and other pollutants (“51 TPY of PM10, 2,030 TPY of NOx, 7,860 TPY of CO, 660 TPY of VOC, 0.02 TPY of SO2, and 264,500 TPY of CO2” from the trucks alone). DEIS, at p. 4-13.

**Response:** The discussion of impacts from particulate emissions contained in Subsection 4.2.1.2 is based on modeling analyses that include emissions from material handling facilities (e.g., ash and coal transportation and storage). An analysis of acute impacts of diesel emissions from trucks operating during the first 6 months of IGCC startup has been added to Subsection 4.2.1.2.

On average, only several trucks would be expected to be operating onsite at any one time. Even if all deliveries occurred within an 8-hour period, then 10 coal delivery trucks per hour on average would be delivering coal. Onsite the trucks would be operating at low speeds or idling most of the time, resulting in low emissions. This, coupled with the small volume of traffic at any one time, would result in low impacts on air quality.

**SC-53:** Additionally, lignite is susceptible to spontaneous combustion because of its high content of volatile matter and its high moisture content. This susceptibility can cause problems in transportation and storage. The EIS must analyze this possibility and precautionary measures to ensure safe transport of the coal.

**Response:** It is true that lignite is more susceptible than other coals to spontaneous combustion. NACC is experienced in the safe handling and storage of lignite. Pile compacting is a standard approach for controlling combustion in coal piles. In addition, the storage silos within the Kemper IGCC facility would have fire detection and suppression systems.

**SC-54:** **D. The DEIS Fails to Consider Emissions from the Coal Mine Part of the Facility, As Required by Law**

The DEIS and the air permit must consider the air emissions from the facility and the coal mine together according to the Clean Air Act and its regulations. The facility and the coal mine must have a BACT demonstration and be a part of the major stationary source permit.

**Response:** As shown in Table 4.2-7, the impacts from the stationary source mine emissions have been analyzed in combination with the IGCC facility. These emissions were also modeled as secondary emissions in the facility's PSD application. DOE believes the analysis provides a reasonable basis to reach conclusions regarding combined impacts of the mine and IGCC plant on air quality. MDEQ is responsible for applicable air permitting and has issued a PSD permit, including a BACT analysis for the Kemper IGCC facility.

**SC-55:** **E. The DEIS Failed to Consider the Risks of PM<sub>2.5</sub>**

In 2006, EPA stated, after conducting its review of the National Ambient Air

Quality Standards for PM<sub>10</sub> and PM<sub>2.5</sub>, that PM<sub>2.5</sub>, sometimes referred to as "fine particulate matter" has a variety of adverse health effects including premature mortality, increased hospital admissions, emergency room visits, and chronic respiratory disease. 71 Fed. Reg. 2,620 (Jan. 17, 2006). EPA has also stated:

The research on which EPA based the 1997 standards did not identify a specific threshold concentration below which individuals have no PM related health effects, meaning that emissions reductions resulting in reduced concentrations below the level of the standards may continue to provide additional health benefits to the local population.

70 Fed. Reg. 65,983, 65,988 (Nov. 1, 2005).

In EPA's most recent review of the PM<sub>10</sub> and PM<sub>2.5</sub> National Ambient Air Quality Standards, EPA was unable to find evidence supporting the selection of a threshold level of PM<sub>2.5</sub> under which the death and disease associated with PM<sub>2.5</sub> would not occur at the population level. 71 Fed. Reg. 2,620, 2,635 (Jan. 17, 2006). EPA also noted that in "the extended ACS [American Cancer Society] study, the authors reported that the associations for all-cause, cardiovascular and lung cancer mortality "were not significantly different from linear associations." *Id.* A linear relationship means that more pollution causes more health impacts. These health risks should not only be identified, but should be analyzed in greater detail in the DEIS.

**Response:** EPA's NAAQS are set to be protective of human health, including health of sensitive populations. As such, they represent the most reasonable basis for presenting an analysis of impacts from changes to ambient air concentrations. Subsection 4.2.19 has been revised to provide

additional discussion of the literature regarding the health effects of PM<sub>2.5</sub> at levels below the NAAQS.

**SC-56: F. The DEIS Should not Have Used PM10 as a Surrogate for PM2.5**

The DEIS fails to make the necessary demonstration that the facility will not violate Clean Air Act requirements for PM<sub>2.5</sub>. Particulate matter is made up of particles of varying sizes, and particle size determines, to a large extent, its health impacts. Prior to 1997, EPA regulated all particulate matter up to 10 microns in diameter under its PM<sub>10</sub> standards. The fine particle component of PM<sub>10</sub> – those up to 2.5 microns in diameter – are the most harmful to health. Accordingly, EPA promulgated a separate NAAQS for PM<sub>2.5</sub> in 1997 because it found that the PM<sub>10</sub> standards did not adequately protect public health and welfare. See 62 Fed. Reg. 38,652, 38,667 (July 18, 1997).

The controlling law requires a BACT limit “for each regulated NSR pollutant that [a new major stationary source] would have the potential to emit in significant amounts....” 40 C.F.R. § 52.21(j)(2) (incorporated by reference into MCEQ R. APC-S-5). Such pollutants include “[a]ny pollutant for which a [NAAQS] has been promulgated” and therefore include PM<sub>2.5</sub>. 40 C.F.R. § 52.21(b)(50)(i). EPA has acknowledged that “[t]he obligation to implement PSD [is] triggered upon the effective date of the NAAQS.” Rule to Implement the Fine Particle National Ambient Air Quality Standards, Notice of Proposed Rulemaking, 70 Fed. Reg. 65,984, 66,043 (Nov. 1, 2005). Because PM<sub>2.5</sub> is regulated pollutant that will be emitted in a significant amount, a BACT limit for PM<sub>2.5</sub> is required. 42 U.S.C. § 7475(a)(4); 40 C.F.R. § 52.21(j).

The DEIS improperly concludes that MDEQ may use PM<sub>10</sub> as a surrogate for PM<sub>2.5</sub>. DEIS at 4-8. This conclusion is based on a misinterpretation of EPA’s now-defunct PM<sub>10</sub> surrogate policy. The surrogate policy has always been governed by D.C. Circuit law on surrogates, which requires a case-by-case reasonableness inquiry. *See, e.g., National Lime v. EPA*, 233 F.3d 625, 639 (D.C. Cir. 2000) (surrogates may only be used in limited circumstances, and only after a thorough reasonableness inquiry demonstrates that use of the surrogate satisfies legal requirements for the original pollutant). This interim policy, announced over twelve years ago in the EPA’s Seitz Memo, advised that permitting authorities could use PM<sub>10</sub> as a surrogate for PM<sub>2.5</sub> only as long as it proved “administratively impracticable” to directly address PM<sub>2.5</sub> due to “technical and informational deficiencies.” Memorandum from John S. Seitz at 2 (October 21, 1997), *available at* <http://www.epa.gov/nsr/documents/nsrmemo.pdf>. Those deficiencies of twelve years ago present no difficulties today – as EPA has recognized.

Consistent with this applicable law, EPA’s surrogate policy has always required MDEQ to perform a thorough reasonableness analysis. *In re Louisville Gas & Electric Co.*, Order Responding to Issues raised in April 28, 2008 and March 2, 2008 Petitions, and Denying in part and Granting in Part Requests For Objection to Permit (August 12, 2009) (“*Trimble*”), at 43-44, at 43 (“this case law governs the use of EPA’s PM<sub>10</sub> Surrogate Policy, and thus that the legal principle from the case law applies where a permit applicant or state permitting authority seeks to rely upon the PM<sub>10</sub> surrogate policy in lieu of a PM<sub>2.5</sub> analysis to obtain a PSD permit.”)

*Trimble* provides detailed instructions for state permitting authorities on how to show PM<sub>10</sub> provides a reasonable surrogate for PM<sub>2.5</sub> in a particular case.

First, the source or the permitting authority establishes in the permit record a strong statistical relationship between PM<sub>10</sub> and PM<sub>2.5</sub> emissions from the proposed unit... A strong statistical relationship could be established in a variety of ways....[but] a simple ratio of AP-42 emissions factors...would not appear to be sufficient...

Second, the source or the permitting authority demonstrates that the degree of control of PM<sub>2.5</sub> by the control technology selected in the PM<sub>10</sub> BACT analysis will be at least as effective as the technology that would have been selected if a BACT analysis specific to PM<sub>2.5</sub> emissions had been conducted....The first [possible method] would be to perform a PM<sub>2.5</sub> –specific BACT analysis, in which case the requirement is met if the control technology selected through the PM<sub>10</sub> BACT analysis is physically the same as what is selected through the PM<sub>2.5</sub> BACT analysis...The second path would be to perform a PM<sub>2.5</sub> –specific BACT analysis, and show that while the type and/or physical design of the control technology may be different, the efficiency for PM<sub>2.5</sub> control of the technology selected through the PM<sub>10</sub> BACT analysis is equal to or better than the efficiency of the technology selected through the PM<sub>2.5</sub> BACT analysis...

*Trimble*, at 45. The reasonableness analysis must be demonstrated in the permit record. *Id.*

The DEIS conducts a wholly inadequate analysis of reasonableness and erroneously concludes that PM<sub>10</sub> is an appropriate substitute at the Kemper facility. First, the DEIS admits that it did not establish a strong statistical relationship between PM<sub>10</sub> and PM<sub>2.5</sub> because “definitive particle size distribution data were unavailable for these sources [the IGCC stacks, gasifier startup stacks, auxiliary boiler, and flare systems].” DEIS at 4-9. Additionally, for fugitive dust and material handling sources, in direct contradiction of the EPA’s instructions in *Trimble*, the DEIS relies on AP-42 emission factors. *Id.* AP-42 provides a constant, fixed ratio of PM<sub>10</sub>/ PM<sub>2.5</sub> for estimation purposes only. *See* EPA, AP 42, Fifth Edition Compilation of Air Pollutant Emission Factors, Volume 1: Stationary Point and Area Sources, (Jan. 1995), available at <http://www.epa.gov/ttnchie1/ap42/> at 1 (“An emission factor is a representative value that...facilitate[s] estimation of emissions from various sources of air pollution”). For this reason, *Trimble* explicitly stated “a simple ratio of AP-42 emissions factors...would not appear to be sufficient [to demonstrate the statistical relationship between PM<sub>10</sub> and PM<sub>2.5</sub>].” *Trimble* at 45.

Second, the DEIS dismisses that any new PM<sub>2.5</sub> controls would be used because postcombustion controls “would not be economically feasible.” DEIS at 4-9. At the first step of the BACT analysis, all potential control technologies must be considered, without regard for cost. The DEIS therefore wrongfully dismisses postcombustion controls, which also makes the reasonableness analysis insufficient.

**Response:** MDEQ is the air permitting agency for this facility. MDEQ has elected to apply EPA’s surrogate policy to its permitting analysis of PM<sub>2.5</sub>. In their Pre-Construction Review and Preliminary Determination of Approval of the Kemper County IGCC Project, dated December 17, 2009, MDEQ stated that:

“The Department has reviewed the information provided and believes that PM<sub>10</sub> is an appropriate surrogate for PM<sub>2.5</sub> for the proposed facility because for each source type, the uncontrolled and controlled emissions of PM<sub>2.5</sub> generally correlate with the respective PM<sub>10</sub> emission rates and the BACT selected for PM<sub>10</sub> for each source is the same as what would be selected for PM<sub>2.5</sub>. Moreover, the state believes that the use of PM<sub>10</sub> as a surrogate is warranted since the final rule that would establish threshold levels for PM<sub>2.5</sub> significant impacts, increments and monitoring for PSD impact analyses has yet to be promulgated. Accordingly, PM<sub>10</sub> was used as a surrogate for PM<sub>2.5</sub> to demonstrate compliance with PSD permitting requirements including control technology evaluation and air quality impacts analysis since Mississippi is a SIP-approved state, and the SIP has not been revised.”

In addition, EPA Region 4 has oversight responsibility in determining whether use of a surrogate is appropriate for permitting issues. Irrespective of the application of the surrogate policy by MDEQ, DOE has analyzed the impacts of air emissions, including PM<sub>2.5</sub>, in a manner which DOE believes is reasonable to support its conclusions regarding their effects on human health and the environment. Subsection 4.2.1.2 explains the basis for this analysis. DOE does not believe that additional postcombustion controls are necessary to mitigate the predicted impacts. However, DOE has revised its language in Subsection 4.2.1.2 to more accurately reflect the analysis in the project's PSD application regarding these controls.

**SC-57:** Before issuing a PSD air permit to Kemper, MDEQ is also required to demonstrate that its fine particulate emissions would not "cause or contribute" to air pollution in excess of the PM<sub>2.5</sub> air quality standards. The PM<sub>2.5</sub> ambient prediction done for this facility was not done with a modeling technique approvable under EPA's Air Quality Modeling Guidance in Appendix W, *available at* [http://www.epa.gov/scram001/guidance/guide/appw\\_05.pdf](http://www.epa.gov/scram001/guidance/guide/appw_05.pdf). The background concentrations of PM<sub>2.5</sub> in the area are very high and close to the NAAQ standard. DEIS at p. 4-8, Table 4.2-4. The background PM<sub>2.5</sub> concentrations are 28.9 and 12.8 µg/m<sup>3</sup> for annual and 24-hour periods respectively. The NAAQ standards are 35 and 15 µg/m<sup>3</sup>. Because of the high PM 2.5 area background and the likelihood that the facility could therefore jeopardize NAAQs, it is very important that the modeled impact predictions of PM<sub>2.5</sub> from the facility are precise.

**Response:** Subsection 4.2.2 has been revised to include modeling for PM<sub>2.5</sub> that is consistent with EPA guidance and with the NAAQS analysis performed for the other criteria pollutants. The analysis explicitly considered the effect of background levels of PM<sub>2.5</sub> in the site vicinity. By adding the highest estimated PM<sub>2.5</sub> impacts from the facility to the maximum background PM<sub>2.5</sub> concentration (measured in an urban area), the analysis demonstrated that ambient concentrations would remain below the NAAQS for PM<sub>2.5</sub>. DOE recognizes that the facility's impacts would cause ambient concentrations to increase and that the identified background levels of PM<sub>2.5</sub> are within 82 to 85 percent of the NAAQS. However, PM<sub>2.5</sub> levels would remain below those established by EPA as protective of public health. Subsection 4.2.19.2 has been revised to provide additional discussion of the literature regarding the health effects of PM<sub>2.5</sub> at levels below the NAAQS.

**SC-58:** **G. The DEIS Failed to Adequately Address Impacts on Wildlife**

1. DOE Failed to Explain its Conclusion that Wildlife Would Acclimate to Plant Operations

According to the DEIS, DOE concludes "most wildlife species would soon become acclimated to the presence of the power plant and would reestablish in suitable adjacent habitats." DEIS, at p. 56. The conclusion that most animals would get used to the power plant's presence is unfounded based on the material presented in the DEIS. The plant would consist of constant human presence, routine vehicular traffic, noise, vibrations, air pollutant emissions, and artificial lighting, all of which will adversely affect animal habitats, and have the potential to drive animals away. The surrounding areas will also be strip mined, which will de facto remove suitable habitat.

The noise of plant operations would extend to the boundary of the mining study area, where reclamation would take place and where displaced animals would quickly return to, according to the DEIS. Operation of the dragline alone creates 119 db, about the same as a jackhammer. While the noise levels are plainly stated, the DEIS fails to analyze the impact of the large increase in noise levels on the surrounding wildlife, particularly in regards to their re-acclimatization to the mine and plant area.

**Response:** Wildlife found in the power plant project vicinity are common species to the region and do adapt to habitat changes due to rural activities such as agriculture and forestry operations. The power plant site is 1,646 acres of mostly forested and other natural communities. Construction of the

power block itself would disturb 739 acres, or 45 percent of the total site. Mine construction on the plant site would impact another 342 acres, or 21 percent of the total power plant site. The remaining habitats (564 acres) would continue to be used by displaced wildlife both onsite and off-site to the adjacent undisturbed habitats to the east, as well as to the unmined or inactively mined habitats to the north, west, and south. Experience working with other developing power plant sites across the southeast indicates wildlife species do adapt and would continue to coexist with an active power facility.

Regarding potential noise impacts on wildlife from the mining (dragline) operation, a maximum noise output of 119 dbA from a piece of equipment would attenuate to a rural ambient level of 55 dbA within approximately 1,500 meters (0.93 mile) of the dragline location. Since active mining would be occurring in blocks, and the total project area is approximately 5 miles wide by 11 miles long, significant portions of the remainder of the mine area and power plant site would not be affected by higher noise levels than ambient. Therefore, no wildlife impacts due to noise would be expected for the majority of the site during the mining operation.

**SC-59:** 2. DOE Failed to Adequately Discuss Impacts to Wildlife due to Mining

According to DOE, mining operations could benefit many wildlife species due to reclamation. This reclamation process, however, takes three years to complete for every 275 acre parcel. DOE acknowledges that the strip mining will result in a “temporary loss of wildlife from the mining area,” and a temporary increase of wildlife in surrounding areas, but concludes that wildlife will return to the refurbished land “relatively quickly.” No impacts are provided on the temporary influx of wildlife to surrounding areas; and what brief analysis was undertaken was done under the assumption the reclamation process will be beneficial to the habitat, and that animals will return to the reclaimed areas, even while the power plant is operating and the surrounding areas are also being strip mined.

**Response:** The mine area is in a rural part of Mississippi and is surrounded by agricultural land uses such as farming, ranching, silviculture, and undeveloped lands. Wildlife would move into the surrounding areas off of the disturbed lands and, as has been the experience at Red Hills Mine, would move quickly back onto the reclaimed lands. Reclaimed lands are managed for high value vegetation and are protected from hunting pressures.

A study of state and federally listed threatened and endangered species occurred for 6 months. No state or federally protected species were detected. The EIS contains reports of threatened and endangered species studies and methodology in Subsections 3.8.3.3 and 3.9.3.3. Price’s potato-bean is discussed in Subsection 3.8.3.3.

**Federally Listed Species**

The U.S. Fish and Wildlife Service has already concurred with the findings of the initial Threatened and Endangered Species Survey performed on the entire 31,000 acre study area (the actual mine area is smaller and falls within that area). That survey concluded that no “Federally” protected species or their critical habitat occur in the project area.

**State-Protected Wildlife**

The Mississippi Department of Wildlife Fisheries and Parks is responsible for the regulation of protected nongame species in the state. The list of protected species and prohibited activities related thereto is provided in the following from the Department’s Web site on general hunting regulations and requirements:

“All birds of prey (eagles, hawks, osprey, owls, kites, and vultures) and other nongame birds are protected and may not be hunted, molested, bought or sold. The following endangered species are also protected: black bear, Florida panther, gray bat, Indiana bat, all sea turtles, gopher tortoise, sawback turtles (black-knobbed, ringed, yellow-blotched), black pine snake, eastern indigo snake, rainbow snake and the southern hognose snake” (<http://home.mdwfp.com/License/info.aspx?id=13>).

Individuals of these species listed cannot be killed or molested if encountered. Limitations on legally authorized development are not expected to fall under these regulations, except for species that are also federally protected.

Generally, mobile wildlife species will move in response to land disturbance and will relocate to surrounding lands.

Stream mitigation operating procedures (SOP), promulgated by USACE Mobile District, ascribes a 50-percent functional value to preserved, restored, or enhanced streams. This reduction in mitigation value effectively incorporates temporal loss in determinations of compensatory mitigation requirements.

**SC-60:**

**3. DOE Failed to Adequately Discuss Impacts to Protected Species**

DOE has conducted an impermissibly cursory analysis of the impact of the Kemper IGCC facility on species that are under State or federal protection. Despite the U.S. Fish and Wildlife Services' (FWS) concerns that the plant will have direct and indirect impacts on a number of listed species, DOE concludes in three paragraphs that the mining operations will not have an adverse effect on any federally-listed species. DOE concludes the mine will adversely affect State-protected species, but does not say to what extent, which is problematic.

There are several federally-listed species that might be affected by this facility. According to FWS, the following federally-listed species can be found on or near the proposed site: Price's potato bean, Lagniappe crayfish (both can be found in Kemper County), yellow-blotched map turtle, Gulf sturgeon, pearl darter, gopher tortoise, and black pine snake. Additionally, the bald eagle uses the habitat in this area. DOE has itself identified two other birds listed by the State whose habitat will be affected (the barred owl and sharp-skinned hawk), the latter of which is designated as critical. A critical designation in Mississippi means “extreme rarity (5 or fewer occurrences or very few remaining individuals or acres) or because of some factor(s) making it vulnerable to extirpation.” DEIS, App. F, at p. 3. Despite this designation, no impact analysis was provided beyond its “[h]abitat . . . may also be adversely affected.” DEIS, at p. 4-59.

DOE has stated it is discussing potential impacts on the Price's potato bean with FWS, but no impacts are laid out in the DEIS. DOE also states that the sharp-skinned hawk (considered critically imperiled by Mississippi) and barred owl will be adversely affected by mining operations. To what extent is unknown. This is an impermissible environmental analysis and is alone a fatal flaw to the DEIS. Furthermore, the remainder of the abovementioned species identified by FWS were not even discussed in the DEIS, save for the gopher tortoise. Of particular concern to FWS was the loss of “numerous miles of riparian habitat” that could affect the Lagniappe crayfish, whose designation, according to FWS, might need to be reassessed following construction of the Kemper facility. DEIS, App. A, at pp. 31-33. This crayfish is not discussed at all in the DEIS. The Lagniappe and the remainder of the species identified by FWS must be addressed by DOE, even if surveying did not locate any of them on the proposed mine site. The direct and indirect impacts of the IGCC facility extend beyond its immediate periphery. Cf. 50 C.F.R.

§ 402.02 (CEQ regulations broadly define the “action area” as “all areas to be affected directly or indirectly by the Federal action and not merely the immediate area involved in the action”).

The analysis of the impact on listed species must be critical, comprise more than a mere “recitation” of the activities, and consider the “total impact” to listed species. *Defenders of Wildlife v. Babbitt*, 130 F. Supp. 2d 121, 128 (D.D.C. 2001). See also 16 U.S.C. § 1536(a)(2) (federal agencies are required, for all discretionary activities, to “insure” that its actions neither “jeopardize the continued existence” of any of the nation’s listed species nor “result in the destruction or adverse modification” of listed species’ “critical habitat”). DOE has failed to do this in the DEIS.

DOE also failed to address Mississippi Wildlife Federation’s concern over the state-listed red salamander, which only is active in the winter and would not have been viewed by a survey during other seasons. DEIS, App. A, at p. 28. DOE should address this before a final decision is issued.

**Response:** DOE disagrees with the assertions made in this comment. First, as documented in Sections 3.8 and 3.9 of the EIS, field surveys were conducted to ascertain the presence or likely presence of protected species. See also Appendices F, G, H, and J in Volume 2 of the EIS, which provide information regarding baseline surveys.

Appendix G presents the habitat type necessary for Price’s potato bean for comparative purposes to the habitats established through the baseline evaluations in the project study areas. Fundamentally, the study areas are well outside the eco-region in the Southern Hilly Gulf Coastal Plain where Price’s potato bean is typically found. Price’s potato bean is specifically addressed in Section 3.8; see pages 3-93, 3-107, and 3-122 of the Draft EIS. It was searched for during all project-related field surveys but was not found.

Similarly, the lagniappe crayfish was addressed in Subsections 3.9.1 and 3.9.3.3 of the Draft EIS. As presented in Subsection 3.9.3, an aquatic sampling program was carried out at eight stream locations within the mine study area. The Lagniappe crayfish was not found when this ecological baseline evaluation was conducted in the study area. Appendix J provides the lists of all aquatic taxa sampled. Furthermore, the lagniappe crayfish is not known to occur within the Chickasawhay River Basin/watershed.

The barred owl and sharp-shinned hawk were addressed in Section 3.8 of the Draft EIS. Neither species is federally listed. The barred owl is not listed by the Mississippi Natural Heritage Program. The sharp-shinned hawk is listed as S1B, meaning its breeding population is critically imperiled in the state. The red salamander was not addressed because it is neither a state nor federally listed wildlife species in Mississippi.

Finally, see responses to DOI and MDWFP for further discussion on impacts to biological resources.

**SC-61:** *4. DOE Failed to Consider Effects of the Mine on Wildlife Habitat and Adequately Explain Mitigating Measures*

The Lagniappe crayfish exemplifies the flaw of the DEIS regarding the attention given to the facility’s impact on the surrounding environment. Even if the crayfish is not located on the mining site, its habitat can still be adversely impacted. FWS stated its concern that the coal mine would impact wildlife offsite, which could have adverse impacts associated with the Chickasawhay River and all aquatics found in that watershed. DEIS, App. A, at p. 33. This river contributes to the habitat of the Lagniappe crayfish, yellow-blotched map turtle, and Gulf sturgeon – none of which are mentioned in the aquatic ecology impact assessment, even though DOE states “stream

diversions would result in the loss of habitats and the aquatic life in the existing stream channels.” DEIS, Ch. 4, at p. 4-63.

Such potential adverse impacts include increased soil acidity, increased nutrient levels, algal blooms, water toxicity, general pollution, and removal of riparian vegetation. The Army Corps also lists “changes in either the normal water conditions for clarity, chemical content, nutrient balance, dissolved oxygen, pH, temperature, salinity, current patterns, circulation and fluctuation, or the physical removal of habitat,” as additional factors that adversely affect wildlife. DEIS, App. A, at p. 47. Although DOE claims the impacts can be minimized using mitigating measures, no such measures are described, much less listed or identified. As a bare minimum, an EIS must contain “a reasonably complete discussion of possible mitigation measures.” *N. Alaska Envtl. Ctr. v. Kempthorne*, 457 F.3d 969, 979 (9<sup>th</sup> Cir. 2006) (quoting *Robertson v. Methow Valley Citizens Counsel*, 490 U.S. 332, 352 (1989)). The mitigation must “be discussed in sufficient detail to ensure that environmental consequences have been fairly evaluated.” *Id.* (quoting *City of Carmel-By-The-Sea v. U.S. Dept. of Transp.*, 123 F.3d at 1142, 1154 (9<sup>th</sup> Cir. 1997)). *See also* 40 C.F.R. § 1502.16(h); *id.* at § 1502.14(f) (the EIS must identify the means to mitigate adverse environmental impacts). Courts have also found that a “‘mere listing’ of mitigation measures, without supporting analytical data,” is insufficient. *League of Wilderness Defenders/Blue Mountains Biodiversity Project v. Forsgren*, 309 F.3d 1181, 1192 (9<sup>th</sup> Cir. 2002).

Simply stating the effects will be minimal because mitigating measures will be required if the Army Corps dredge and fill permit is approved is wholly inadequate for the NEPA process. *See e.g.* DEIS, at p. 4-134 (“using 6.5 MGD of ground water from the Massive Sand aquifer could adversely impact some users of water from that same aquifer, yet such impacts could be mitigated”). This type of perfunctory statement fails to satisfy the requirements of NEPA. *Winter v. NRDC*, 129 S.Ct. 365, 376 (2008) (“Part of the harm NEPA attempts to prevent in requiring an **EIS** is that, without one, there may be little if any information about . . . potential **mitigating** measures”). According to the Supreme Court, a discussion of mitigation measures is essential to the NEPA process: “omission of a reasonably complete discussion of possible mitigation measures would undermine the “actionforcing” function of NEPA. Without such a discussion, neither the agency nor other interested groups and individuals can properly evaluate the severity of the adverse effects.” *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 352, 371 (1989).

Appendix P states that mining impacts on streams and waterways will be mitigated by relocating and diverting streams and reclamation following mining. The DEIS also states, however, that system functions could be lost for up to five years after reclamation, and diverted streams could lose some function for up to two years – the effects of which are not discussed in any detail. DEIS, App. P, at p. 3.

Furthermore, mitigation measures such as reclamation and reconstruction of streams does not lessen the environmental impacts associated with filling natural streams. Impacts on streams from strip mining include the increase in discharge of chemicals that are carried downstream, thereby reducing aquatic biodiversity. Stream chemistry monitoring has shown significant increases in conductivity, hardness, sulfate, and sedimentation concentrations downstream of strip mining operations. These environmental consequences must be assessed and given a greater amount of attention in the DEIS.

**Response:** Regarding potential impacts to the lagniappe crayfish and other aquatic species, refer to the comment letter from DOI and DOE responses (DOI-01 through -03), as well as the response provided to SC-60.

Impacts to surface water were quantitatively and qualitatively evaluated in the Draft EIS. As stated in the Draft EIS, all surface water that comes in contact with any mining or mining-related

disturbances would flow to a sediment pond. The purpose of a sediment pond is to retain surface water long enough to meet all applicable state and federal water quality standards prior to releasing it. As stated in the EIS, this retention time is minimal and, at most, is 10 days. Please refer also to the responses to MDWFP-01 and -02.

All surface water discharged from the mine sediment ponds and diversions would flow to Okatibbee Lake. Okatibbee Lake is a USACE-owned and operated surface lake with a generally controlled release through a dam. It is important to note that the Chickasawhay River is downstream of Okatibbee Lake, while Chickasawhay Creek is upstream (located in the study area).

**SC-62:**      **VI. Cumulative Effects**

**A. The EIS Must Examine Climate Change Impacts**

The U.S. Department of Interior Director's Order No. 3226 (U.S. Dep't of Interior, Jan. 19, 2001) acknowledges that "[t]here is a consensus in the international community that global climate change is occurring and that it should be addressed in government decisionmaking." That Order further instructs "[e]ach bureau and office of the Department [of Interior] [to] consider and analyze potential climate change impacts . . . when making major decisions regarding the potential utilization of resources under the Department's purview." The same standard should apply to the DOE.

DOE's analysis of the effects of the Kemper IGCC facility on climate change is entirely inadequate for NEPA purposes. Although DOE admits the Kemper facility would increase the atmosphere's concentration of GHGs (greenhouse gases), thereby contributing to global warming, DOE states the specific effects of the plant on the surrounding area are unknown. NEPA calls for more analysis.

**Response:**      The issues of climate change impacts are addressed in the EIS in Subsection 6.1.2. DOE believes that this discussion adequately meets the NEPA requirements.

**SC-63:**      There are two preliminary problems with the analysis. First, the DEIS assumes the plant would be designed to capture and sequester 50 to 67 percent of CO<sub>2</sub>. However, there is no enforceable requirement for the Kemper facility to capture any CO<sub>2</sub>. Therefore the DEIS cannot assume any CO<sub>2</sub> emissions will be captured and must analyze the impact of the full amount of CO<sub>2</sub> emissions from the facility.

**Response:**      The project as proposed to DOE—and the design basis for the air permits—includes carbon capture as an integral design of the project. The gasifier, syngas cleanup systems, and combustion turbines are all designed for optimal operation with carbon capture. Furthermore, Mississippi Power would enter into contracts for the sale of captured CO<sub>2</sub>, so the project economics are tied to carbon capture as a normal operating condition. Therefore, DOE believes the two carbon capture scenarios (50- and 67-percent capture) analyzed in the EIS represent the only operating conditions that would occur during normal operations, even if there are no enforceable permit conditions requiring carbon capture. Normal operations without carbon capture would not be a realistic scenario. However, DOE could also consider a minimum carbon capture requirement as a condition of the ROD.

If the scenario of 0-percent carbon capture were assumed, as suggested by the commenter, the annual emissions of GHGs attributable to the operation of the power plant would be approximately 5.4 million tons of CO<sub>2</sub> equivalent. This would obviously be a substantial increase in the contributions of GHGs relative to the 50- or 67-percent scenarios. However, the conclusions regarding the potential effects on global climate change would be the same.

- SC-64:** Second, the DEIS's conclusion that it need not assess Kemper's emissions because dirtier plants could be built is entirely inappropriate. The DEIS concludes that "it cannot be assumed that, if the Kemper County IGCC Project were not built, these additional emissions would be avoided – other less efficient and/or more CO2 emitting fossil fuel power plants might be constructed in its stead, or existing plants might produce more power, thereby increasing their CO2 emissions." DEIS at 6-6. This conclusion is all the more unsupportable since the DEIS failed to evaluate cleaner sources of energy, such as renewables, demand side management or natural gas.
- Response:** The statement cited is not a conclusion, but DOE believes the statement is accurate.
- SC-65:** DOE concludes that "emissions of GHGs from the proposed power plant by themselves would not have a direct impact on the environment in the proposed plant's vicinity; neither would these emissions by themselves cause appreciable global warming that would lead to climate changes." DEIS at 6-6. DOE also states there is "no methodology that would allow DOE to estimate the specific impacts (if any) this increment of warming would produce in the vicinity of the plant or elsewhere." DEIS, at p. 6-6. These conclusory statements fall desperately short of sufficient NEPA analysis. See 40 C.F.R. § 1508.7 (an agency must assess the "impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions"); *Ocean Advocates v. U.S. Army Corps of Engrs.*, 361 F.3d 1108, 1128 (9th Cir. 2004) ("[g]eneral statements about possible effects and some risks do not constitute a hard look absent a justification why more definitive information could not be provided" and the analysis "must be more than perfunctory; it must provide a useful analysis of the cumulative impacts of past, present, and future projects"). Aside from stating the Kemper plant will emit GHGs, DOE provides no analysis of the cumulative effects of GHG emissions vis-à-vis climate change.
- Response:** The Draft EIS summarizes the potential effects of global climate change on global, national, and regional scales in Subsection 6.1.2, and DOE acknowledges in the Draft EIS that "these emissions would increase the atmosphere's concentration of GHGs, and, in combination with past and future emissions from all other sources, contribute incrementally to the global warming that produces the adverse effects of climate change described previously."
- SC-66:** However difficult the local effects of the Kemper plant might be to articulate, NEPA requires governmental agencies to consider impacts on the global environment, as well as local and regional impacts. NEPA Section 102(F) requires that the federal government "recognize the worldwide and long-range character of environmental problems and, where consistent with the foreign policy of the United States, lend support to initiatives, resolutions, and programs designed to maximize international cooperation in anticipating and preventing a decline in the quality of mankind's world environment." This includes global climate change.
- Response:** DOE believes it is not possible to predict potential climate changes at a finer scale than the regional level at this time. As stated in the IPCC Climate Change 2007: Synthesis Report, "[o]n these scales, natural climate variability is relatively larger, making it harder to distinguish changes expected due to external forcings. Uncertainties in local forcings, such as those due to aerosols and land-use change, and feedbacks also make it difficult to estimate the contribution of GHG increases to observed small-scale temperature changes." It is not possible to predict how global climate change may alter local weather patterns at this time given the complexity of the underlying natural systems and the paucity of data. While local temperatures may increase, it is not possible to predict if this will change local precipitation rates, the onset of seasons, storm patterns and intensity, or the other factors that determine a locale's climate and weather. In addition, climate changes in other regions may mask, exacerbate, or otherwise affect local changes. NEPA does not require agencies to resolve intractable uncertainties or to speculate.

- SC-67:** DOE states that stabilizing atmospheric concentrations of GHGs will require societies to reduce their annual emissions – and the construction of major emitting facilities will not accomplish this task.
- Response:** The Draft EIS also states that “industrial societies will continue to use fossil fuels for at least 25 to 50 years.” DOE believes that, since coal will continue to be an important part of the nation’s energy mix, the development and commercialization of advanced energy technologies, such as IGCC, will reduce the potential environmental impacts of the use of coal.
- SC-68:** Moreover, precision and certainty are not required under NEPA, and it is, in fact, accepted that “[r]easonable forecasting and speculation is . . . implicit” in NEPA analysis. *Kern v. U.S. BLM*, 284 F.3d 1062, 1072 (9th Cir. 2002). See also *Conner v. Burford*, 848 F.2d 1441, 1450 (9th Cir. 1988) (“the government’s inability to fully ascertain the precise extent of the effects . . . is not . . . a justification for failing to estimate what those effects might be before irrevocably committing to the activity”). Inherent uncertainties regarding climate change does not allow DOE to “shirk [its] responsibilities under NEPA.” *Kern v. BLM*, 284 F.3d at 1072 (quoting *Save Our Ecosystems v. Clark*, 747 F.2d 1240, 1246 n. 9 (9th Cir. 1984)); cf. *NRDC v. Kempthorne*, 506 F. Supp. 2d 322, 369 (E.D. Cal. 2007) (rejecting agency position characterizing global warming’s effects to endangered fish as speculation or “sheer guesswork”).
- Response:** DOE believes the analysis of global climate change effects as a cumulative impact in the Draft EIS meets DOE’s responsibilities under NEPA.
- SC-69:** DOE claims that “there is much uncertainty regarding the extent of global warming caused by anthropogenic GHGs,” DEIS at p. 6-4, and that “climate change cannot be avoided.” *Id.* at p. 6-5. DOE is nonetheless required to assess “to the greatest extent possible” how climate change is currently impacting the environment, and how the Kemper IGCC plant will combine with the effects of climate change to impact resources in the project area. See *Davis v. Coleman*, 521 F.2d 661, 671 (9th Cir. 1975).
- Regardless of the mere lack of absolute certainty, scientific knowledge regarding global warming is not completely veiled in uncertainty, either. In February 2007, the Intergovernmental Panel on Climate Change (“IPCC”) released a summary of the contribution of Working Group I to its Fourth Assessment Report. The Summary concludes, in part:
- The global atmospheric concentration of CO<sub>2</sub> has increased from a pre-industrial value of about 280 ppm to 379 ppm in 2005;
  - The atmospheric concentration of CO<sub>2</sub> in 2005 exceeds by far the natural range over the last 650,000 years;
  - The primary source of the increased atmospheric concentration of CO<sub>2</sub> since the pre-industrial period results from fossil fuel use;
  - Warming of the climate system is unequivocal, as is now evident from observations of increases in global average air and ocean temperatures, widespread melting of snow and ice, and rising global average sea level;
  - At continental, regional, and ocean basin scales, numerous long term changes have been observed. These include changes in arctic temperatures and ice, widespread changes in precipitation amounts, ocean salinity, wind patterns and aspects of extreme weather including droughts, heavy precipitation, heat waves, and the intensity of tropical cyclones;

- There is greater than a 90% likelihood that most of the observed increases in global average temperatures since the mid-20th century are due to the observed increases in anthropogenic greenhouse gas emissions;
- For the next two decades, warming of about 0.2 Degrees Celsius per decade is projected for a range of emission scenarios;
- There is a greater than 90% likelihood that hot extremes, heat waves, and heavy precipitation events will continue to become more frequent; and

In April 2007, the IPCC released a Summary of the Contribution of Working Group II to its Fourth Assessment Report. The Summary concludes, among other things:

- There will be a significant increase in damage to coastal areas from floods and storms and approximately 30% of the coastal wetlands are projected to be lost. Millions more people could experience coastal flooding each year;
- Cities that currently experience heat waves are expected to be further challenged by an increased number, intensity, and duration of heat waves during the course of the century, with potential for adverse health impacts;
- Sea level rise under global warming is inevitable. An increase in sea levels will result in salinisation of irrigation water, estuaries, and fresh water systems, and also cause flooding and costly efforts to rebuild or relocate after flooding; and
- In North America, major challenges are projected for crops that are near the warm end of their suitable range or depend on highly utilized water resources.

**Response:** The potential effects of global climate change are summarized in the Draft EIS, referencing the IPCC report.

**SC-70:** On or about May 4, 2007, the IPCC released a Summary of the contribution of Working Group III to its Fourth Assessment Report. The Summary concludes, among other things:

- Global GHG emissions have grown since pre-industrial times, with an increase of 70% between 1970 and 2004;
- The largest growth in global GHG emissions between 1970 and 2004 has come from the energy supply sector (an increase of 145%);
- With current global climate change mitigation policies and related sustainable development practices, global GHG emissions will continue to grow over the next few decades;
- There is substantial economic potential for the mitigation of global GHG emissions over the coming decades that could offset the projected growth of global emissions or reduce emissions below current levels;
- There are mitigation opportunities with net negative costs, in other words, for which the benefits such as reduced energy costs and reduced emissions of pollutants equal or exceed their costs to society, excluding the benefits of avoided climate change;

- Fuel switching from coal to gas, renewable heat and power (hydropower, solar, wind, geothermal and bioenergy), and early applications of carbon capture and storage (e.g. storage of removed CO<sub>2</sub> from natural gas) are key mitigation technologies and practices currently commercially available;
- Near-term health co-benefits from reduced air pollution as a result of actions to reduce GHG emissions can be substantial and may offset a substantial fraction of mitigation costs;
- It is often more cost-effective to invest in end-use energy efficiency improvement than in increasing energy supply to satisfy demand for energy services. Efficiency improvement has a positive effect on energy security, local and regional air pollution abatement and employment;
- Renewable energy generally has a positive effect on energy security, employment and on air quality; and
- In order to stabilize the concentrations of GHGs in the atmosphere, emissions would need to peak and decline thereafter.

**Response:** DOE has cited the IPCC report in the Draft EIS.

**SC-71:** Hansen and others have stated that global emissions of CO<sub>2</sub> and other global warming pollutants must be immediately reduced to avoid exceeding the 475ppm ceiling for significant irreversible impacts. The World Health Organization has estimated that approximately 154,000 human lives are lost each year as a result of global warming.

The DOE should consider the entirety of the Fourth Assessment Report and make it part of the administrative record for the FEIS.

**Response:** The IPCC report is appropriately referenced in the EIS. The report is widely available, and it is not necessary to include the report in the Administrative Record.

**SC-72:** Due to the severe impacts of the Kemper Facility's CO<sub>2</sub> emissions on the health, welfare, economy, and environment of the state of Mississippi, the nation, and the planet as a whole as described in the IPCC report, the EIS should examine alternatives and mitigation measures designed to eliminate or minimize CO<sub>2</sub> emissions.

**Response:** DOE disagrees that the CO<sub>2</sub> emissions from the proposed project by themselves would cause severe impacts. The potential effects are appropriately considered as cumulative effects in the Draft EIS. The Draft EIS discusses the plans for carbon capture for beneficial use and geologic storage.

**SC-73:** The EIS should also include findings from the EPA's CO<sub>2</sub> endangerment finding. Available at <http://epa.gov/climatechange/endangerment.html>

**Response:** Text has been added to Subsection 6.1.2 acknowledging the release of the EPA endangerment finding. However, it should be noted that EPA states that "[t]hese findings do not themselves impose any requirements on industry or other entities."

**SC-74:** The DOE also failed to assess the impacts of global warming pollution on different environmental receptors such as wildlife, vegetation, water resources, humans, and land. The EIS process should also analyze the local, regional, and global environmental impacts of CO<sub>2</sub> emissions from the Kemper facility. DOE should pay particular attention to the impact of global warming on Mississippi, a coastal state that is especially vulnerable to rising sea levels and more intense trop-

ical storms. Climate change is affecting the intensity of Atlantic hurricanes, and hurricane damage will likely continue to increase because of greenhouse warming.

**Response:** The text in Subsection 6.1.2 acknowledges the potential effects of global climate change on biological resources, water resources, humans, and the land. Global climate change is an inherently cumulative effect and the impacts of any single source cannot be quantified. The Draft EIS specifically references the IPCC report in projecting that there could be more severe hurricane activity and increases in frequency and intensity of severe precipitation.

**SC-75:** The DOE should also consider the economic impacts of CO<sub>2</sub> emissions from the Kemper facility.

**Response:** Until EPA completes the rulemaking process or legislation restricting carbon emissions is passed by the U.S. Congress and signed into law, the real costs associated with CO<sub>2</sub> emissions and required reductions cannot be determined with any confidence. Under the standards established by 40 CFR 1502.22 of the CEQ NEPA regulations, the EIS has addressed “reasonably foreseeable” impacts from CO<sub>2</sub> emissions to the extent practicable without resorting to unwarranted conjecture.

**SC-76:** In addition, the EIS should analyze the cumulative impacts of this significant new source of CO<sub>2</sub> emissions in combination with other existing and proposed CO<sub>2</sub> sources.

**Response:** Subsection 6.1.2 of the Draft EIS analyzes the cumulative effects of CO<sub>2</sub> emissions relative to global climate change.

**SC-77: B. The EIS Must Consider the Economic Impact of Emitting Greenhouse Gases**

The DEIS did not evaluate the economic impacts of emitting 2.8 million tons of CO<sub>2</sub> annually, and 112 million tons of CO<sub>2</sub> over the commercial life of the facility. Peer reviewed studies have been performed which model the economic costs of global warming and CO<sub>2</sub> emissions. Synapse Energy Economics predicts that CO<sub>2</sub> costs could rise to \$68/ton by 2030 – less than two decades into the life of the proposed Kemper plant. Sierra Club Testimony, at 12:5. Other studies have estimated that each ton of CO<sub>2</sub> emitted causes approximately \$85 in damage. *Id.* In either case, the \$30/ton considered by Mississippi Power as the upper level of CO<sub>2</sub> costs is woefully inadequate. The DOE cannot turn a blind eye to these damages and the EIS process must analyze the economic impact of emitting over 2.8 million tons of CO<sub>2</sub> annually, DEIS at 6-6 (although, as explained above, the DEIS should evaluate the impact of the full amount of CO<sub>2</sub> that would be emitted from Kemper without Kemper). Even Southern Co.’s former business partner, Orlando Utilities Commission (OUC), recognized economic costs of operating power plants that emit large amounts of GHGs. OUC “withdrew from the [Florida] project because of uncertainty regarding regulation of greenhouse gas (GHG) emissions,” DEIS, at p. 1-1, “apparently as a result of the possibility that new coal-fueled power plants would be required to install carbon capture and sequestration,” *id.* at p. 1-4. CO<sub>2</sub> prices are only likely to increase, as well: “CO<sub>2</sub> emissions allowance prices [would likely] result from the adoption and implementation of the major greenhouse gas regulatory legislation that has been introduced in the current U.S. Congress.” Sierra Club Testimony, at 13:12-15. See also Direct Testimony of Kimberly D. Flowers, filed January 16, 2009, at page 45 and Mississippi Power Company’s response to Data Request No. MPUS 1-5 (laws regulating GHG emissions are “imminent”).

**Response:** DOE is aware that studies have been done that project costs of CO<sub>2</sub> emissions. However, until EPA completes the rulemaking process or legislation restricting carbon emissions is passed by the U.S. Congress and signed into law, the real costs associated with CO<sub>2</sub> emissions and required reductions cannot be determined with any confidence. Under the standards established by

40 CFR 1502.22 of the CEQ NEPA regulations, the EIS has addressed “reasonably foreseeable” impacts from CO<sub>2</sub> emissions to the extent practicable without resorting to unwarranted conjecture.

**SC-78:** Of particular significance to Mississippi, climate change is affecting the intensity of Atlantic hurricanes, and hurricane damage will likely continue to increase because of greenhouse warming. Greater CO<sub>2</sub> emissions from coal-burning power plants would lead to more significant atmospheric warming and larger and more frequent storms. In addition, global warming will lead to rising sea levels. The EIS should consider the impacts to Mississippi from rising sea levels and violent hurricanes that will accompany global warming.

**Response:** The Draft EIS specifically references the IPCC report in projecting that there could be more severe hurricane activity and increases in frequency and intensity of severe precipitation and sea level rise.

**SC-79: C. The DEIS Fails to Adequately Discuss Totality of Environmental Consequences**

The DEIS environmental consequences are evaluated in Chapter 4, but are done so in a deceptively piecemeal way. The effect of this is that no ultimate environmental impact is easily derived from this section. For example, while mine and power plant construction might not significantly affect the critically-listed sharp-skinned hawk, mine operations might adversely affect the species. The cumulative effects of all facility operations on the hawk are nowhere to be found. Such an analysis does not provide the public with quality information regarding the ultimate effects of the proposed action.

**Response:** DOE has consulted with the U.S. Fish and Wildlife Service and state agencies regarding potential impacts to endangered species as discussed in the EIS. In a letter to DOE (please refer to the response to DOI-01), the Department of the Interior concurred with DOE’s determination that the project may affect but would not likely adversely affect listed species.

**SC-80: D. The DEIS Fails to Adequately Analyze and Discuss the Totality of Socioeconomic Consequences**

The DEIS fails to consider adverse socioeconomic impacts caused by the Kemper facility. For example, the DEIS fails to consider the impact to the local economy, such as lost fishing opportunities caused by loss of springs and surface waters.

**Response:** Effects on recreation and water resources are addressed in the Draft EIS.

**SC-81:** The DEIS also fails to consider the impact to the local economy as a result of adverse impacts to fisheries caused by air pollutants, such as acid rain and mercury.

**Response:** The Draft EIS contains an analysis of nitrogen and sulfur deposition, which has been expanded in the Final EIS (see Subsection 4.2.1.2). Based on this analysis, adverse effects are not expected. Adverse effects from this project are not expected (see Subsection 4.2.19.2). A more thorough analysis of mercury deposition is provided in the Final EIS.

**SC-82:** The DEIS also fails to consider adverse economic impacts to human health as a result of emission of massive quantities of air pollutants from the Kemper IGCC plant. For example, the DEIS fails to consider the cumulative impacts to economics resulting from lost work days, medical visits, and premature death as a result of the air pollutants emitted from the related coal plants.

**Response:** The Final EIS has a discussion of potential health effects of PM<sub>2.5</sub> increases (see Subsection 4.2.19.2). The adverse economic impacts of human health could not be quantified but are expected to be very small.

**SC-83: E. Failure to Adequately Analyze Totality of Unavoidable Impacts**

The DEIS fails to provide necessary information regarding the surface water impacts as result of the Kemper facility. The DEIS should be re-issued after providing a complete quantitative analysis of the following pollutants on surface waters: acid-rain generating pollutants (acidification from NO<sub>x</sub> and SO<sub>2</sub>), nitrogen deposition (algae blooms), and mercury emissions (a bio-persistent and bio-accumulative pollutant).

**Response:** DOE does not believe that a quantitative analysis of the effects of NO<sub>x</sub> and SO<sub>2</sub> on surface waters or nitrogen deposition is warranted, given the low levels of ambient air quality impacts. The Final EIS does, however, have a more thorough analysis of effects of sulfur and nitrogen deposition (see Subsection 4.2.1.2) as well as mercury deposition (see Subsection 4.2.19.2).

**SC-84: VII. DOE'S NEPA Decisionmaking Process Has Been Improperly Pre-Determined**

**A. DOE Improperly Limited the Choice of Alternatives By Committing Significant Resources to the Kemper Project**

DOE has prejudiced the NEPA process by providing funding for the proposed project before the environmental analysis has been completed. The agency must not make any commitment of resources prior to completing the NEPA analysis that would prejudice the decision making process, such as taking an action that would cause environmental harm or limit the choice of reasonable alternatives available to the agency. *See* 40 C.F.R. § 1502.2(f) (“Agencies shall not commit resources prejudicing selection of alternatives before making a final decision); *id.* at § 1506.1(a).

The DOE has already committed significant resources in this case that prejudice the decision-making process. DOE provided \$24.4 million to Southern Company for the preliminary design of the Orlando project, which was passed onto the Kemper project when the Orlando project. DEIS at 1-4. This is a substantial investment, which certainly has the potential to affect the choosing of the technology and its potential environmental impact. Additionally DOE has already made public comments that it has already awarded \$293 million dollars to the Kemper project. DOE Comments at p. 4 (attached as Exhibit to these comments).

The “appropriate time for preparing an EIS [therefore] *prior* to a decision, when the decision-maker retains a maximum range of options.” *Sierra Club v. Peterson*, 717 F.2d 1409, 1414 (D.C. Cir. 1983) (citing *EDF v. Andrus*, 596 F.2d 848, 852-53 (9<sup>th</sup> Cir. 1979) (emphasis in original)). *Accord Port of Astoria v. Hodel*, 595 F.2d 467, 478 (9<sup>th</sup> Cir. 1979) (NEPA requires that an EIS be prepared “at an early stage when alternative courses of action are still possible”). Completing the NEPA process prior to awarding funding helps ensure that the agency takes the requisite “hard look” at the environmental impacts of a project rather than rubber stamping the proposal and turning the EIS “into promotional document in favor of the proposal, at the expense of a thorough and rigorous analysis of environmental risks.” *Brooks v. Volpe*, 380 F.Supp. 1287, 1292 (C.D. Wash. 1974). *Accord Metcalf v. Daley*, 214 F.3d 1135, 1143 (9<sup>th</sup> Cir. 2000) (the appellants argued that “‘by making a commitment to authorize and fund the . . . plan, and then drafting a NEPA document which simply rubber-stamped the decision . . ., defendants eliminated the opportunity to choose among alternatives, . . . and seriously impeded the degree to which their planning and decisions could reflect environmental values’ . . . We [agree]”); *id.* at 1145 (an agency “should not . . . commit[] to support the . . . proposal before [conducting an environmental

assessment] because doing so probably influenced their evaluation of the environmental impact of the proposal”).

NEPA emphasizes up-front environmental analysis so that an agency does not act on incomplete information, “only to regret its decision after it is too late to correct.” *Blue Mountains Biodiversity Project v. Blackwood*, 161 F.3d 1208, 1216 (9<sup>th</sup> Cir. 1998) (quoting *Marsh v. ONRC*, 490 U.S. 360, 371 (1989)). This helps prevent an agency from making too large an “irretrievable investment”: “Once there has been . . . ‘an irretrievable commitment of resources’ in the technology development stage, the balance of environmental costs and economic and other benefits shifts in favor of ultimate application of the technology.” *Scientists’ Inst. For Public Info., Inc. v. Atomic Energy Commn.*, 481 F.2d 1079, 1090 (D.C. Cir. 1973).

**Response:** Consistent with NEPA regulations, the funding provided by DOE prior to completion of the NEPA process has not and will not have an impact on the environment or limit the range of reasonable alternatives.

The award of a cooperative agreement does not prejudice DOE decisionmaking in this or any other financial assistance project. The funding provided previously was for the project definition, preliminary design, and permitting of the project at the Orlando site. This funding was consistent with NEPA requirements and applicable federal regulations (i.e., no funds are to be provided for project activities that could either have an adverse impact on the environment or limit the choice of reasonable alternatives). Such funding is typical for financial assistance projects such as those under CCPI. Project activities such as project definition and preliminary design are necessary to determine to a reasonable degree the types and nature of the potential environmental impacts that might be expected and form the basis for the analyses in the EIS.

**SC-85: B. DOE’s Comments to the MS Public Utilities Commission Evidence DOE’s Disingenuous Decision-making Process and Improperly Influenced the State Utility Approval Process**

The Mississippi Public Utilities Commission is currently considering Mississippi Power’s request for a certificate of need for the Kemper IGCC facility. Docket 2009-UA-14, *available at* [http://www.insite.psc.state.ms.us/publicinsiteweb/cts\\_wv/](http://www.insite.psc.state.ms.us/publicinsiteweb/cts_wv/). As a public utility, Mississippi Power must obtain a certificate of need from the state in order to pass on the costs of constructing and operating the Kemper facility to Mississippi ratepayers.

On September 30, 2009, the DOE submitted comments to the Mississippi Public Utilities Commission detailing how the Kemper project “is of significant importance to achieving DOE’s goal of demonstrating clean coal technologies in the United States and, as demonstrated by DOE’s significant financial commitment, we strongly support its approval.” DOE Comments at p. 1 (Attached as Exhibit to these comments). The comments go so far as to state that “[t]he development of clean coal technology, such as TRIG™ is an essential component of energy security in the United States.” *Id.* at 2.

DOE’s submission of comments to the Kemper certificate docket was highly improper. As described in the previous section, DOE must not reach a final decision before the NEPA process is complete. Here, not only has DOE clearly reached a final conclusion before seriously considering the impacts disclosed by the full NEPA process, DOE has also been attempting to influence the state decision-making process.

On a related note, the DEIS improperly concludes that the Kemper plant will provide Mississippi Power’s customers with reliable power at a low cost. DEIS at 1-8 thru 1-10. Yet this is the

precise question currently in front of the Mississippi Public Utilities Commission, and the subject of much controversy.

For example, the DOE takes Mississippi Power's word that its planning process "considers a broad range of options in a fair and balanced manner to ensure reliability, minimize costs (and thereby minimize rates)..." DEIS at 1-8. The DEIS provides no discussion of other views on MPC's planning process, which have been subject to several dockets and much controversy at the MS Public Utilities Commission.

Given the fact that DOE is funding this project as a demonstration of new technology, its interests are somewhat in conflict with Mississippi ratepayers, who would ultimately have to bear the costs of implementing this new technology, no matter how much it ultimately costs.

**Response:** The DOE letter of support was intended to make clear the reasons for the DOE selection of this project under the CCPI solicitation.

**SC-86: C. DOE Violated NEPA by Failing to Undertake Environmental Assessment Prior to Granting Southern Co. Millions in R&D Funding Through Connected Actions**

The DOE's comments to the MS Public Utilities Commission and the DEIS evidence how DOE's prior investments in TRIG™ technology in Alabama and Florida are connected actions to the current Kemper IGCC plant, and the environmental consequences of these related actions should have been assessed from the start "Following more than a decade of design, engineering, and testing of Transport Integrated Gasification (TRIG)...in Wilsonville Alabama, the DOE has been working closely with Southern Company Services, Inc. (SCS) and Mississippi Power Company (MPC) [on Kemper development]." DOE Comment Letter, attachment, at p. 1-2. The DEIS also states that "[t]he gasifier design is based on a technology that Southern Company, Kellogg Brown & Root LLC...DOE, and other industrial proponents have been developing since 1996..." DEIS at 1-6. The DOE comments further explain how DOE has invested over \$400 million in the development of TRIG™ and other related technologies.

NEPA defines a connected actions are ones that "[a]re interdependent parts of a larger action and depend on the larger action for their justification." 40 C.F.R. § 1508.25(a)(1)(iii). The development of the gasifier technology and the building of an IGCC plant using that technology are inherently related and connected actions. The gasifier technology development is only justified by using it eventually in a larger facility, and the total environmental impacts should have been assessed together.

DOE failed to make the necessary connections between development of the TRIG technology and when it awarded millions of dollars to develop this technology without first undertaking an environmental assessment of an IGCC project. The DEIS recognizes connections between the lignite mine, pipelines and transmission lines, but neglects the previous connected actions developing the gasifier technology. For example, before irretrievably committed resources to coal gasification technologies, DOE should have generally assessed the global warming, pollution and mining impacts from coal power plants as compared with alternative technologies and energy efficiency programs. *See In re Katrina Canal Breaches Consol. Litig.*, 2009 U.S. Dist. LEXIS 107836, slip op. at 466-467 (E.D. La. 2009) ("where 'proceeding with one project will, because of functional or economic dependence, foreclose options or **irretrievably commit** resources to future projects, the environmental consequences of the projects should be evaluated together") (quoting *O'Reilly v. United States Army Corps of Engrs.*, 477 F.3d 225, 236 (5<sup>th</sup> Cir. 2007)). *See also* 40 C.F.R. § 1508.25 ("Cumulative actions, which when viewed with other proposed actions have cumulatively significant impacts and should therefore be discussed in the same impact statement"); *id.* at § 1508.7 ("Cumulative impact is the impact on the environment which results

from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions . . . Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time”).

**Response:** This comment appears to be directed at the Fossil Energy Program in general. DOE does not believe that previous funding for fossil energy in general and the development of IGCC technology are connected actions that must be evaluated in this EIS. However, DOE considers the need for programmatic NEPA documents periodically and previously prepared a programmatic assessment for the Clean Coal Technology Program.

**SC-87: D. Loan Guarantees Cannot be Awarded Prior to NEPA Completion**

The NEPA process must be completed before Mississippi Power is awarded any loan guarantee under EPCA05, Title XVII. According to DOE, “DOE’s loan guarantees are considered major Federal actions and are subject to NEPA review . . . NEPA compliance is integrated into DOE’s Loan Guarantee Program Office (LGPO) decision-making procedures to ensure that environmental impacts are considered throughout the loan guarantee process. The NEPA review must be completed before a loan guarantee can be issued.” <http://www.lgprogram.energy.gov/NEPA-4.html>.

**Response:** DOE intends to issue a separate ROD for the loan guarantee action based on this Final EIS.

**SC-88: VIII. DEIS Failed to Provide Adequate Information Regarding Property Rights**

According to the DEIS, there are existing structures on the facility location that will have to be removed. DEIS, Ch. 2, at p. 2-65. The DEIS does not, however, specify what rights, if any, individuals have regarding these structures. The DEIS also failed to give a legal description of the mining areas or a list of property owners and mineral right holders with legal descriptions of property boundaries. The DEIS also did not contain information regarding how many residences presently exist within the proposed mine’s boundary, and how the mine will acquire that land (*i.e.* buy-out, eminent domain, existing mining rights). If eminent domain will be used, the EIS should describe what entity will exercise that power. The EIS must evaluate what will happen to local landowners that refuse to sell their land for the mine. The EIS should contain information regarding the number of houses, churches, and cemeteries within the proposed area that will be mined. The EIS should contain information describing how structures will be removed from the area and who will pay for removal of structures.

**Response:** NACC would secure the right to mine or disturb lands for mining purposes through land purchases or leases, both of which are secured through negotiations with the landowner(s), not through right of eminent domain.

NACC will not provide a legal description of the property owners and mineral right holders or a legal description of property boundaries, but this information may be obtained by the public at the Kemper and Lauderdale Courthouses.

The methods that NACC would use to acquire the land were discussed in the EIS (Subsection 4.2.12.1). The mine company would negotiate to either purchase or lease the property necessary to secure the mine. If the land is not leased or purchased, the mine operations would avoid disturbance to the land and would provide uninterrupted access to that property.

The numbers of houses and churches were provided in Subsection 3.12.2 of the Draft EIS. As noted in Subsection 2.5.1, “churches that are in use and dedicated cemeteries would be mined around and remain undisturbed.”

**SC-89: IX. The EIS Must Consider the Local Economic Impact of the Different Alternatives**

Renewable energy sources, energy efficiency and conservation produce *more local jobs* than a highly automated plant burning dirty imported fuel. DOE failed to consider these impacts on the local economy in the DEIS by simply concluding the construction of this facility will be socio-economically superior to the status quo because it is a *possible* source of revitalization for an economically depressed part of Mississippi.” DEIS, Ch. 9, at p. 1. DOE should take into consideration, however, alternative sources of energy that provide even greater socio-economic benefits sans significant environmental degradation. Additionally, this facility might increase local energy rates, discussed below in Section XV, which should be taken into consideration by DOE in the DEIS, as this could have a particularly adverse effect on the existing environmental justice population in Mississippi.

**Response:** A renewable energy facility is not proposed for the project area. Based on testimony provided in the Mississippi PSC docket, the effect of this project on electricity rates depends on assumptions regarding the time period under consideration and other factors (see the discussion of customer electricity rates that has been added in Subsection 4.2.11.2). Also, DOE notes that it was reported in the Sun Herald (a newspaper covering south Mississippi) on February 5, 2010, that Mississippi Power “officials said rates would increase about 33 percent over the next 10 years.” That equates to an annual rate of increase of approximately 2.9 percent. The company official was quoted further as saying that “with the Kemper project, rates will begin to stabilize” after 10 years “because of significant fuel savings,” with those savings estimated at \$200 to \$400 million a year.

**SC-90: X. DOE Should Have Considered the Alternative Stanton Facility**

As currently proposed, the Kemper project design is environmentally inferior when compared to its immediate predecessor, the IGCC portion of the Stanton proposal. The Kemper design plant will produce much more than twice as much of some air pollutants vis-à-vis the Stanton plant, even though it is almost exactly twice as large. (Stanton was 285 MW, Kemper will be 582 MW)

For example, Kemper will emit more than four times as much SO<sub>2</sub> (670 TPY compared to 155 TPY); significantly more than twice as much NO<sub>x</sub> (2214 TPY rather than 855 TPY); and more than triple the amount of PM<sub>10</sub> (521 TPY versus 156 TPY). See Table 2.1.1, Orlando Gasification Project EIS, appendix for PSD permit limits, compared to Kemper County IGCC EIS, App. C, Table 3-1, Table S-3, and Table 2.6-1, at p. 2-60.

**Response:** The Stanton facility is not available and is not a reasonable alternative.

**SC-91: XI. DOE Failed to Adequately Explain Conclusory Statements****A. Effects of Acid Rain**

DOE claims that, “[e]ven though the [Kemper] facility’s emissions are significant in relation to those of the surrounding counties, total emissions of acid-producing pollutants would still be lower than most conventional coal-fired power plants,” and ergo, “appreciable adverse impacts related to acid rain would be limited.” DEIS, at p. 4-12. This conclusory statement fails to fully explain what those appreciable impacts would be. The adverse effects of acid rain from the power plant would only be compounded by the increased pH levels in soils and groundwater from strip mining and soil erosion from the lignite mine. These combined effects were not addressed in the DEIS. This could be especially problematic for the Lagniappe crayfish, which cannot tolerate water more acidic than pH 5.5.

EPA states it “is critical that acid deposition be reduced.” The emission of SO<sub>2</sub> and NO<sub>x</sub> (both would be emitted in a great quantity by the Kemper facility – 669.7 and 2089.6 TYP, respective-

ly) are the root causes of acid rain. EPA has identified that “acid rain formation result[s] from . . . man-made sources, primarily emissions of sulfur dioxide (SO<sub>2</sub>) and nitrogen oxides (NO<sub>x</sub>) resulting from fossil fuel combustion,” from “burning fossil fuels, like coal.”

**Response:** Please refer to the response to JW-53 regarding sulfur and nitrogen deposition. Also, runoff from the Red Hills Mine has been shown to not be strongly acidic.

**SC-92: B. Soil Erosion from Lignite Mine**

According to the DEIS, there will be “short-term adverse effects from land disturbance by accelerating soil erosion,” but the DEIS fails to state what those effects would be. DEIS, at p. 4-16. The DEIS must identify what these effects will be to adequately inform the public. 40 C.F.R. § 1502.1.

**Response:** Soil erosion effects would be limited to the areas that drain into sedimentation ponds. Thus, the effects of excessive sedimentation would require NACC to excavate accumulated sediment from the ponds to maintain the storage volume required by the MDEQ SMCRA Regulations.

Offsite erosion impacts or impacts to undisturbed portions of the mine study area would be limited to the time period when the sedimentation ponds are being constructed and reclaimed, because sedimentation pond construction is the initial disturbance associated with mining in a given block and the final disturbance associated with reclaiming a given block. As noted on page 4-16 of the Draft EIS, NACC would develop a wind and water soil erosion plan as required by MDEQ regulations and would utilize BMPs to minimize erosion beyond the sedimentation pond drainage basins during construction and reclamation of the ponds.

**SC-93: XII. The DEIS Does Not Specify How all Lands are to be Reclaimed**

The Kemper facility will gut 12,275 acres of land – up to 375 acres a year for forty years. DEIS, at p. S-11. DOE must clarify how much of this land will be reclaimed subsequent to mining. The DEIS provides that, “[f]ollowing lignite removal, approximately 275 acres per year of mined land would be graded to the approximate premining land surface elevations and planted with various types of vegetative cover. Physical completion of land reclamation would occur approximately 3 years after lignite extraction. Upon completion of mining operations, all mine support structures and facilities would be demolished and reclaimed as well.” This conflicts with the mitigation plan in the appendix which states that “leased lands will be replanted in accordance with contractual rights of the property owner.” DEIS, App. P, at p. 7. This is a problematic and ambiguous mitigation measure for two reasons.

Firstly, DOE must specify what “replanted in accordance” means. This could mean no replanting will be done at all. It could also mean exotic and environmentally-harmful species might be introduced to the ecosystem. Such consequences would need to be addressed in the DEIS. Secondly, while a complete mitigation plan is not required, the DEIS does require a “reasonable complete discussion of possible mitigation measures,” and a “‘mere listing’ of mitigation measures, without supporting analytical data,” is insufficient, *League of Wilderness Defenders/Blue Mountains Biodiversity Project v. Forsgren*, 309 F.3d 1181, 1192 (9<sup>th</sup> Cir. 2002) (quoting *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 352 (1989)), let alone merely listing exceedingly ambiguous mitigation measures.

**Response:** Mitigation will be finalized by USACE prior to issuance of the Section 404 permit and the mitigation plan attached to the permit will constitute the compensatory mitigation required to compensate for losses of aquatic resources, should USACE decide to issue permits to Mississippi Power and NACC.

Table 2.4-1 documents that every acre would be reclaimed. The reclamation plan, which is distinct and separate from the mitigation plan, will describe the measures required to meet the requirements of Subsections 2715, 2723, 5397, 5399, 53101, and 53103 of the MDEQ SMCRA Regulations. Subsection 5397 prohibits the use of exotic or invasive species and prescribes the species types and densities to be planted.

The MDEQ mining regulations require the mining entity to reclaim the land concurrent to the mining practice. This is evidenced at the Red Hills Mine in Choctaw County. The reclamation plan must comply with state SMCRA Regulations, but at the same time it is recognized that the rights of the surface owner and the reasonableness of their request for postmine vegetation.

Coal leases state that mining and reclamation activities will comply with pertinent regulations. Section 53109 indicates the landowner will be consulted when considering changes in postmining use. The property owner has the right to determine, within a structures framework, how their property will be reclaimed. Once reclamation has occurred, all reclaimed land must meet the re-vegetation success standards outlined in the regulations.

The MDEQ regulations do not allow for no replanting and do not allow environmentally harmful species to be planted. The list of species to be used in reclamation would be published in the MDEQ surface mining permit.

**SC-94: XIII. DOE Should Explain Discrepancies Among Levels of NOx Emissions Stated in DEIS**

The DEIS contains several different proposed levels of NOx emissions. The Summary states NOx emissions will be 1800-1900 TPY, DEIS, Table S-3; Chapter 4 states the operation of the power plant alone will emit 2214, *id.*, at p. 4-5; and Appendix C lists the facility-wide total NOx emissions as 2089.6 TPY, *id.* App. C, Table 3-1. DOE should account for the 400 TPY discrepancy between the PTE for NOx emissions stated in the Summary and the PTE listed in Chapter 4. This level of ambiguity fails to rise to the required high quality of environmental information. 40 C.F.R. § 1500.1(b). DOE should also clarify whether or not these emissions levels are from the power plant alone, or include emissions from mining operations. If not, DOE should explain.

**Response:** The information in each table is correct. As noted in each table, the tables referenced present different scenarios. Table S-3 presents facilitywide emissions at an 85-percent capacity factor. Table 2.6-1 presents worst-case emissions from each individual HRSG stack. Table 3-1 in Appendix C presents maximum potential facilitywide emissions (100-percent capacity factor).

**SC-95: XIV. DOES Should Consider the Cost of the Kemper IGCC Facility as Being in Excess of the Projected \$2.2 Billion**

According to Sierra Club's expert, costs of the Kemper project might "increase significantly over time." Sierra Club Testimony, at 36:7. The costs of building coal power plants have risen 233% since just 2002. *Id.*, at 36:13-14. In Ohio, a power plant was scrapped after cost estimates increased by 37% in just thirteen months. *Id.*, at 36:18-21. Xcel Energy abandoned a Colorado IGCC facility plan for similar reasons. *Id.*, at 37:20-22. The Minnesota Public Utility Commission forbade Xcel from purchasing energy from an IGCC facility because it would "result in unreasonably high prices for Xcel and unreasonably high rates for Xcel's ratepayers." *Id.*, at 38:16-17. Duke Energy Indiana announced that its proposed Edwardsport IGCC unit would cost \$1.985 billion in April of 2008, but a year later that price had jumped to over \$2.34 billion – an 18% increase. *Id.*, at 39:17-20. These are market realities DOE and Mississippi Power must face, and these increases should be accounted for in the DEIS, particularly in regard to the existing environmental justice population in Mississippi.

**Response:** DOE has conducted an independent evaluation of the project costs under the CCPI program and believes that the estimate with contingency is reasonable. DOE will conduct another evaluation under the loan guarantee program prior to reaching a decision on the loan guarantee. The costs of the power produced by the Kemper County IGCC Project are appropriately the jurisdiction of the Mississippi PSC. However, the effect of the project on potential increases in electricity rates has been added to the discussion of socioeconomic and environmental justice impacts.

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**From:** Sierra Club Membership Services [membership.services@sierraclub.org] on behalf of Jacquelyn Wesson [wessonnites@aol.com]  
**Sent:** Saturday, November 21, 2009 8:07 AM  
**To:** Kemper-EIS@netl.doe.gov  
**Subject:** Kemper IGCC Coal Plant Proposal/Draft EIS

Nov 21, 2009

Mr. Richard Hargis

Dear Mr. Hargis,

I urge you to stop any Department of Energy funding for the dirty, expensive, and unnecessary Kemper Coal Plant. This proposal would have unacceptable and unnecessary impacts to our environment and public health. Wetland and stream impacts from a 45 square mile strip mine coupled with 63 pounds of Mercury and 15 billion pounds of carbon dioxide annually is not the clean energy future for Mississippi. Thank you for considering my request.

JW2-01

Sincerely,

Mrs. Jacquelyn Wesson  
804 Hilltop Dr  
Warrior, AL 35180-1907  
(205) 647-9060

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**From:** Sierra Club Membership Services [membership.services@sierraclub.org] on behalf of Pat and Gary Gover [govers@bellsouth.net]  
**Sent:** Saturday, November 21, 2009 8:37 AM  
**To:** Kemper-EIS@netl.doe.gov  
**Subject:** Kemper IGCC Coal Plant Proposal/Draft EIS

Nov 21, 2009

Mr. Richard Hargis

Dear Mr. Hargis,

I urge you to stop any Department of Energy funding for the dirty, expensive, and unnecessary Kemper Coal Plant. This proposal would have unacceptable and unnecessary impacts to our environment and public health. Wetland and stream impacts from a 45 square mile strip mine coupled with 63 pounds of Mercury and 15 billion pounds of carbon dioxide annually is not the clean energy future for Mississippi. That's enough mercury to contaminate 50 million pounds of fish every year along with 15 billion pounds of carbon dioxide. Tell the DOE thanks but no thanks to dirty coal!

PG-01

Sincerely,

Mrs. Pat and Gary Gover  
300 Lincoln St  
Fairhope, AL 36532-2818  
(251) 990-8662

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**From:** Sierra Club Membership Services [membership.services@sierraclub.org] on behalf of Tom Brent [tomalvabrent@hughes.net]  
**Sent:** Saturday, November 21, 2009 8:37 AM  
**To:** Kemper-EIS@netl.doe.gov  
**Subject:** Kemper IGCC Coal Plant Proposal/Draft EIS

Nov 21, 2009

Mr. Richard Hargis

Dear Mr. Hargis,

I urge you to stop any Department of Energy funding for the dirty, expensive, and unnecessary Kemper Coal Plant. This proposal would have unacceptable and unnecessary impacts to our environment and public health. Wetland and stream impacts from a 45 square mile strip mine coupled with 63 pounds of Mercury and 15 billion pounds of carbon dioxide annually is not the clean energy future for Mississippi. As responsible Mississippians we expect our elected representatives, also, to show a reasonable level of responsibility to their constituents...and to the next generation....for this land with which we have entrusted them.

TB-01

Sincerely,

Dr. Tom Brent  
 540 County Road 119  
 Walnut, MS 38683-8892  
 (662) 223-6257

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**From:** Sierra Club Membership Services [membership.services@sierraclub.org] on behalf of JESSE FINERAN [fineran@gmail.com]  
**Sent:** Saturday, November 21, 2009 9:07 AM  
**To:** Kemper-EIS@netl.doe.gov  
**Subject:** Kemper IGCC Coal Plant Proposal/Draft EIS

Nov 21, 2009

Mr. Richard Hargis

Dear Mr. Hargis,

I urge you to stop any Department of Energy funding for the dirty, expensive, and unnecessary Kemper Coal Plant. This proposal would have unacceptable and unnecessary impacts to our environment and public health. Wetland and stream impacts from a 45 square mile strip mine coupled with 63 pounds of Mercury and 15 billion pounds of carbon dioxide annually is not the clean energy future for Mississippi.

PLEASE CLEAN UP THE CURRENT MESS IN MISSISSIPPI BEFORE EVEN CONSIDERING MAKING MORE MESS. We are still waiting to learn what real impact of the manner that MDEQ EPA and ADSTR handled the millions of gallons of permitted hazardous waste (ferris chloride heavy metal soup) that was discharged into Katrina flood waters during Katrina. DuPont Delisle's Hazardous Waste protection System failed. Rather than deep well injecting the poison into the ground, MDEQ and EPA allowed it to be deposited into St Louis bay and on lands in Hancock and Harrison County. MDEQ claimed that it was just harmless salt water. ADTRS even provided a less than believable study on area blue crabs. There must be a better way than using dirty technology. Thank you for considering my request.

JF-01

Sincerely,

Mr. JESSE FINERAN  
 921 Faith St  
 Waveland, MS 39576-2652  
 (228) 463-1246

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**From:** Sierra Club Membership Services [membership.services@sierraclub.org] on behalf of William Larry [djlary06@hotmail.com]  
**Sent:** Saturday, November 21, 2009 9:07 AM  
**To:** Kemper-EIS@netl.doe.gov  
**Subject:** Kemper IGCC Coal Plant Proposal/Draft EIS

Nov 21, 2009

Mr. Richard Hargis

Dear Mr. Hargis,

I urge you to stop any Department of Energy funding for the dirty, expensive, and unnecessary Kemper Coal Plant. This proposal would have unacceptable and unnecessary impacts to our environment and public health. Wetland and stream impacts from a 45 square mile strip mine coupled with 63 pounds of Mercury and 15 billion pounds of carbon dioxide annually is not the clean energy future for Mississippi. Please do not allow the Kemper Coal Plant to be built. I am opposed to

any more pollution in our area of the Southeast. Mississippi has enough clean energy (natural gas) to provide the electric energy needs of the state of Mississippi. Thank you for considering my request.

WL-01

Sincerely,

Mr. William Larry  
 1006 Meleah Dr  
 Talladega, AL 35160-3357  
 (256) 362-3068

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**From:** Sierra Club Membership Services [membership.services@sierraclub.org] on behalf of Gary Dunavant [gwdun@bellsouth.net]  
**Sent:** Saturday, November 21, 2009 9:37 AM  
**To:** Kemper-EIS@netl.doe.gov  
**Subject:** Kemper IGCC Coal Plant Proposal/Draft EIS

Nov 21, 2009

Mr. Richard Hargis

Dear Mr. Hargis,

I urge you to stop any Department of Energy funding for the dirty, expensive, and unnecessary Kemper Coal Plant. This proposal would have unacceptable and unnecessary impacts to our environment and public health. Wetland and stream impacts from a 45 square mile strip mine coupled with 63 pounds of Mercury and 15 billion pounds of carbon dioxide annually is not the clean energy future for Mississippi. Please find an alternative to this coal plant.

GD-01

Sincerely,

Mr. Gary Dunavant  
 3341 Altaloma Dr  
 Birmingham, AL 35216-4283  
 (205) 979-8494

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**From:** Sierra Club Membership Services [membership.services@sierraclub.org] on behalf of Lawrence Rives [l.rives@yahoo.com]  
**Sent:** Saturday, November 21, 2009 9:37 AM  
**To:** Kemper-EIS@netl.doe.gov  
**Subject:** Kemper IGCC Coal Plant Proposal/Draft EIS

Nov 21, 2009

Mr. Richard Hargis

Dear Mr. Hargis,

I urge you to stop any Department of Energy funding for the dirty, expensive, and unnecessary Kemper Coal Plant. This proposal would have unacceptable and unnecessary impacts to our environment and public health. Wetland and stream impacts from a 45 square mile strip mine coupled with 63 pounds of Mercury and 15 billion pounds of carbon dioxide annually is not the clean energy future for Mississippi.

Much, much more could be gained at no cost to the environment by

utilizing energy efficiency. So this should be the solution rather than more dirty coal fired plants.

LR-01

Sincerely,

Mr. Lawrence Rives  
612 E Main St  
Albertville, AL 35950-2448  
(256) 878-3045

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**From:** Sierra Club Membership Services [membership.services@sierraclub.org] on behalf of James Lazell [wenhua@etal.uri.edu]  
**Sent:** Saturday, November 21, 2009 10:07 AM  
**To:** Kemper-EIS@netl.doe.gov  
**Subject:** Kemper IGCC Coal Plant Proposal/Draft EIS

Nov 21, 2009

Mr. Richard Hargis

Dear Mr. Hargis,

I urge you to stop any Department of Energy funding for the dirty, expensive, and unnecessary Kemper Coal Plant. This proposal would have unacceptable and unnecessary impacts to our environment and public health. Wetland and stream impacts from a 45 square mile strip mine coupled with 63 pounds of Mercury and 15 billion pounds of carbon dioxide annually is not the clean energy future for Mississippi.

Thank you for considering my request. I am a professional biologist and ecologist with a long history of conservation work in Mississippi.

JL-01

Sincerely,

Dr. James Lazell  
1140 Monroe St  
Jackson, MS 39202-2134  
(601) 353-8895

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**From:** Sierra Club Membership Services [membership.services@sierraclub.org] on behalf of Julia O'Neal [joneal@wildblue.net]  
**Sent:** Saturday, November 21, 2009 10:07 AM  
**To:** Kemper-EIS@netl.doe.gov  
**Subject:** Kemper IGCC Coal Plant Proposal/Draft EIS

Nov 21, 2009

Mr. Richard Hargis

Dear Mr. Hargis,

I urge you to stop any Department of Energy funding for the dirty, expensive, and unnecessary Kemper Coal Plant. This proposal would have unacceptable and unnecessary impacts to our environment and public health. Wetland and stream impacts from a 45 square mile strip mine coupled with 63 pounds of Mercury and 15 billion pounds of carbon dioxide annually is not the clean energy future for Mississippi.  
 Thank you for considering my request.

Here in rural coastal Mississippi, we are afraid to feed the fish from our ponds to children (they are more affected by mercury than adults) as it is. The mercury from another coal plant will add to the problem.

Why is Southern Co. building a biomass generating plant in Texas and a coal plant in Mississippi?

Sincerely,

Ms. Julia O'Neal  
 1973 King Bee Rd  
 Perkinston, MS 39573-3543  
 (601) 928-5828

JO-04

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**From:** Sierra Club Membership Services [membership.services@sierraclub.org] on behalf of Jerry Mayeux [jerry\_mayeux@comcast.net]  
**Sent:** Saturday, November 21, 2009 10:07 AM  
**To:** Kemper-EIS@netl.doe.gov  
**Subject:** Kemper IGCC Coal Plant Proposal/Draft EIS

Nov 21, 2009

Mr. Richard Hargis

Dear Mr. Hargis,

I urge you to stop any Department of Energy funding for the dirty, expensive, and unnecessary Kemper Coal Plant. This proposal would have unacceptable and unnecessary impacts to our environment and public health. Wetland and stream impacts from a 45 square mile strip mine coupled with 63 pounds of Mercury and 15 billion pounds of carbon dioxide annually is not the clean energy future for Mississippi.  
 Thank you for considering my request.

Consider the Connection to:  
 Environmental Conservation  
 Our economy, health, & planet R N D balance.

Sincerely,

Mr. Jerry Mayeux  
 37 Rue Rordeaux  
 Nattiesburg, MS 39402-8079  
 (601) 264-2266

JM-01

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**From:** Sierra Club Membership Services [membership.services@sierraclub.org] on behalf of Hugh Wolfe [skywolfe@gmail.com]  
**Sent:** Saturday, November 21, 2009 10:07 AM  
**To:** Kemper-EIS@netl.doe.gov  
**Subject:** Kemper IGCC Coal Plant Proposal/Draft EIS

Nov 21, 2009

Mr. Richard Hargis

Dear Mr. Hargis,

I urge you to stop any Department of Energy funding for the dirty, expensive, and unnecessary Kemper Coal Plant. This proposal would have unacceptable and unnecessary impacts to our environment and public health. Wetland and stream impacts from a 45 square mile strip mine coupled with 63 pounds of Mercury and 15 billion pounds of carbon dioxide annually is not the clean energy future for Mississippi.

Thank you for considering my request.

Taking steps like this may save many many lives in the future. Your prompt attention to this matter is greatly appreciated.

Many Blessings,

Hugh K. Wolfe, Jr.

Sincerely,

Dr. Hugh Wolfe  
2408 Brookline Dr NW  
Huntsville, AL 35810-4142  
(256) 270-0424

HW-01

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**From:** Sierra Club Membership Services [membership.services@sierraclub.org] on behalf of Donald Landers [oceanwaves@cableone.net]  
**Sent:** Saturday, November 21, 2009 10:07 AM  
**To:** Kemper-EIS@netl.doe.gov  
**Subject:** Kemper IGCC Coal Plant Proposal/Draft EIS

Nov 21, 2009

Mr. Richard Hargis

Dear Mr. Hargis,

I urge you to stop any Department of Energy funding for the dirty, expensive, and unnecessary Kemper Coal Plant. This proposal would have unacceptable and unnecessary impacts to our environment and public health. Wetland and stream impacts from a 45 square mile strip mine coupled with 63 pounds of Mercury and 15 billion pounds of carbon dioxide annually is not the clean energy future for Mississippi.

Thank you for considering my request.

We have the ability already to replace all the dirty energy sources we just need a plan of action to save our planet and finances. Thanks, Don. PEACE

Sincerely,

Mr. Donald Landers  
850 Angel Dr  
Jacksonville, AL 36265-5739  
(256) 435-8829

DL-01

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**From:** Sierra Club Membership Services [membership.services@sierraclub.org] on behalf of Edward Struthers [enstruthers@mchsi.com]  
**Sent:** Saturday, November 21, 2009 11:25 AM  
**To:** Kemper-EIS@netl.doe.gov  
**Subject:** Kemper IGCC Coal Plant Proposal/Draft EIS

Nov 21, 2009

Mr. Richard Hargis

Dear Mr. Hargis,

I urge you to stop any Department of Energy funding for the dirty, expensive, and unnecessary Kemper Coal Plant. This proposal would have unacceptable and unnecessary impacts to our environment and public health. Wetland and stream impacts from a 45 square mile strip mine coupled with 63 pounds of Mercury and 15 billion pounds of carbon dioxide annually is not the clean energy future for Mississippi. I live on a river in Alabama which is already impaired by mercury and there is no apparent source other than neighboring coal-fired power plants. It is your job to correct this problem. Thank you for considering my request.

ES-01

Sincerely,

Mr. Edward Struthers  
11270 Queens Way  
Theodore, AL 36582-8308  
(251) 973-2980

---

**From:** Sierra Club Membership Services [membership.services@sierraclub.org] on behalf of Brent Brackett [bbrackett69@gmail.com]  
**Sent:** Saturday, November 21, 2009 11:26 AM  
**To:** Kemper-EIS@netl.doe.gov  
**Subject:** Kemper IGCC Coal Plant Proposal/Draft EIS

Nov 21, 2009

Mr. Richard Hargis

Dear Mr. Hargis,

I urge you to stop any Department of Energy funding for the dirty, expensive, and unnecessary Kemper Coal Plant. This proposal would have unacceptable and unnecessary impacts to our environment and public health. Wetland and stream impacts from a 45 square mile strip mine coupled with 63 pounds of Mercury and 15 billion pounds of carbon dioxide annually is not the clean energy future for Mississippi. Why build it if it is unnecessary? Thank you for considering my request.

BB-01

Sincerely,

Mr. Brent Brackett  
1092 County Road 15  
Boaz, AL 35957-8124

---

**From:** Sierra Club Membership Services [membership.services@sierraclub.org] on behalf of Earl Gregg Swem [gswem@aol.com]  
**Sent:** Saturday, November 21, 2009 11:27 AM  
**To:** Kemper-EIS@netl.doe.gov  
**Subject:** Kemper IGCC Coal Plant Proposal/Draft EIS

Nov 21, 2009

Mr. Richard Hargis

Dear Mr. Hargis,

I urge you to stop any Department of Energy funding for the dirty, expensive, and unnecessary Kemper Coal Plant. This proposal would have unacceptable and unnecessary impacts to our environment and public health. Wetland and stream impacts from a 45 square mile strip mine coupled with 63 pounds of Mercury and 15 billion pounds of carbon dioxide annually is not the clean energy future for Mississippi.

It is time to move beyond coal as an energy producer. Mississippi and the rest of the country should be developing alternatives on a

large scale. From the environmental destruction of strip mining to the total decimation of mountaintop removal coal mining to the harmful pollution of coal plants, it's all a negative impact on people and places. We must rethink our energy programs. Thank you for considering my request.

Sincerely,

Mr. Earl Gregg Swem  
8479 County Road 14  
Union Springs, AL 36089-4153  
(502) 451-5516

ES2-01

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**From:** Sierra Club Membership Services [membership.services@sierraclub.org] on behalf of Elise Casey [drgnsrus@yahoo.com]  
**Sent:** Saturday, November 21, 2009 11:27 AM  
**To:** Kemper-EIS@netl.doe.gov  
**Subject:** Kemper IGCC Coal Plant Proposal/Draft EIS

Nov 21, 2009

Mr. Richard Hargis

Dear Mr. Hargis,

I urge you to stop any Department of Energy funding for the dirty, expensive, and unnecessary Kemper Coal Plant. This proposal would have unacceptable and unnecessary impacts to our environment and public health. Wetland and stream impacts from a 45 square mile strip mine coupled with 63 pounds of Mercury and 15 billion pounds of carbon dioxide annually is not the clean energy future for Mississippi. Please, it is time for us to not just explore but implement alternatives - methane generators are just one example.

Sincerely,

Dr. Elise Casey  
3309 Shallowford Rd  
Birmingham, AL 35216-4242

EC-01

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**From:** Sierra Club Membership Services [membership.services@sierraclub.org] on behalf of Swink Hicks [ghicks@medicine.umsmc.edu]  
**Sent:** Saturday, November 21, 2009 11:27 AM  
**To:** Kemper-EIS@netl.doe.gov  
**Subject:** Kemper IGCC Coal Plant Proposal/Draft EIS

Nov 21, 2009

Mr. Richard Hargis

Dear Mr. Hargis,

I urge you to stop any Department of Energy funding for the dirty, expensive, and unnecessary Kemper Coal Plant. This proposal would have unacceptable and unnecessary impacts to our environment and public health. Wetland and stream impacts from a 45 square mile strip mine coupled with 63 pounds of Mercury and 15 billion pounds of carbon dioxide annually is not the clean energy future for Mississippi. Thank you for considering my request. The only entity that would benefit is the company proposing it. It will be an environmental disaster. However, I suppose it will go through via the usual ruse of "job creation".

SH-01

Sincerely,

Dr. Swink Hicks  
 137 Hickory Gln  
 Madison, MS 39110-7607  
 (601) 898-1826

---

**From:** Sierra Club Membership Services [membership.services@sierraclub.org] on behalf of Jon Wesson [jonwessonatty@aol.com]  
**Sent:** Saturday, November 21, 2009 11:56 AM  
**To:** Kemper-EIS@netl.doe.gov  
**Subject:** Kemper IGCC Coal Plant Proposal/Draft EIS

Nov 21, 2009

Mr. Richard Hargis

Dear Mr. Hargis,

I urge you to stop any Department of Energy funding for the dirty, expensive, and unnecessary Kemper Coal Plant. This proposal would have unacceptable and unnecessary impacts to our environment and public health. Wetland and stream impacts from a 45 square mile strip mine coupled with 63 pounds of Mercury and 15 billion pounds of carbon dioxide annually is not the clean energy future for Mississippi. I urge you to DENY Kemper Coal permission to further pollute the

beautiful wetlands of Mississippi. To do so, places the value of human

life far below that of commerce. To allow Kemper to continue with this dirty and outdated practice prevents or stagnates the search for cleaner and healthier fuels. Thank you for your consideration.

JW3-01

Sincerely,

Mr. Jon Wesson  
 804 Hilltop Dr  
 Warrior, AL 35180-1907

---

**From:** Sierra Club Membership Services [membership.services@sierraclub.org] on behalf of Dick Pyburn [lnrpyburn@wildblue.net]  
**Sent:** Saturday, November 21, 2009 11:57 AM  
**To:** Kemper-EIS@netl.doe.gov  
**Subject:** Kemper IGCC Coal Plant Proposal/Draft EIS

Nov 21, 2009

Mr. Richard Hargis

Dear Mr. Hargis,

I urge you to stop any Department of Energy funding for the dirty, expensive, and unnecessary Kemper Coal Plant. This proposal would have unacceptable and unnecessary impacts to our environment and public health. Wetland and stream impacts from a 45 square mile strip mine coupled with 63 pounds of Mercury and 15 billion pounds of carbon dioxide annually is not the clean energy future for Mississippi.

We must stop these destructive practices immediately and protect future generations from our greedy and selfish attitudes. We must take responsibility for our decisions and actions. Thank you for considering my request.

DP-01

Sincerely,

Dr. Dick Pyburn  
120 County Road 1000  
Verbena, AL 36091-3602

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**From:** Sierra Club Membership Services [membership.services@sierraclub.org] on behalf of Jane Gardner [jgould07@mac.com]  
**Sent:** Saturday, November 21, 2009 11:57 AM  
**To:** Kemper-EIS@netl.doe.gov  
**Subject:** Kemper IGCC Coal Plant Proposal/Draft EIS

Nov 21, 2009

Mr. Richard Hargis

Dear Mr. Hargis,

I urge you to stop any Department of Energy funding for the dirty, expensive, and unnecessary Kemper Coal Plant. This proposal would have unacceptable and unnecessary impacts to our environment and public health. Wetland and stream impacts from a 45 square mile strip mine coupled with 63 pounds of Mercury and 15 billion pounds of carbon dioxide annually is not the clean energy future for Mississippi.

I voted for Obama with hopes of ending this type of archaic energy dinosaur. This needs to stop now!

Thank you for considering my request.

JG-01

Sincerely,

Ms. Jane Gardner  
604 Washington St  
Natchez, MS 39120-3527  
(601) 442-7809

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**From:** Sierra Club Membership Services [membership.services@sierraclub.org] on behalf of Terry Blake-Edwards [ferngullystudio2@bellsouth.net]  
**Sent:** Saturday, November 21, 2009 12:57 PM  
**To:** Kemper-EIS@netl.doe.gov  
**Subject:** Kemper IGCC Coal Plant Proposal/Draft EIS

Nov 21, 2009

Mr. Richard Hargis

Dear Mr. Hargis,

I urge you to stop any Department of Energy funding for the dirty, expensive, and unnecessary Kemper Coal Plant. This proposal would have unacceptable and unnecessary impacts to our environment and public health. Wetland and stream impacts from a 45 square mile strip mine coupled with 63 pounds of Mercury and 15 billion pounds of carbon dioxide annually is not the clean energy future for Mississippi.

As a mother, life long resident of Mississippi and a professional artist focused on environmental art, I strongly oppose the Kemper Coal Plant. Our natural beauty in this state and the health of our children are much more important than what would be gained from the coal plant.

Please, please listen to the citizens on this issue.

Thank you,  
 Terry Blake Edwards

Sincerely,

Mrs. Terry Blake-Edwards  
 501 Espy Ave  
 Pass Christian, MS 39571-3131  
 (228) 452-5605

TBE-01

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**From:** Sierra Club Membership Services [membership.services@sierraclub.org] on behalf of Gary Addis [addis4163@bellsouth.net]  
**Sent:** Saturday, November 21, 2009 12:57 PM  
**To:** Kemper-EIS@netl.doe.gov  
**Subject:** Kemper IGCC Coal Plant Proposal/Draft EIS

Nov 21, 2009

Mr. Richard Hargis

Dear Mr. Hargis,

I urge you to stop any Department of Energy funding for the dirty, expensive, and unnecessary Kemper Coal Plant. This proposal would have unacceptable and unnecessary impacts to our environment and public health. Wetland and stream impacts from a 45 square mile strip mine coupled with 63 pounds of Mercury and 15 billion pounds of carbon dioxide annually is not the clean energy future for Mississippi.

Mississippi alone has twelve clean energy plants that sit idle 85% of the time. Force them to use production capacity they already have.

Wanting to build more dirty coal plants is pure greed. Please, for the sake of all of us, stop them.

Thank you for considering my request.

Sincerely,

Mr. Gary Addis  
 6913 Barnes Rd  
 Moss Point, MS 39563-9334  
 (228) 474-8999

GA-01

**From:** Sierra Club Membership Services [membership.services@sierraclub.org] on behalf of Caleb Dana [chdana@aol.com]  
**Sent:** Saturday, November 21, 2009 1:26 PM  
**To:** Kemper-EIS@netl.doe.gov  
**Subject:** Kemper IGCC Coal Plant Proposal/Draft EIS

Nov 21, 2009

Mr. Richard Hargis

Dear Mr. Hargis,

I urge you to stop any Department of Energy funding for the dirty, expensive, and unnecessary Kemper Coal Plant. This proposal would have unacceptable and unnecessary impacts to our environment and public health. Wetland and stream impacts from a 45 square mile strip mine coupled with 63 pounds of Mercury and 15 billion pounds of carbon dioxide annually is not the clean energy future for Mississippi.

Thank you for considering my request. Please help us Mississippians keep from destroying some of our beautiful environment, especially since this proposed plant is unnecessary because we have existing natural gas fired power plants sitting idle whose capacity far exceeds the capacity of the proposed plant, will add additional greenhouse gases to our atmosphere, will add additional mercury poisoning to our

lakes and streams, and will cause our electricity bills to increase and Mississippi become less competitive to attract new industry.

Sincerely,

Mr. Caleb Dana  
 103 Pinetrail Pl  
 Madison, MS 39110-8008  
 (601) 940-1168

To: [Kemper-EIS@netl.doe.gov](mailto:Kemper-EIS@netl.doe.gov)  
 Subject: Kemper IGCC Coal Plant Proposal/Draft EIS

January 14, 2010

To: Mr. Richard Hargis

Dear Mr. Hargis:

It has come to my attention that a letter was submitted under my name to the US DOE in response to the Mississippi Power Company's IGCC Coal Plant project proposed for Kemper County, Mississippi. That letter, as I understand, was a form letter submitted by the Sierra Club and was dated November 21, 2009. The purpose of this letter is to correct that letter. I did not knowingly give permission to anyone to write such a letter on my behalf. The views expressed in the form letter are not mine, and I disagree with them.

I am in complete support of the Kemper County project and feel that its successful completion is essential to meeting the electrical power needs of Mississippi. I believe this project will utilize technology that is protective of the environment and will take advantage of local resources (lignite coal) in order to provide reliable electrical power and to provide new jobs in Mississippi.

Please disregard the previous form letter and accept this as my true position in this matter. If you have any questions regarding this please call me.

Very truly yours,



Mr. Caleb Dana  
 103 Pinetrail Place  
 Madison, MS 39110  
 (601) 940-1168

CD-01

CD-02

**From:** Sierra Club Membership Services [membership.services@sierraclub.org] on behalf of Tim Wallace [tim4925@gmail.com]  
**Sent:** Saturday, November 21, 2009 1:26 PM  
**To:** Kemper-EIS@netl.doe.gov  
**Subject:** Kemper IGCC Coal Plant Proposal/Draft EIS

Nov 21, 2009

Mr. Richard Hargis

Dear Mr. Hargis,

I urge you to stop any Department of Energy funding for the dirty, expensive, and unnecessary Kemper Coal Plant. This proposal would have unacceptable and unnecessary impacts to our environment and public health. Wetland and stream impacts from a 45 square mile strip mine coupled with 63 pounds of Mercury and 15 billion pounds of carbon dioxide annually is not the clean energy future for Mississippi.

Please stop funding from the Department of Energy toward the expensive and unnecessary Kemper Coal Plant proposed in Mississippi. There are

viable alternatives like the Solar plants out in the desert. The impact on our environment will impact wetlands and streams. Each year the

plant will pollute our air to the degree of 63 pounds of mercury and 15 billion pounds of carbon Dioxide, that's billion, with a "B".  
 Thank you for considering my request.

Sincerely,

Mr. Tim Wallace  
 333 Montgomery Ave  
 Trussville, AL 35173-1973  
 (205) 540-6293

TW2-01

**From:** Sierra Club Membership Services [membership.services@sierraclub.org] on behalf of Donald Koontz [dwkoon@gulftel.com]  
**Sent:** Saturday, November 21, 2009 1:57 PM  
**To:** Kemper-EIS@netl.doe.gov  
**Subject:** Kemper IGCC Coal Plant Proposal/Draft EIS

Nov 21, 2009

Mr. Richard Hargis

Dear Mr. Hargis,

I urge you to stop any Department of Energy funding for the dirty, expensive, and unnecessary Kemper Coal Plant. This proposal would have unacceptable and unnecessary impacts to our environment and public health. Wetland and stream impacts from a 45 square mile strip mine coupled with 63 pounds of Mercury and 15 billion pounds of carbon dioxide annually is not the clean energy future for Mississippi.

Thank you for considering my request. We have one outstanding polutter

in Alabama, Alabama Power, and we certainly don't need more. It is time for the coal industry to CLEAN-UP or get out. We, on the gulf coast, have unlimited clean fuel in our source of natural gas.

Sincerely,

Mr. Donald Koontz  
 25274 Pine St  
 Elberta, AL 36530-2467  
 (251) 987-1917

DK-01

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**From:** Sierra Club Membership Services [membership.services@sierraclub.org] on behalf of Crystal Twynham [dr.twynham@caringsurgery.com]  
**Sent:** Saturday, November 21, 2009 2:26 PM  
**To:** Kemper-EIS@netl.doe.gov  
**Subject:** Kemper IGCC Coal Plant Proposal/Draft EIS

Nov 21, 2009

Mr. Richard Hargis

Dear Mr. Hargis,

I urge you to stop any Department of Energy funding for the dirty, expensive, and unnecessary Kemper Coal Plant. This proposal would have unacceptable and unnecessary impacts to our environment and public health. Wetland and stream impacts from a 45 square mile strip mine coupled with 63 pounds of Mercury and 15 billion pounds of carbon dioxide annually is not the clean energy future for Mississippi.

As someone who treats the consequences of coal as an energy resource, I ask you to stop promoting the coal industry to protect the health of our people.  
Thank you for considering my request.

CT-01

Sincerely,

Dr. Crystal Twynham  
319 Parks Ave  
Scottsboro, AL 35768-2411  
(256) 259-1305

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**From:** Sierra Club Membership Services [membership.services@sierraclub.org] on behalf of Lisa Brouillette [penwoman1@gmail.com]  
**Sent:** Saturday, November 21, 2009 2:56 PM  
**To:** Kemper-EIS@netl.doe.gov  
**Subject:** Kemper IGCC Coal Plant Proposal/Draft EIS

Nov 21, 2009

Mr. Richard Hargis

Dear Mr. Hargis,

I urge you to stop any Department of Energy funding for the dirty, expensive, and unnecessary Kemper Coal Plant. This proposal would have unacceptable and unnecessary impacts to our environment and public health. Wetland and stream impacts from a 45 square mile strip mine coupled with 63 pounds of Mercury and 15 billion pounds of carbon dioxide annually is not the clean energy future for Mississippi.

This issue is within your control. Please take the necessary actions to end DOE funding to the Kemper Coal Plant.  
Thank you for considering my request.

LB-01

Sincerely,

Ms. Lisa Brouillette  
323 Brookside Dr  
Auburn, AL 36830-5922

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**From:** Sierra Club Membership Services [membership.services@sierraclub.org] on behalf of Ray Ables [spanishinterpreter@msn.com]  
**Sent:** Saturday, November 21, 2009 3:27 PM  
**To:** Kemper-EIS@netl.doe.gov  
**Subject:** Kemper IGCC Coal Plant Proposal/Draft EIS

Nov 21, 2009

Mr. Richard Hargis

Dear Mr. Hargis,

I urge you to stop any Department of Energy funding for the dirty, expensive, and unnecessary Kemper Coal Plant. This proposal would have unacceptable and unnecessary impacts to our environment and public health. Wetland and stream impacts from a 45 square mile strip mine coupled with 63 pounds of Mercury and 15 billion pounds of carbon dioxide annually is not the clean energy future for Mississippi.

Thank you for considering my request. In this day in age there are too

many truly clean sources of energy to consider building more dirty coal plants. Despite the propaganda, there is nothing clean about coal.

Sincerely,

Mr. Ray Ables  
20761 Lawrence Rd  
Fairhope, AL 36532-4548

RA-01

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**From:** Sierra Club Membership Services [membership.services@sierraclub.org] on behalf of David Newton [newton3117@bellsouth.net]  
**Sent:** Saturday, November 21, 2009 6:57 PM  
**To:** Kemper-EIS@netl.doe.gov  
**Subject:** Kemper IGCC Coal Plant Proposal/Draft EIS

Nov 21, 2009

Mr. Richard Hargis

Dear Mr. Hargis,

I urge you to stop any Department of Energy funding for the dirty, expensive, and unnecessary Kemper Coal Plant. This proposal would have unacceptable and unnecessary impacts to our environment and public health. Wetland and stream impacts from a 45 square mile strip mine coupled with 63 pounds of Mercury and 15 billion pounds of carbon dioxide annually is not the clean energy future for Mississippi.

With more than 600 coal fired power plants in this country, we must find other ways to generate the electricity we need.

Thank you.

Sincerely,

Dr. David Newton  
129 Carter St  
Auburn, AL 36830-6320  
(334) 821-9817

DN-01

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**From:** Sierra Club Membership Services [membership.services@sierraclub.org] on behalf of Susan Putnam [sdp439@gmail.com]  
**Sent:** Saturday, November 21, 2009 7:26 PM  
**To:** Kemper-EIS@netl.doe.gov  
**Subject:** Kemper IGCC Coal Plant Proposal/Draft EIS

Nov 21, 2009

Mr. Richard Hargis

Dear Mr. Hargis,

I urge you to stop any Department of Energy funding for the dirty, expensive, and unnecessary Kemper Coal Plant. This proposal would have unacceptable and unnecessary impacts to our environment and public health. Wetland and stream impacts from a 45 square mile strip mine coupled with 63 pounds of Mercury and 15 billion pounds of carbon dioxide annually is not the clean energy future for Mississippi. Thank you for considering my request. Many of us suffer from chronic respiratory problems due to emissions from coal plants.

SP-01

Sincerely,

Ms. Susan Putnam  
1200 Cresthill Rd  
Birmingham, AL 35213-1104

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**From:** Sierra Club Membership Services [membership.services@sierraclub.org] on behalf of Jan Garrett [garr6904@bellsouth.net]  
**Sent:** Saturday, November 21, 2009 8:57 PM  
**To:** Kemper-EIS@netl.doe.gov  
**Subject:** Kemper IGCC Coal Plant Proposal/Draft EIS

Nov 21, 2009

Mr. Richard Hargis

Dear Mr. Hargis,

I urge you to stop any Department of Energy funding for the dirty, expensive, and unnecessary Kemper Coal Plant. This proposal would have unacceptable and unnecessary impacts to our environment and public health. Wetland and stream impacts from a 45 square mile strip mine coupled with 63 pounds of Mercury and 15 billion pounds of carbon dioxide annually is not the clean energy future for Mississippi. Thank you for considering my request. Let's spend our resources on developing renewal energy sources.

JG2-01

Sincerely,

Dr. Jan Garrett  
1295 Torrence Rd  
Tuskegee, AL 36083-6026  
(334) 725-9272

---

**From:** Sierra Club Membership Services [membership.services@sierraclub.org] on behalf of Rebecca May [froggydarlin@aol.com]  
**Sent:** Saturday, November 21, 2009 9:27 PM  
**To:** Kemper-EIS@netl.doe.gov  
**Subject:** Kemper IGCC Coal Plant Proposal/Draft EIS

Nov 21, 2009

Mr. Richard Hargis

Dear Mr. Hargis,

I urge you to stop any Department of Energy funding for the dirty, expensive, and unnecessary Kemper Coal Plant. This proposal would have unacceptable and unnecessary impacts to our environment and public health. Wetland and stream impacts from a 45 square mile strip mine coupled with 63 pounds of Mercury and 15 billion pounds of carbon dioxide annually is not the clean energy future for Mississippi.

As a southern citizen, I must say that I am extremely disappointed that this proposal, which would cause a multitude of harm to our environment, is actually being taken into consideration. I urge you, once again, to stop any funding for the Kemper Coal Plant.

RM-01

Sincerely,

Miss Rebecca May  
 1611 London Town Ln  
 Montgomery, AL 36117-1754

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**From:** Sierra Club Membership Services [membership.services@sierraclub.org] on behalf of Jan Cambre [johnjancambre@bellsouth.net]  
**Sent:** Saturday, November 21, 2009 9:57 PM  
**To:** Kemper-EIS@netl.doe.gov  
**Subject:** Kemper IGCC Coal Plant Proposal/Draft EIS

Nov 21, 2009

Mr. Richard Hargis

Dear Mr. Hargis,

I urge you to stop any Department of Energy funding for the dirty, expensive, and unnecessary Kemper Coal Plant. This proposal would have unacceptable and unnecessary impacts to our environment and public health. Wetland and stream impacts from a 45 square mile strip mine coupled with 63 pounds of Mercury and 15 billion pounds of carbon dioxide annually is not the clean energy future for Mississippi.

Thank you for considering my request. I know you don't read this, but I feel it is wrong to destroy this environment. This plant is saying it

will supply energy for decades so what happens to future Mississippians in the years 2090-3000AD? they will be stuck with a toxic waste site instead of a beautiful environment of people and their communities of

JC-01

solar power, wind power and natural gas. I sure the coal industry ddoes not want our communities powered by natual gas.

Sincerely,

Ms. Jan Cambre  
 3509 Jo Beth Ter  
 Gautier, MS 39553-5308  
 (228) 497-6393

---

**From:** Sierra Club Membership Services [membership.services@sierraclub.org] on behalf of peter bacuzzi [pab1941@bellsouth.net]  
**Sent:** Saturday, November 21, 2009 9:57 PM  
**To:** Kemper-EIS@netl.doe.gov  
**Subject:** Kemper IGCC Coal Plant Proposal/Draft EIS

Nov 21, 2009

Mr. Richard Hargis

Dear Mr. Hargis,

I urge you to stop any Department of Energy funding for the dirty, expensive, and unnecessary Kemper Coal Plant. This proposal would have unacceptable and unnecessary impacts to our environment and public health. Wetland and stream impacts from a 45 square mile strip mine coupled with 63 pounds of Mercury and 15 billion pounds of carbon dioxide annually is not the clean energy future for Mississippi.

Thank you for considering my request. MS is far too polluted already. Please consider using the gas-fired plants and scrapping this coal-burning, toxic facility.  
Thank you,  
Peter A. Bacuzzi

Sincerely,

Mr. peter bacuzzi  
15140 Royal St  
Gulfport, MS 39503-2803

PB-01

---

**From:** Sierra Club Membership Services [membership.services@sierraclub.org] on behalf of Thomas Powell [attytmp@bellsouth.net]  
**Sent:** Saturday, November 21, 2009 10:27 PM  
**To:** Kemper-EIS@netl.doe.gov  
**Subject:** Kemper IGCC Coal Plant Proposal/Draft EIS

Nov 21, 2009

Mr. Richard Hargis

Dear Mr. Hargis,

I urge you to stop any Department of Energy funding for the dirty, expensive, and unnecessary Kemper Coal Plant. This proposal would have unacceptable and unnecessary impacts to our environment and public health. Wetland and stream impacts from a 45 square mile strip mine coupled with 63 pounds of Mercury and 15 billion pounds of carbon dioxide annually is not the clean energy future for Mississippi.

Thank you for considering my request.  
My family lives in Alabama and we do not wish to breathe any more poisons emitted by any more coal plants.

Sincerely,

Mr. Thomas Powell  
3009 Smyer Rd  
Vestavia Hills, AL 35216-1032  
(205) 870-4058

TP-01

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**From:** Sierra Club Membership Services [membership.services@sierraclub.org] on behalf of Phyllis Prichard [phyllisprichard1@bellsouth.net]  
**Sent:** Saturday, November 21, 2009 10:57 PM  
**To:** Kemper-EIS@netl.doe.gov  
**Subject:** Kemper IGCC Coal Plant Proposal/Draft EIS

Nov 21, 2009

Mr. Richard Hargis

Dear Mr. Hargis,

I urge you to stop any Department of Energy funding for the dirty, expensive, and unnecessary Kemper Coal Plant. This proposal would have unacceptable and unnecessary impacts to our environment and public health. Wetland and stream impacts from a 45 square mile strip mine coupled with 63 pounds of Mercury and 15 billion pounds of carbon dioxide annually is not the clean energy future for Mississippi. It defies my comprehension that money comes before the well being of human beings and the environment!! That greed is SHAMEFUL, to say the least!!!! Please!!!! Put an end to this horrendous destruction of the world around us!! It becomes more and more difficult to repair the damage done by coal plants. It is time to stop throwing good money after bad.

PP-01

Sincerely,

Ms. Phyllis Prichard  
2214 Beltline Rd SW  
Decatur, AL 35601-3618

---

**From:** Sierra Club Membership Services [membership.services@sierraclub.org] on behalf of H. F. Jaeckel [hfandre@aol.com]  
**Sent:** Saturday, November 21, 2009 10:57 PM  
**To:** Kemper-EIS@netl.doe.gov  
**Subject:** Kemper IGCC Coal Plant Proposal/Draft EIS

Nov 21, 2009

Mr. Richard Hargis

Dear Mr. Hargis,

I urge you to stop any Department of Energy funding for the dirty, expensive, and unnecessary Kemper Coal Plant. This proposal would have unacceptable and unnecessary impacts to our environment and public health. Wetland and stream impacts from a 45 square mile strip mine coupled with 63 pounds of Mercury and 15 billion pounds of carbon dioxide annually is not the clean energy future for Mississippi.

Thank you for considering my request.

Coal driven plants are sooo 20th century. Funds need to be spent on clean energy sources that will protect the environment, people and other creatures on this good earth.

HJ-01

Sincerely,

Mr. H. F. Jaeckel  
3403 Kimbrough Ave  
Tupelo, MS 38801-6207  
(601) 844-3132

---

**From:** Sierra Club Membership Services [membership.services@sierraclub.org] on behalf of Barbara Powell [bpwll@bellsouth.net]  
**Sent:** Saturday, November 21, 2009 11:27 PM  
**To:** Kemper-EIS@netl.doe.gov  
**Subject:** Kemper IGCC Coal Plant Proposal/Draft EIS

Nov 21, 2009

Mr. Richard Hargis

Dear Mr. Hargis,

I urge you to stop any Department of Energy funding for the dirty, expensive, and unnecessary Kemper Coal Plant. This proposal would have unacceptable and unnecessary impacts to our environment and public health. Wetland and stream impacts from a 45 square mile strip mine coupled with 63 pounds of Mercury and 15 billion pounds of carbon dioxide annually is not the clean energy future for Mississippi. Please don't straddle our Mississippians with the cost of building a multimillion dollar coal plant when there are natural gas plants capable of meeting the need for energy standing idle. The coal plant would denude a large area of the Mississippi landscape and pollute our land and air unnecessarily. Thank you for considering my request.

BP-01

Sincerely,

Ms. Barbara Powell  
1914 Cherokee Dr  
Jackson, MS 39211-6508  
(601) 362-8577

---

**From:** Sierra Club Membership Services [membership.services@sierraclub.org] on behalf of Frank Wiygul [fwiygul@comcast.net]  
**Sent:** Sunday, November 22, 2009 12:27 AM  
**To:** Kemper-EIS@netl.doe.gov  
**Subject:** Kemper IGCC Coal Plant Proposal/Draft EIS

Nov 21, 2009

Mr. Richard Hargis

Dear Mr. Hargis,

I urge you to stop any Department of Energy funding for the dirty, expensive, and unnecessary Kemper Coal Plant. This proposal would have unacceptable and unnecessary impacts to our environment and public health. Wetland and stream impacts from a 45 square mile strip mine coupled with 63 pounds of Mercury and 15 billion pounds of carbon dioxide annually is not the clean energy future for Mississippi.

To: Miss. Public Service Commission

Gentlemen: This letter is to express my concern as a citizen of Miss. over the proposed power plant using a low-grade type of coal as fuel.

It is my understanding that lignite of the lowest grade of coal that it is possible to use as a fuel. I am concerned over the environmental impact that this project will have on our state as well as the probability of higher rates for electricity and health issues that will result from this power plant. I urge you to delay approval of this project until there is a clear and compelling need for it.

FW-01

Sincerely,

Frank M. Wiygul Jr. M.D.  
509 Rollingwood Dr.  
Jackson Ms. 39211

Sincerely,

Dr. Frank Wiygul  
509 Rollingwood Dr  
Jackson, MS 39211-4727  
(601) 956-4349

---

**From:** Sierra Club Membership Services [membership.services@sierraclub.org] on behalf of Jacquelyn Smith [abstract.lit@gmail.com]  
**Sent:** Sunday, November 22, 2009 2:27 AM  
**To:** Kemper-EIS@netl.doe.gov  
**Subject:** Kemper IGCC Coal Plant Proposal/Draft EIS

Nov 22, 2009

Mr. Richard Hargis

Dear Mr. Hargis,

I urge you to stop any Department of Energy funding for the dirty, expensive, and unnecessary Kemper Coal Plant. This proposal would have unacceptable and unnecessary impacts to our environment and public health. Wetland and stream impacts from a 45 square mile strip mine coupled with 63 pounds of Mercury and 15 billion pounds of carbon dioxide annually is not the clean energy future for Mississippi. I would appreciate it..if this didn't go in...I like the land like it is, the sky as clear as it is in the MS, and for the earth and all not to be tempered with by the greedy hands of man. Sometimes we are too speciescytric... have a nice day-

JS-01

Sincerely,

Ms. Jacquelyn Smith  
 64 O J Batte Rd  
 Richton, MS 39476-9525  
 (601) 788-1088

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**From:** Sierra Club Membership Services [membership.services@sierraclub.org] on behalf of Frederick Kernbach [fred\_kernbach@hotmail.com]  
**Sent:** Sunday, November 22, 2009 7:58 AM  
**To:** Kemper-EIS@netl.doe.gov  
**Subject:** Kemper IGCC Coal Plant Proposal/Draft EIS

Nov 22, 2009

Mr. Richard Hargis

Dear Mr. Hargis,

I urge you to stop any Department of Energy funding for the dirty, expensive, and unnecessary Kemper Coal Plant. This proposal would have unacceptable and unnecessary impacts to our environment and public health. Wetland and stream impacts from a 45 square mile strip mine coupled with 63 pounds of Mercury and 15 billion pounds of carbon dioxide annually is not the clean energy future for Mississippi. Maximize use of natural gas-fired power plants.

FK-01

Sincerely,

Mr. Frederick Kernbach  
 35 Neptune Ln  
 Lumberton, MS 39455-9194  
 (601) 688-0561

**From:** Sierra Club Membership Services [membership.services@sierraclub.org] on behalf of Roger Mills [rogerdocmillsii@yahoo.com]  
**Sent:** Sunday, November 22, 2009 10:33 AM  
**To:** Kemper-EIS@netl.doe.gov  
**Subject:** Kemper IGCC Coal Plant Proposal/Draft EIS

Nov 22, 2009

Mr. Richard Hargis

Dear Mr. Hargis,

I urge you to stop any Department of Energy funding for the dirty, expensive, and unnecessary Kemper Coal Plant. This proposal would have unacceptable and unnecessary impacts to our environment and public health. Wetland and stream impacts from a 45 square mile strip mine coupled with 63 pounds of Mercury and 15 billion pounds of carbon dioxide annually is not the clean energy future for Mississippi.

Thank you for considering my request. We need real innovation not just stop-gap measures that continue to pump more carbon and mercury into our children's children's atmosphere. The real visionaries think for the future not just for works for now; and will sacrifice some in the

present to do what is right for all time. I pray your department (which is made up by people who may have grandchildren's children to worry about) will make the pro-life (truly pro-life) decision.

Roger Mills  
 228.236.6221  
 rogerdocmillsii@yahoo.com

Sincerely,

Mr. Roger Mills  
 12255 Stone Rd  
 Gulfport, MS 39503-7775

RM2-01

**From:** Sierra Club Membership Services [membership.services@sierraclub.org] on behalf of Edmund Wright [samoanjoke66@yahoo.com]  
**Sent:** Sunday, November 22, 2009 12:02 PM  
**To:** Kemper-EIS@netl.doe.gov  
**Subject:** Kemper IGCC Coal Plant Proposal/Draft EIS

Nov 22, 2009

Mr. Richard Hargis

Dear Mr. Hargis,

I urge you to stop any Department of Energy funding for the dirty, expensive, and unnecessary Kemper Coal Plant. This proposal would have unacceptable and unnecessary impacts to our environment and public health. Wetland and stream impacts from a 45 square mile strip mine coupled with 63 pounds of Mercury and 15 billion pounds of carbon dioxide annually is not the clean energy future for Mississippi.

We are at the point of no return, on energy policy. we either start using the abundant and clean energy of the sun, wind, thermal, and hydro., or we will begin our own extinction, I hope to think that we are smarter than that, to bad about greed and the easy way. Edmund Wright

Sincerely,

Mr. Edmund Wright  
 24711 County Road 20  
 Elberta, AL 36530-6542  
 (251) 987-5222

EW-01

---

**From:** Sierra Club Membership Services [membership.services@sierraclub.org] on behalf of Gloria Mattingly [geeam@sbcglobal.net]  
**Sent:** Sunday, November 22, 2009 5:00 PM  
**To:** Kemper-EIS@netl.doe.gov  
**Subject:** Kemper IGCC Coal Plant Proposal/Draft EIS

Nov 22, 2009

Mr. Richard Hargis

Dear Mr. Hargis,

I urge you to stop any Department of Energy funding for the dirty, expensive, and unnecessary Kemper Coal Plant. This proposal would have unacceptable and unnecessary impacts to our environment and public health. Wetland and stream impacts from a 45 square mile strip mine coupled with 63 pounds of Mercury and 15 billion pounds of carbon dioxide annually is not the clean energy future for Mississippi. We must find alternatives to all coal-generated energy. Even the cleanest coal plant is anything but clean. This particular coal plant

will be located only a few miles from my home, making the environmental impact particularly threatening. For the sake of my family, our nation, and the world, please stop this plant before it begins.

Thank you for considering my request.

Sincerely,

Ms. Gloria Mattingly  
 10492 Highway 495  
 Meridian, MS 39305-9215  
 (601) 737-4378

GM-01

---

**From:** Sierra Club Membership Services [membership.services@sierraclub.org] on behalf of Gary Gover [govers@bellsouth.net]  
**Sent:** Sunday, November 22, 2009 5:01 PM  
**To:** Kemper-EIS@netl.doe.gov  
**Subject:** Kemper IGCC Coal Plant Proposal/Draft EIS

Nov 22, 2009

Mr. Richard Hargis

Dear Mr. Hargis,

I urge you to stop any Department of Energy funding for the dirty, expensive, and unnecessary Kemper Coal Plant. This proposal would have unacceptable and unnecessary impacts to our environment and public health. Wetland and stream impacts from a 45 square mile strip mine coupled with 63 pounds of Mercury and 15 billion pounds of carbon dioxide annually is not the clean energy future for Mississippi.

That's enough mercury to contaminate 50 million pounds of fish every year along with 15 billion pounds of carbon dioxide. Thanks but no thanks to dirty coal!

Sincerely,

Mrs. Gary Gover  
 300 Lincoln St  
 Fairhope, AL 36532-2818  
 (251) 990-8862

GG-01

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**From:** Sierra Club Membership Services [membership.services@sierraclub.org] on behalf of Edward Donovan [edono46@aol.com]  
**Sent:** Sunday, November 22, 2009 7:30 PM  
**To:** Kemper-EIS@netl.doe.gov  
**Subject:** Kemper IGCC Coal Plant Proposal/Draft EIS

Nov 22, 2009

Mr. Richard Hargis

Dear Mr. Hargis,

I urge you to stop any Department of Energy funding for the dirty, expensive, and unnecessary Kemper Coal Plant. This proposal would have unacceptable and unnecessary impacts to our environment and public health. Wetland and stream impacts from a 45 square mile strip mine coupled with 63 pounds of Mercury and 15 billion pounds of carbon dioxide annually is not the clean energy future for Mississippi.

We know mercury continuation is bad for the environment and a problem

which has an enduring negative impact that will adversely affect future

generations. Wouldn't we want our grandchildren to think back and say:

"I'm sure glad the light bulb went off for our grandparents and that they stood up and made their voices heard about that dumb idea about cheaper energy available from a sacrifice of our environment.

Thank you for considering my request.

Sincerely,

Ed Donovan  
2559 River Place Blvd.  
Biloxi, MS 39531

Sincerely,

Mr. Edward Donovan  
2559 River Place Blvd  
Biloxi, MS 39531-2752  
(601) 435-9490

ED-01

**From:** Sierra Club Membership Services [membership.services@sierraclub.org] on behalf of Phyllis Wallace [kpwal420@bellsouth.net]  
**Sent:** Sunday, November 22, 2009 7:59 PM  
**To:** Kemper-EIS@netl.doe.gov  
**Subject:** Kemper IGCC Coal Plant Proposal/Draft EIS

Nov 22, 2009

Mr. Richard Hargis

Dear Mr. Hargis,

I urge you to stop any Department of Energy funding for the dirty, expensive, and unnecessary Kemper Coal Plant. This proposal would have unacceptable and unnecessary impacts to our environment and public health. Wetland and stream impacts from a 45 square mile strip mine coupled with 63 pounds of Mercury and 15 billion pounds of carbon dioxide annually is not the clean energy future for Mississippi.

Thank you for considering my request.

I live in Alabama, and we do not want ANY "fall-out" from this coal plant.

Neither should there be any reason for maintaining the Kemper Coal Plant, which would degrade the area, be an unnecessary cost and a dangerous pollutant to the environment. Please see that this is NOT funded in any way.

Thank you -----

Sincerely,

Mrs. Phyllis Wallace  
 9388 County Road 11  
 Fairhope, AL 36532-6111  
 (251) 928-0536

PW-01

**From:** Sierra Club Membership Services [membership.services@sierraclub.org] on behalf of Robert Brooks [parfy66@hotmail.com]  
**Sent:** Sunday, November 22, 2009 8:30 PM  
**To:** Kemper-EIS@netl.doe.gov  
**Subject:** Kemper IGCC Coal Plant Proposal/Draft EIS

Nov 22, 2009

Mr. Richard Hargis

Dear Mr. Hargis,

I urge you to stop any Department of Energy funding for the dirty, expensive, and unnecessary Kemper Coal Plant. This proposal would have unacceptable and unnecessary impacts to our environment and public health. Wetland and stream impacts from a 45 square mile strip mine coupled with 63 pounds of Mercury and 15 billion pounds of carbon dioxide annually is not the clean energy future for Mississippi.

Thank you for considering my request. The health of our environment and children should not be sacrificed for the sake of energy or money.

Sincerely,

Dr. Robert Brooks  
 114 Dampeer St  
 Crystal Springs, MS 39059-2561  
 (601) 892-3139

RB-01

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**From:** Sierra Club Membership Services [membership.services@sierraclub.org] on behalf of Paul Diamond [pulldigm@yahoo.com]  
**Sent:** Sunday, November 22, 2009 10:00 PM  
**To:** Kemper-EIS@netl.doe.gov  
**Subject:** Kemper IGCC Coal Plant Proposal/Draft EIS

Nov 22, 2009

Mr. Richard Hargis

Dear Mr. Hargis,

I urge you to stop any Department of Energy funding for the dirty, expensive, and unnecessary Kemper Coal Plant. This proposal would have unacceptable and unnecessary impacts to our environment and public health. Wetland and stream impacts from a 45 square mile strip mine coupled with 63 pounds of Mercury and 15 billion pounds of carbon dioxide annually is not the clean energy future for Mississippi.

Thank you for considering my request. You might also consider that lower Alabama and Mississippi are flatland with constant prevailing winds. They are perfect places for windfarms.

PD-01

Sincerely,

Mr. Paul Diamond  
410 Brookwood Cir  
Foley, AL 36535-2363  
(251) 978-5597

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**From:** Sierra Club Membership Services [membership.services@sierraclub.org] on behalf of Maria Skinner [mariahskinner@hotmail.com]  
**Sent:** Monday, November 23, 2009 12:59 AM  
**To:** Kemper-EIS@netl.doe.gov  
**Subject:** Kemper IGCC Coal Plant Proposal/Draft EIS

Nov 22, 2009

Mr. Richard Hargis

Dear Mr. Hargis,

I urge you to stop any Department of Energy funding for the dirty, expensive, and unnecessary Kemper Coal Plant. This proposal would have unacceptable and unnecessary impacts to our environment and public health. Wetland and stream impacts from a 45 square mile strip mine coupled with 63 pounds of Mercury and 15 billion pounds of carbon dioxide annually is not the clean energy future for Mississippi.

Coal is cheap in the short run, and expensive in the long run. Let's take the long view. Thanks!

MS-01

Sincerely,

Mrs. Maria Skinner  
8616 County Road 26  
Ragland, AL 35131-5622

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**From:** Sierra Club Membership Services [membership.services@sierraclub.org] on behalf of Jan Cambre [johnjancambre@bellsouth.net]  
**Sent:** Monday, November 23, 2009 12:59 AM  
**To:** Kemper-EIS@netl.doe.gov  
**Subject:** Kemper IGCC Coal Plant Proposal/Draft EIS

Nov 22, 2009

Mr. Richard Hargis

Dear Mr. Hargis,

I urge you to stop any Department of Energy funding for the dirty, expensive, and unnecessary Kemper Coal Plant. This proposal would have unacceptable and unnecessary impacts to our environment and public health. Wetland and stream impacts from a 45 square mile strip mine coupled with 63 pounds of Mercury and 15 billion pounds of carbon dioxide annually is not the clean energy future for Mississippi. Thank you for considering my request. Mississippi is in need of protection from the coal industry. I do not agree with the proposed Coal Plant in Kemper County.

JC-02

Sincerely,

Ms. Jan Cambre  
 3509 Jo Beth Ter  
 Gautier, MS 39553-5308  
 (228) 497-6393

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**From:** Sierra Club Membership Services [membership.services@sierraclub.org] on behalf of Brantly Cochrane [brantlyc@dbtech.net]  
**Sent:** Monday, November 23, 2009 8:00 AM  
**To:** Kemper-EIS@netl.doe.gov  
**Subject:** Kemper IGCC Coal Plant Proposal/Draft EIS

Nov 23, 2009

Mr. Richard Hargis

Dear Mr. Hargis,

I urge you to stop any Department of Energy funding for the dirty, expensive, and unnecessary Kemper Coal Plant. This proposal would have unacceptable and unnecessary impacts to our environment and public health. Wetland and stream impacts from a 45 square mile strip mine coupled with 63 pounds of Mercury and 15 billion pounds of carbon dioxide annually is not the clean energy future for Mississippi. If there is already excess generating capacity in Mississippi, thanks to electricity being generated by gas fired plants, why build a coal fired plant? Is the coal industry lobby that strong? We should use the generating capacity that we have, rather than opting for building another plant. You have the power to end this redundancy and the building of coal fired plants, just because the coal industry wants them. Please stop the Kemper Coal Plant. We all have a vested interest in protecting our environment. Thank you for considering my request.

BC2-01

Sincerely,

Ms. Brantly Cochrane  
 PO Box 1275  
 Tuscaloosa, AL 35403-1275

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**From:** Sierra Club Membership Services [membership.services@sierraclub.org] on behalf of Tommy Davis [davis@irby.com]  
**Sent:** Monday, November 23, 2009 10:13 AM  
**To:** Kemper-EIS@netl.doe.gov  
**Subject:** Kemper IGCC Coal Plant Proposal/Draft EIS

Nov 23, 2009

Mr. Richard Hargis

Dear Mr. Hargis,

I urge you to stop any Department of Energy funding for the dirty, expensive, and unnecessary Kemper Coal Plant. This proposal would have unacceptable and unnecessary impacts to our environment and public health. Wetland and stream impacts from a 45 square mile strip mine coupled with 63 pounds of Mercury and 15 billion pounds of carbon dioxide annually is not the clean energy future for Mississippi. Thank you for considering my request. There is no such thing as clean coal.  
Tommy Davis

Sincerely,

Mr. Tommy Davis  
601 Crossover Rd  
Tupelo, MS 38801-4943

TD-01

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**From:** Sierra Club Membership Services [membership.services@sierraclub.org] on behalf of TEZEL RELYEA [tezel.relyea@navy.mil]  
**Sent:** Monday, November 23, 2009 10:36 AM  
**To:** Kemper-EIS@netl.doe.gov  
**Subject:** Kemper IGCC Coal Plant Proposal/Draft EIS

Nov 23, 2009

Mr. Richard Hargis

Dear Mr. Hargis,

I urge you to stop any Department of Energy funding for the dirty, expensive, and unnecessary Kemper Coal Plant. This proposal would have unacceptable and unnecessary impacts to our environment and public health. Wetland and stream impacts from a 45 square mile strip mine coupled with 63 pounds of Mercury and 15 billion pounds of carbon dioxide annually is not the clean energy future for Mississippi.

I am strongly opposed to this absolutely unacceptable coal plant which

will emit very high levels of toxic mercury -- enough to contaminate 50 million pounds of fish every year -- and would affect our neighbors in Alabama as well. It definitely is not the clean energy future that Mississippi is expecting!

Sincerely,

Ms. TEZEL RELYEA  
201 Glenwood Dr  
Carriere, MS 39426-7659

TR-01

**From:** Sierra Club Membership Services [membership.services@sierraclub.org] on behalf of Joe Estes [joe.estes@trinityhsv.org]  
**Sent:** Monday, November 23, 2009 11:30 AM  
**To:** Kemper-EIS@netl.doe.gov  
**Subject:** Kemper IGCC Coal Plant Proposal/Draft EIS

Nov 23, 2009

Mr. Richard Hargis

Dear Mr. Hargis,

I urge you to stop any Department of Energy funding for the dirty, expensive, and unnecessary Kemper Coal Plant. This proposal would have unacceptable and unnecessary impacts to our environment and public health. Wetland and stream impacts from a 45 square mile strip mine coupled with 63 pounds of Mercury and 15 billion pounds of carbon dioxide annually is not the clean energy future for Mississippi.

If we don't take steps now to work for a cleaner environment, air, water, soil, food sources, and others, we are not facing up to our

responsibilities as citizens and human beings. Also, what affects one area usually has an impact on nearby communities as well.  
 Thank you for considering my request.

Sincerely,

Mr. Joe Estes  
 202 Red Oak Pl  
 Madison, AL 35758-1562  
 (256) 461-7484

JE-01

**From:** Postmaster@NETL.DOE.GOV on behalf of EIS Kemper [Kemper-EIS@NETL.DOE.GOV]  
**Sent:** Monday, November 23, 2009 2:05 PM  
**To:** Mark Clodfelter  
**Subject:** Re: Kemper IGCC Coal Plant Proposal/Draft EIS (Kemper County IGCC Project)

Thank you for your comments.

Richard Hargis

>>> patent1 11/23/09 14:04 >>>

Nov 23, 2009

Mr. Richard Hargis

Dear Mr. Hargis,

I urge you to stop any Department of Energy funding for the dirty, expensive, and unnecessary Kemper Coal Plant. This proposal would have unacceptable and unnecessary impacts to our environment and public health. Wetland and stream impacts from a 45 square mile strip mine coupled with 63 pounds of Mercury and 15 billion pounds of carbon dioxide annually is not the clean energy future for Mississippi.

Why are we screwing up the atmosphere. We have to breathe this stuff.  
 Thank you for considering my request.

Sincerely,

Mr. Mark Clodfelter  
 235 High Rd  
 Madison, AL 35758-1405  
 (256) 971-1500

MC2-01

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**From:** Postmaster@NETL.DOE.GOV on behalf of EIS Kemper [Kemper-EIS@NETL.DOE.GOV]  
**Sent:** Monday, November 23, 2009 5:03 PM  
**To:** Elizabeth Waldorf  
**Subject:** Re: Kemper IGCC Coal Plant Proposal/Draft EIS (Kemper County IGCC Project)

Thank you for your comments.

Richard Hargis

>>> elizabeth.waldorf 11/23/09 17:02 >>>

Nov 23, 2009

Mr. Richard Hargis

Dear Mr. Hargis,

I urge you to stop any Department of Energy funding for the dirty, expensive, and unnecessary Kemper Coal Plant. This proposal would have unacceptable and unnecessary impacts to our environment and public health. Wetland and stream impacts from a 45 square mile strip mine coupled with 63 pounds of Mercury and 15 billion pounds of carbon dioxide annually is not the clean energy future for Mississippi.

James Hansen, the leading NASA scientist on Global Warming, warns that we must stop building coal fired power plants if we are to stop our annual increase in carbon dioxide output and begin to reduce it. Our civilization is at risk. This is not a petty matter.

EW2-01

Sincerely,

Dr. Elizabeth Waldorf  
3840 NW Lincoln Ave  
Corvallis, OR 97330-2360  
(541) 207-3613

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**From:** Postmaster@NETL.DOE.GOV on behalf of EIS Kemper [Kemper-EIS@NETL.DOE.GOV]  
**Sent:** Monday, November 23, 2009 5:32 PM  
**To:** Sarai Webb  
**Subject:** Re: Kemper IGCC Coal Plant Proposal/Draft EIS (Kemper County IGCC Project)

Thank you for your comments.

Richard Hargis

>>> sarai 11/23/09 17:30 >>>

Nov 23, 2009

Mr. Richard Hargis

Dear Mr. Hargis,

I urge you to stop any Department of Energy funding for the dirty, expensive, and unnecessary Kemper Coal Plant. This proposal would have unacceptable and unnecessary impacts to our environment and public health. Wetland and stream impacts from a 45 square mile strip mine coupled with 63 pounds of Mercury and 15 billion pounds of carbon dioxide annually is not the clean energy future for Mississippi. Thank you for considering my request.

It seems to me that Mississippi Power Co. and Southern Co. are the main recipients in building this plant. There will definitely be a rate increase for everyone, 3000 acres of land destroyed, and home owners with have their property taken from them which means defacing and devaluing individuals homesteads. No, I am not in favor of building a plant that no one is sure will even work. Every one is talking about "going green" well, a coal plant emitting mercury and carbon dioxide is not "going green".  
Sarai Webb

SW-01

Sincerely,

Mrs. Sarai Webb  
2661 Highway 11 And 80  
Toomsaba, MS 39364-9444  
(601) 483-8751

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**From:** Postmaster@NETL.DOE.GOV on behalf of EIS Kemper [Kemper-EIS@NETL.DOE.GOV]  
**Sent:** Monday, November 23, 2009 6:33 PM  
**To:** James Puckett  
**Subject:** Re: Kemper IGCC Coal Plant Proposal/Draft EIS (Kemper County IGCC Project)

Thank you for your comments.

Richard Hargis

>>> jfpuc 11/23/09 18:32 >>>

Nov 23, 2009

Mr. Richard Hargis

Dear Mr. Hargis,

I urge you to stop any Department of Energy funding for the dirty, expensive, and unnecessary Kemper Coal Plant. This proposal would have unacceptable and unnecessary impacts to our environment and public health. Wetland and stream impacts from a 45 square mile strip mine coupled with 63 pounds of Mercury and 15 billion pounds of carbon dioxide annually is not the clean energy future for Mississippi.  
.I am a resident of Mississippi and I oppose this plant proposal. My

understanding of the energy field leads me to the conclusion that there are less expensive energy solutions, with fewer consequences.  
Thank you for considering my request.  
Sincerely,  
Jim Puckett

JP-01

Sincerely,

Dr. James Puckett  
PO Box 16863  
Hattiesburg, MS 39404-6863

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**From:** Postmaster@NETL.DOE.GOV on behalf of EIS Kemper [Kemper-EIS@NETL.DOE.GOV]  
**Sent:** Monday, November 23, 2009 10:02 PM  
**To:** Curtis Dodd  
**Subject:** Re: Kemper IGCC Coal Plant Proposal/Draft EIS (Kemper County IGCC Project)

Thank you for your comments.

Richard Hargis

>>> cdodd 11/23/09 22:01 >>>

Nov 23, 2009

Mr. Richard Hargis

Dear Mr. Hargis,

I urge you to stop any Department of Energy funding for the dirty, expensive, and unnecessary Kemper Coal Plant. This proposal would have unacceptable and unnecessary impacts to our environment and public health. Wetland and stream impacts from a 45 square mile strip mine coupled with 63 pounds of Mercury and 15 billion pounds of carbon dioxide annually is not the clean energy future for Mississippi. Thank you for considering my request.

We need to focus our efforts, as a nation, on renewable energy sources and conservation. The coal industry continues to misrepresent their energy source as something that is clean.

CD2-01

Sincerely,

Mr. Curtis Dodd  
2803 Bentley St SE  
Huntsville, AL 35801-2220  
(256) 883-0222

---

**From:** Postmaster@NETL.DOE.GOV on behalf of EIS Kemper [Kemper-EIS@NETL.DOE.GOV]  
**Sent:** Monday, November 23, 2009 11:02 PM  
**To:** Marie Hatton  
**Subject:** Re: Kemper IGCC Coal Plant Proposal/Draft EIS (Kemper County IGCC Project)

Thank you for your comments.

Richard Hargis

>>> keeshmomm 11/23/09 23:00 >>>

Nov 23, 2009

Mr. Richard Hargis

Dear Mr. Hargis,

I urge you to stop any Department of Energy funding for the dirty, expensive, and unnecessary Kemper Coal Plant. This proposal would have unacceptable and unnecessary impacts to our environment and public health. Wetland and stream impacts from a 45 square mile strip mine coupled with 63 pounds of Mercury and 15 billion pounds of carbon dioxide annually is not the clean energy future for Mississippi.

My home is very near the Mississippi state line. The natural-gas plants there were a wise investment -- so why don't we use what is already there and relatively environmentally clean to supply the power needs of the region? Living in southern Alabama has been a challenge at times because of mercury dumped around Axis; this is quite enough for me, in this day filled with more than enough causes for concern.

PLEASE do not add to those causes, showing the wisdom which got you into your current position.

Thank you for considering my request.

Sincerely,

Ms. Marie Hatton  
1104 Garland Dr  
Mobile, AL 36618-2322  
(251) 786-4618

MH-01

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**From:** Postmaster@NETL.DOE.GOV on behalf of EIS Kemper [Kemper-EIS@NETL.DOE.GOV]  
**Sent:** Monday, November 23, 2009 11:03 PM  
**To:** Richard Johnson  
**Subject:** Re: Kemper IGCC Coal Plant Proposal/Draft EIS (Kemper County IGCC Project)

Thank you for your comments.

Richard Hargis

>>> dickjoh 11/23/09 23:01 >>>

Nov 23, 2009

Mr. Richard Hargis

Dear Mr. Hargis,

I urge you to stop any Department of Energy funding for the dirty, expensive, and unnecessary Kemper Coal Plant. This proposal would have unacceptable and unnecessary impacts to our environment and public health. Wetland and stream impacts from a 45 square mile strip mine coupled with 63 pounds of Mercury and 15 billion pounds of carbon dioxide annually is not the clean energy future for Mississippi.

Mississippi already has 12 natural gas power plants working only a small portion of the time, just one of which would meet Mississippi's future needs.

Building this power plant would simply be wasting hundreds of millions of tax payer money to bring about this travesty.

Thank you for considering my request.

Sincerely,

Mr. Richard Johnson  
971 Parkwood Pl  
Jackson, MS 39206-5956

RJ-01

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**From:** Postmaster@NETL.DOE.GOV on behalf of EIS Kemper [Kemper-EIS@NETL.DOE.GOV]  
**Sent:** Tuesday, November 24, 2009 9:03 AM  
**To:** Betsy Ogle Montgomery  
**Subject:** Re: Kemper IGCC Coal Plant Proposal/Draft EIS (Kemper County IGCC Project)

Thank you for your comments.

Richard Hargis

>>> betsyogle 11/24/09 09:01 >>>

Nov 24, 2009

Mr. Richard Hargis

Dear Mr. Hargis,

I urge you to stop any Department of Energy funding for the dirty, expensive, and unnecessary Kemper Coal Plant. This proposal would have unacceptable and unnecessary impacts to our environment and public health. Wetland and stream impacts from a 45 square mile strip mine coupled with 63 pounds of Mercury and 15 billion pounds of carbon dioxide annually is not the clean energy future for Mississippi.

I am a life long resident of Alabama and have watched and suffered as corporate interests have washed over dangerous and even illegal business practices to the detriment of me and my family. I have acquired asthma as an adult and all three of my children suffer from respiratory and/or neurological disorders. Please stop corporate poisoning of our air, land and water for the sake of the dollar. The cost in human suffering is far than the short term profits of mindless executives.

Thank you for considering my request.

Sincerely,

Ms. Betsy Ogle Montgomery  
402 Balcourt Dr  
Birmingham, AL 35206-2201  
(205) 789-5046

BM-01

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**From:** Postmaster@NETL.DOE.GOV on behalf of EIS Kemper [Kemper-EIS@NETL.DOE.GOV]  
**Sent:** Tuesday, November 24, 2009 5:34 PM  
**To:** Valya Mobley  
**Subject:** Re: Kemper IGCC Coal Plant Proposal/Draft EIS (Kemper County IGCC Project)

Thank you for your comments.

Richard Hargis

>>> valyamobley 11/24/09 17:32 >>>

Nov 24, 2009

Mr. Richard Hargis

Dear Mr. Hargis,

I urge you to stop any Department of Energy funding for the dirty, expensive, and unnecessary Kemper Coal Plant. This proposal would have unacceptable and unnecessary impacts to our environment and public health. Wetland and stream impacts from a 45 square mile strip mine coupled with 63 pounds of Mercury and 15 billion pounds of carbon dioxide annually is not the clean energy future for Mississippi. After seeing the film MountainTop Removal I am against any more coal plants period. It is not clean energy and just seems to impact those in poverty unable to make a stand the worst.

VM-01

Sincerely,

Mrs. Valya Mobley  
1204 Ash Cv  
Alabaster, AL 35007-9691  
(205) 663-8706

---

**From:** Postmaster@NETL.DOE.GOV on behalf of EIS Kemper [Kemper-EIS@NETL.DOE.GOV]  
**Sent:** Wednesday, November 25, 2009 10:06 PM  
**To:** Shannon Faye  
**Subject:** Re: Kemper IGCC Coal Plant Proposal/Draft EIS (Kemper County IGCC Project)

Thank you for your comments.

Richard Hargis

>>> sha\_faye 11/25/09 22:04 >>>

Nov 25, 2009

Mr. Richard Hargis

Dear Mr. Hargis,

I urge you to stop any Department of Energy funding for the dirty, expensive, and unnecessary Kemper Coal Plant. This proposal would have unacceptable and unnecessary impacts to our environment and public health. Wetland and stream impacts from a 45 square mile strip mine coupled with 63 pounds of Mercury and 15 billion pounds of carbon dioxide annually is not the clean energy future for Mississippi.

It is essential that we maximize the resources we have at our disposal,

including the 12 natural gas-fired plants already in use. Redundancy is expensive and wasteful: I cannot imagine that there is "extra" money to be put toward an unnecessary coal plant.

Instead, I suggest you work instead on upgrading and keeping safe the plants safe - certainly this would qualify as "creating jobs" (one of the many arguments for the Kemper Coal Plant).

Sincerely,

Ms. Shannon Faye  
162 S Sage Ave  
Mobile, AL 36606-5022

SF-01

---

**From:** Postmaster@NETL.DOE.GOV on behalf of EIS Kemper [Kemper-EIS@NETL.DOE.GOV]  
**Sent:** Thursday, November 26, 2009 2:08 PM  
**To:** Lola McCord  
**Subject:** Re: Kemper IGCC Coal Plant Proposal/Draft EIS (Kemper County IGCC Project)

Thank you for your comments.

Richard Hargis

>>> lolamccord 11/26/09 14:06 >>>

Nov 26, 2009

Mr. Richard Hargis

Dear Mr. Hargis,

I urge you to stop any Department of Energy funding for the dirty, expensive, and unnecessary Kemper Coal Plant. This proposal would have unacceptable and unnecessary impacts to our environment and public health. Wetland and stream impacts from a 45 square mile strip mine coupled with 63 pounds of Mercury and 15 billion pounds of carbon dioxide annually is not the clean energy future for Mississippi.

As a neighbor to Mississippi, those of us in Alabama are deeply concerned about the Kemper Plant and its toll on our health and wellbeing. I thank you for considering my request.

LM2-01

Sincerely,

Dr. Lola McCord  
27 Creek Dr  
Montgomery, AL 36117-4130  
(334) 279-6938

---

**From:** Postmaster@NETL.DOE.GOV on behalf of EIS Kemper [Kemper-EIS@NETL.DOE.GOV]  
**Sent:** Sunday, November 29, 2009 12:13 AM  
**To:** Jan Cambre  
**Subject:** Re: Kemper IGCC Coal Plant Proposal/Draft EIS (Kemper County IGCC Project)

Thank you for your comments.

Richard Hargis

>>> johnjancambre 11/29/09 00:12 >>>

Nov 28, 2009

Mr. Richard Hargis

Dear Mr. Hargis,

I urge you to stop any Department of Energy funding for the dirty, expensive, and unnecessary Kemper Coal Plant. This proposal would have unacceptable and unnecessary impacts to our environment and public health. Wetland and stream impacts from a 45 square mile strip mine coupled with 63 pounds of Mercury and 15 billion pounds of carbon dioxide annually is not the clean energy future for Mississippi.

Thank you for considering my request. Energy conservation is the way to go.

JC-03

Sincerely,

Ms. Jan Cambre  
3509 Jo Beth Ter  
Gautier, MS 39553-5308  
(228) 497-6393

**From:** Postmaster@NETL.DOE.GOV on behalf of EIS Kemper [Kemper-EIS@NETL.DOE.GOV]  
**Sent:** Sunday, November 29, 2009 2:45 PM  
**To:** Maxine Ramsay  
**Subject:** Re: Kemper IGCC Coal Plant Proposal/Draft EIS (Kemper County IGCC Project)

Thank you for your comments.

Richard Hargis

>>> macramz 11/29/09 14:44 >>>

Nov 29, 2009

Mr. Richard Hargis

Dear Mr. Hargis,

I urge you to stop any Department of Energy funding for the dirty, expensive, and unnecessary Kemper Coal Plant. This proposal would have unacceptable and unnecessary impacts to our environment and public health. Wetland and stream impacts from a 45 square mile strip mine coupled with 63 pounds of Mercury and 15 billion pounds of carbon dioxide annually is not the clean energy future for Mississippi. Thank you for considering my request.

It appears as Mississippi's Public Service Commissioners are selling us out down the road to the highest bidders.....Mississippi Power, Inc., by their actions thus far with their agreeing that we need additional electrical power. Hogwash! They have not done their homework or if

they have, they have disregarded facts and figures. It seems as though Mississippi's politicians wants us to be last in every aspect of every

day life from education to environmental issues. Kemper County is just another 'nail in our coffins'. It seems as though we cannot stand for

our neighboring state of Louisiana to be called 'Cancer Alley'. If one will study the cancer, autism and other health problems rate, Mississippi has passed Louisiana up hands down.

Sincerely,

Mrs. Maxine Ramsay  
13001 Pulpwood Rd  
Ocean Springs, MS 39565-9417  
(228) 392-5227

MR-01

---

**From:** Postmaster@NETL.DOE.GOV on behalf of EIS Kemper [Kemper-EIS@NETL.DOE.GOV]  
**Sent:** Sunday, November 29, 2009 5:15 PM  
**To:** John Robins Langlow  
**Subject:** Re: Kemper IGCC Coal Plant Proposal/Draft EIS (Kemper County IGCC Project)

Thank you for your comments.

Richard Hargis

>>> john.Langlow 11/29/09 17:14 >>>

Nov 29, 2009

Mr. Richard Hargis

Dear Mr. Hargis,

I urge you to stop any Department of Energy funding for the dirty, expensive, and unnecessary Kemper Coal Plant. This proposal would have unacceptable and unnecessary impacts to our environment and public health. Wetland and stream impacts from a 45 square mile strip mine coupled with 63 pounds of Mercury and 15 billion pounds of carbon dioxide annually is not the clean energy future for Mississippi.

Thank you for considering my request. I understand that we need energy production but surely there is a cleaner way to do it.

Sincerely,

Dr. John Robins Langlow  
106 Poinciana Dr  
Birmingham, AL 35209-2039  
(205) 871-0459

JL2-01

---

**From:** Postmaster@NETL.DOE.GOV on behalf of EIS Kemper [Kemper-EIS@NETL.DOE.GOV]  
**Sent:** Monday, November 30, 2009 8:24 PM  
**To:** Billy Easley  
**Subject:** Re: Kemper IGCC Coal Plant Proposal/Draft EIS (Kemper County IGCC Project)

Thank you for your comments.

Richard Hargis

>>> coe.2505 11/30/09 20:22 >>>

Nov 30, 2009

Mr. Richard Hargis

Dear Mr. Hargis,

I urge you to stop any Department of Energy funding for the dirty, expensive, and unnecessary Kemper Coal Plant. This proposal would have unacceptable and unnecessary impacts to our environment and public health. Wetland and stream impacts from a 45 square mile strip mine coupled with 63 pounds of Mercury and 15 billion pounds of carbon dioxide annually is not the clean energy future for Mississippi. Too many of our rivers and streams are already near toxic levels of life threatening chemicals such as the mercury and other controllable contaminants.

BE-01

For the sake of humanity and the native wildlife of Mississippi, please do not allow this project to move forward.

Sincerely,  
Billy Easley  
1414 Pontocola Rd  
Pontotoc, MS 38863

Sincerely,

Mr. Billy Easley  
1414 Pontocola Rd  
Pontotoc, MS 38863-9563

---

**From:** Postmaster@NETL.DOE.GOV on behalf of EIS Kemper [Kemper-EIS@NETL.DOE.GOV]  
**Sent:** Tuesday, December 01, 2009 7:54 PM  
**To:** Donald Abrams  
**Subject:** Re: Kemper IGCC Coal Plant Proposal/Draft EIS (Kemper County IGCC Project)

Thank you for your comments.

Richard Hargis

>>> don 12/01/09 19:52 >>>

Dec 1, 2009

Mr. Richard Hargis

Dear Mr. Hargis,

I urge you to stop any Department of Energy funding for the dirty, expensive, and unnecessary Kemper Coal Plant. This proposal would have unacceptable and unnecessary impacts to our environment and public health. Wetland and stream impacts from a 45 square mile strip mine coupled with 63 pounds of Mercury and 15 billion pounds of carbon dioxide annually is not the clean energy future for Mississippi.

The plan for this plant is not founded on good science and engineering. It would be a disgrace to allow such an facility to be built in 21st-century America.

DA-01

Sincerely,

Mr. Donald Abrams  
1708 Warren Dr  
Ocean Springs, MS 39564-4837  
(228) 806-1009

**From:** Aaron Viles [aaron@healthygulf.org]  
**Sent:** Monday, December 14, 2009 2:56 PM  
**To:** kemper-eis@netl.doe.gov  
**Subject:** Re: Kemper IGCC project DEIS and USACE Permits SAM-2008-1759-DMY and SAM-2009-1149-DMY

Richard Hargis, Jr,  
 United States Department of Energy  
 626 Cochrans Mill Road  
 PO Box 10940  
 Pittsburgh, PA 15236  
 US

To whom it may concern:

The following comments are regarding the Department of Energy Kemper County IGCC project Draft Environmental Impact Statement, the IGCC Project Mississippi Power Company / ECO-Systems, Inc. (SAM-2008-1759-DMY) permit application, and the IGCC Project North American Coal Corporation / Barry A. Vittor and Associates (SAM-2009-1149-DMY) permit application.

I unequivocally oppose this project because I do not want to sacrifice our environment and health for an experiment that could fail. The Kemper power plant and coal mine will take too much and give too little. We live in a changing world and our choices today will ripple across generations to come. We, as citizens, should get to decide what our own future looks like and be given the option of preserving our land as a legacy to our families. My specific objections are as follows:

AV-01

The waters near the plant and mine will become even more polluted: Coal is dirty-even if the carbon can successfully be sequestered after burning (which is unproven at this point). The Draft Environmental Impact Statement (DEIS) states that "The proposed project would discharge no process water effluent from the site." This contaminated water must go somewhere. Contaminated water stored on site is the equivalent of a toxic waste dump. The DEIS does not examine the possible consequences or alternatives to storing toxic wastewater on site. Given the problems that the nation has seen with coal mine water pollution--from the TVA coal ash spills in Tennessee, to (reference pollution in NY Times water pollution series)--putting additional pollutants in or near the waters of Mississippi and Alabama is unacceptable.

AV-02

The waterways this mine and plant could adversely impact include the Chunky River (a state Scenic Stream), Okatibbee Creek, Pascagoula River, Okatibbee Lake (a designated drinking water source), and the Gulf of Mexico. These waters and surrounding lands support fishing, boating, camping, hiking, swimming, hunting, and offer a diverse array of habitat for wildlife. The Kemper coal plant and mine will potentially pollute these high quality waters due to rainwater runoff, falling toxic air emissions, and stored toxic wastewater on site that may leak into ground and surface waters. Further, the destruction of wetlands and streams will remove the natural filters from our waterways, thus allowing pollution to have more of an impact to downstream waters and communities. The impact to water quality downstream should be studied. The DEIS claims that the University of Mississippi is monitoring flow; the University should also monitor toxics, sediment, and micro and macro fauna.

AV-03

Wetlands and streams will be lost and their function will not be replaced: According to the DEIS, approximately 6,000 acres of wetlands will be impacted and 56.5 miles of stream channel will be removed by Kemper power plant and lignite mine. The wetlands that would be impacted include those on federally owned or managed lands (such as the Okatibbee Wildlife Management Area). This destruction is completely unacceptable. While the DEIS maintains that function of degraded wetlands will be replaced however, given the destruction of land and construction of proposed levees, it is almost impossible to believe that "reconstructed" wetlands and streams would ever replace the natural ones that are destroyed. This plan will only compound the flooding problems at the site and the surrounding community. Given these huge impacts, it would be irresponsible for the Corps

AV-04

or DOE to approve this project.

AV-04  
(contd.)

High quality land and valuable cultural resources will be impacted: The proposed lignite mine directly abuts the Okatibbee Wildlife Management Area (WMA) northern boundary. The Army Corps of Engineers Mobile District website claims "The bottomland forests and numerous beaver flowages provide a paradise for the bird watcher and nature enthusiast. The endangered American Alligator is a permanent resident . . ." Also, USACE states that "public hunting is a popular activity at Okatibbee during the fall and winter. More than 6,000 acres of land are licensed to the Mississippi Department of Wildlife, Fisheries, & Parks for wildlife management purposes."

AV-05

Further, the Federal government cannot degrade land that is being used to mitigate for damage that occurred on other property. If it does, then it has to mitigate twice. First, it has to mitigate for the damage that originally put the property into mitigation, then it will have to mitigate for the damage to the actual site.

AV-06

In conclusion, the magnitude of the environmental impacts of the Kemper IGCC and associated coal mine far exceeds the possible intellectual gains of the project. Mitigation would not sufficiently address these impacts. This project cannot be economically justified given the significant environmental damage the state of Mississippi will sustain as a result. Further the DOE and Corps have not taken a hard look at alternatives to this project, as well as all of the potential environmental impacts. Because of this, as a concerned citizen, I request that the Corps permit be denied, and that the DOE not allow this project to proceed as proposed.

AV-07

Sincerely,

Mr. Aaron Viles  
338 Baronne St.  
Suite 200  
New Orleans, LA 70112

504-891-9642

**From:** Postmaster@NETL.DOE.GOV on behalf of EIS Kemper [Kemper-EIS@NETL.DOE.GOV]  
**Sent:** Monday, December 14, 2009 4:33 PM  
**To:** RUSTY ANDERSON  
**Subject:** Re: Kemper IGCC project DEIS and USACE PermitsSAM-2008-1759-DMY and SAM-2009-1149-DMY (Kemper County IGCC Project)

Thank you for your comments.

Richard Hargis

>>> c.anderson 12/14/09 16:32 >>>

Richard Hargis, Jr,  
United States Department of Energy  
626 Cochrans Mill Road  
PO Box 10940  
Pittsburgh, PA 15236  
US

To whom it may concern:,

The following comments are regarding the Department of Energy Kemper County IGCC project Draft Environmental Impact Statement, the IGCC Project Mississippi Power Company / ECO-Systems, Inc. (SAM-2008-1759-DMY) permit application, and the IGCC Project North American Coal Corporation / Barry A. Vittor and Associates (SAM-2009-1149-DMY) permit application.

I unequivocally oppose this project because I do not want to sacrifice our environment and health for an experiment that could fail. The Kemper power plant and coal mine will take too much and give too little. We live in a changing world and our choices today will ripple across generations to come. We, as citizens, should get to decide what our own future looks like and be given the option of preserving our land as a legacy to our families. My specific objections are as follows:

The waters near the plant and mine will become even more polluted: Coal is dirty-even if the carbon can successfully be sequestered after burning (which is unproven at this point). The Draft Environmental Impact Statement (DEIS) states that "The proposed project would discharge no process water effluent from the site." This contaminated water must go somewhere. Contaminated water stored on site is the equivalent of a toxic waste dump. The DEIS does not examine the possible consequences or alternatives to storing toxic wastewater on site. Given the problems that the nation has seen with coal mine water pollution--from the TVA coal ash spills in Tennessee, to (reference pollution in NY Times water pollution series)--putting additional pollutants in or near the waters of Mississippi and Alabama is unacceptable.

The waterways this mine and plant could adversely impact include the Chunky River (a state Scenic Stream), Okatibbee Creek, Pascagoula River, Okatibbee Lake (a designated drinking water source), and the Gulf of Mexico. These waters and surrounding lands support fishing, boating, camping, hiking, swimming, hunting, and offer a diverse array of habitat for wildlife. The Kemper coal plant and mine will potentially pollute these high quality waters due to rainwater runoff, falling toxic air emissions, and stored toxic wastewater on site that may leak into ground and surface waters. Further, the destruction of wetlands and streams will remove the natural filters from our waterways, thus allowing pollution to have more of an impact to downstream waters and communities. The impact to water quality downstream should be studied. The DEIS claims that the University of Mississippi is monitoring flow; the University should also monitor toxics, sediment, and micro and macro fauna.

Wetlands and streams will be lost and their function will not be replaced: According to the DEIS, approximately 6,000 acres of wetlands will be impacted and 56.5 miles of stream channel will be removed by Kemper power plant and lignite mine. The wetlands that would be impacted include those on federally owned or managed lands (such as the Okatibbee

Wildlife Management Area). This destruction is completely unacceptable. While the DEIS maintains that function of degraded wetlands will be replaced however, given the destruction of land and construction of proposed levees, it is almost impossible to believe that "reconstructed" wetlands and streams would ever replace the natural ones that are destroyed. This plan will only compound the flooding problems at the site and the surrounding community. Given these huge impacts, it would be irresponsible for the Corps or DOE to approve this project.

High quality land and valuable cultural resources will be impacted: The proposed lignite mine directly abuts the Okatibbee Wildlife Management Area (WMA) northern boundary. The Army Corps of Engineers Mobile District website claims "The bottomland forests and numerous beaver flowages provide a paradise for the bird watcher and nature enthusiast. The endangered American Alligator is a permanent resident . . ." Also, USACE states that "public hunting is a popular activity at Okatibbee during the fall and winter. More than 6,000 acres of land are licensed to the Mississippi Department of Wildlife, Fisheries, & Parks for wildlife management purposes."

Further, the Federal government cannot degrade land that is being used to mitigate for damage that occurred on other property. If it does, then it has to mitigate twice. First, it has to mitigate for the damage that originally put the property into mitigation, then it will have to mitigate for the damage to the actual site.

In conclusion, the magnitude of the environmental impacts of the Kemper IGCC and associated coal mine far exceeds the possible intellectual gains of the project. Mitigation would not sufficiently address these impacts. This project cannot be economically justified given the significant environmental damage the state of Mississippi will sustain as a result. Further the DOE and Corps have not taken a hard look at alternatives to this project, as well as all of the potential environmental impacts. Because of this, as a concerned citizen, I request that the Corps permit be denied, and that the DOE not allow this project to proceed as proposed.

I LIVE AT THE MOUTH OF THE WEST PAS. RIVER SYSTEM, ( THE SINGING RIVER), AND I DO NOT WANT TO SEE THE RIVER I WAS RAISED ON MY ENTIRE LIFE DESTROYED BY ANY POLLUTING INDUSTRY OF ANY KIND. THE ONLY REASON FOR BUILDING ANY SUCH INDUSTRY ON A STREAM OR RIVER IS FOR THE EASY DISPOSAL OF PROCESSING WATERS AND DISCHARGES THAT EFFECT THE ENVIORMENT AND HAS DEVASTATING CIRCUMSTANCES. THE FINES IMPOSED ARE JUST A GENERAL EXPENSE AND CHEAPER THAN OTHER LAWFUL DISPOSALS. I REJECT THIS LIS'G TO BE ISSUED. CRA.

RA2-01

Sincerely,

RUSTY ANDERSON  
2021 ROBERTSDALE  
GAUTIER, MS 39553

**From:** Postmaster@NETL.DOE.GOV on behalf of EIS Kemper [Kemper-EIS@NETL.DOE.GOV]  
**Sent:** Monday, December 14, 2009 5:27 PM  
**To:** Matthew Stevens  
**Subject:** Re: Kemper IGCC project DEIS and USACE Permits SAM-2008-1759-DMY and SAM-2009-1149-DMY (Kemper County IGCC Project)

Thank you for your comments.

Richard Hargis

>>> msteve3 12/14/09 17:26 >>>

Richard Hargis, Jr,  
United States Department of Energy  
626 Cochrans Mill Road  
PO Box 10940  
Pittsburgh, PA 15236  
US

To whom it may concern:

PLEASE HEAR THE VOICES OF ACTUAL MISSISSIPPPIANS. WE DO NOT WANT ANOTHER COAL PLANT. THIS IS LESS AN "IN MY BACKYARD" ISSUE AND MORE A "UNIVERSAL DEGRADATION OF OUR ENVIRONMENT" ISSUE. WE ARE TIRED OF BEING MANIPULATED, WE ARE TIRED OF BEING BEHIND THE TIMES. GREEN JOBS NOW! WE DESERVE BETTER AND CAN DO BETTER!

MS2-01

The following comments are regarding the Department of Energy Kemper County IGCC project Draft Environmental Impact Statement, the IGCC Project Mississippi Power Company / ECO-Systems, Inc. (SAM-2008-1759-DMY) permit application, and the IGCC Project North American Coal Corporation / Barry A. Viitor and Associates (SAM-2009-1149-DMY) permit application.

I unequivocally oppose this project because I do not want to sacrifice our environment and health for an experiment that could fail. The Kemper power plant and coal mine will take too much and give too little. We live in a changing world and our choices today will ripple across generations to come. We, as citizens, should get to decide what our own future looks like and be given the option of preserving our land as a legacy to our families. My specific objections are as follows:

The waters near the plant and mine will become even more polluted: Coal is dirty-even if the carbon can successfully be sequestered after burning (which is unproven at this point). The Draft Environmental Impact Statement (DEIS) states that "The proposed project would discharge no process water effluent from the site." This contaminated water must go somewhere. Contaminated water stored on site is the equivalent of a toxic waste dump. The DEIS does not examine the possible consequences or alternatives to storing toxic wastewater on site. Given the problems that the nation has seen with coal mine water pollution--from the TVA coal ash spills in Tennessee, to (reference pollution in NY Times water pollution series)--putting additional pollutants in or near the waters of Mississippi and Alabama is unacceptable.

The waterways this mine and plant could adversely impact include the Chunky River (a state Scenic Stream), Okatibbee Creek, Pascagoula River, Okatibbee Lake (a designated drinking water source), and the Gulf of Mexico. These waters and surrounding lands support fishing, boating, camping, hiking, swimming, hunting, and offer a diverse array of habitat for wildlife. The Kemper coal plant and mine will potentially pollute these high quality waters due to rainwater runoff, falling toxic air emissions, and stored toxic wastewater on site that may leak into ground and surface waters. Further, the destruction of wetlands and streams will remove the natural filters from our waterways, thus allowing pollution to have more of an impact to downstream waters and communities. The impact to water quality downstream should be studied. The DEIS claims that the University of

Mississippi is monitoring flow; the University should also monitor toxics, sediment, and micro and macro fauna.

Wetlands and streams will be lost and their function will not be replaced: According to the DEIS, approximately 6,000 acres of wetlands will be impacted and 56.5 miles of stream channel will be removed by Kemper power plant and lignite mine. The wetlands that would be impacted include those on federally owned or managed lands (such as the Okatibbee Wildlife Management Area). This destruction is completely unacceptable. While the DEIS maintains that function of degraded wetlands will be replaced however, given the destruction of land and construction of proposed levees, it is almost impossible to believe that "reconstructed" wetlands and streams would ever replace the natural ones that are destroyed. This plan will only compound the flooding problems at the site and the surrounding community. Given these huge impacts, it would be irresponsible for the Corps or DOE to approve this project.

High quality land and valuable cultural resources will be impacted: The proposed lignite mine directly abuts the Okatibbee Wildlife Management Area (WMA) northern boundary. The Army Corps of Engineers Mobile District website claims "The bottomland forests and numerous beaver flowages provide a paradise for the bird watcher and nature enthusiast. The endangered American Alligator is a permanent resident . . ." Also, USACE states that "public hunting is a popular activity at Okatibbee during the fall and winter. More than 6,000 acres of land are licensed to the Mississippi Department of Wildlife, Fisheries, & Parks for wildlife management purposes."

Further, the Federal government cannot degrade land that is being used to mitigate for damage that occurred on other property. If it does, then it has to mitigate twice. First, it has to mitigate for the damage that originally put the property into mitigation, then it will have to mitigate for the damage to the actual site.

In conclusion, the magnitude of the environmental impacts of the Kemper IGCC and associated coal mine far exceeds the possible intellectual gains of the project. Mitigation would not sufficiently address these impacts. This project cannot be economically justified given the significant environmental damage the state of Mississippi will sustain as a result. Further the DOE and Corps have not taken a hard look at alternatives to this project, as well as all of the potential environmental impacts. Because of this, as a concerned citizen, I request that the Corps permit be denied, and that the DOE not allow this project to proceed as proposed.

Sincerely,  
Matthew Stevens

Matthew Stevens  
3298 Winchester Cir  
Tupelo, MS 38801

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**From:** Postmaster@NETL.DOE.GOV on behalf of EIS Kemper [Kemper-EIS@NETL.DOE.GOV]  
**Sent:** Wednesday, December 30, 2009 12:12 AM  
**To:** Beth Wilborn  
**Subject:** Re: Kemper IGCC project DEIS and USACE Permits SAM-2008-1759-DMY and SAM-2009-1149-DMY (Kemper County IGCC Project)

Thank you for your comments.

Richard Hargis

>>> miss.sugarmagnolia 12/30/09 00:11 >>>

Richard Hargis, Jr,  
United States Department of Energy  
626 Cochrans Mill Road  
PO Box 10940  
Pittsburgh, PA 15236  
US

To whom it may concern:,

The following comments are regarding the Department of Energy Kemper County IGCC project Draft Environmental Impact Statement, the IGCC Project Mississippi Power Company / ECO-Systems, Inc. (SAM-2008-1759-DMY) permit application, and the IGCC Project North American Coal Corporation / Barry A. Vittor and Associates (SAM-2009-1149-DMY) permit application.

I unequivocally oppose this project because I am not only a native of the beautiful state of Mississippi but I also do NOT want to sacrifice our environment and health for an experiment in dirty energy that could fail. The Kemper power plant and coal mine will take too much and give too little. We live in a changing world and our choices today will ripple across generations to come. We, as citizens, should get to decide what our own future looks like and be given the option of preserving our land as a legacy to our families. My specific objections are as follows:

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be impacted include those on federally owned or managed lands (such as the Okatibbee Wildlife Management Area). This destruction is completely unacceptable. While the DEIS maintains that function of degraded wetlands will be replaced however, given the destruction of land and construction of proposed levees, it is almost impossible to believe that ?reconstructed? wetlands and streams would ever replace the natural ones that are destroyed. This plan will only compound the flooding problems at the site and the surrounding community. Given these huge impacts, it would be irresponsible for the Corps or DOE to approve this project.

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Further, the Federal government cannot degrade land that is being used to mitigate for damage that occurred on other property. If it does, then it has to mitigate twice. First, it has to mitigate for the damage that originally put the property into mitigation, then it will have to mitigate for the damage to the actual site.

In conclusion, the magnitude of the environmental impacts of the Kemper IGCC and associated coal mine far exceeds the possible intellectual gains of the project. Mitigation would not sufficiently address these impacts. This project cannot be economically justified given the significant environmental damage the state of Mississippi will sustain as a result. Further the DOE and Corps have not taken a hard look at alternatives to this project, as well as all of the potential environmental impacts. Because of this, as a concerned citizen, I request that the Corps permit be denied, and that the DOE not allow this project to proceed as proposed.

Please think about the fact that the days of fossil fuel for energy are dying fast. We must move in new directions in order to survive and, while we are saving the human race, we must also think in terms of preserving the animals and the environment.

BW-01

PLEASE do not go ahead with this misbegotten plan.

Sincerely,

Beth Wilborn  
2120 Henderson Drive  
Opelika, AL 36801

- JW2-01:** I urge you to stop any Department of Energy funding for the dirty, expensive, and unnecessary Kemper Coal Plant. This proposal would have unacceptable and unnecessary impacts to our environment and public health. Wetland and stream impacts from a 45 square mile strip mine coupled with 63 pounds of Mercury and 15 billion pounds of carbon dioxide annually is not the clean energy future for Mississippi.
- Response:** The issues raised are addressed in the EIS. The “45 square mile” number equates to approximately 29,000 acres. As noted throughout the EIS, the total area to be disturbed over the life-of-mine would be approximately 12,275 acres. In a given year, no more than 500 acres of land would be in a disturbed condition (see Table 2.4-1). The claim of “15 billion pounds of carbon dioxide annually” is erroneous. Annual emissions of CO<sub>2</sub> from the IGCC plant would be between 1.8 and 2.6 million tons (3.6 to 5.2 billion pounds) (see Table 2.5-1).
- PG-01:** That’s enough mercury to contaminate 50 million pounds of fish every year along with 15 billion pounds of carbon dioxide. Tell the DOE thanks but no thanks to dirty coal!
- Response:** Please refer to the response to LM-07 (transcript). Subsection 4.2.19.2 of the Final EIS has been supplemented with further discussion and assessment of potential mercury contamination of fish.
- TB-01:** As responsible Mississippians we expect our elected representatives, also, to show a reasonable level of responsibility to their constituents....and to the next generation....for this land with which we have entrusted them
- Response:** Comment noted.
- JF-01:** PLEASE CLEAN UP THE CURRENT MESS IN MISSISSIPPI BEFORE EVEN CONSIDERING MAKING MORE MESS. We are still waiting to learn what real impact of the manner that MDEQ EPA and ADSTR handled the millions of gallons of permitted hazardous waste (ferris chloride heavy metal soup) that was discharged into Katrina flood waters during Katrina. DuPont Delisle’s Hazardous Waste protection System failed. Rather than deep well injecting the poison into the ground, MDEQ and EPA allowed it to be deposited into St Louis bay and on lands in Hancock and Harrison County. MDEQ claimed that it was just harmless salt water. ADTRS even provided a less than believable study on area blue crabs. There must be a better way than using dirty technology.
- Response:** Comment noted.
- WL-01:** Please go not allow the Kemper Coal Plan to be built. I am opposed to any more pollution in our area of the Southeast. Mississippi have enough clean energy (natural gas) to provide the electric energy needs of the state of Mississippi.
- Response:** Comment noted.
- GD-01:** Please find an alternative to this coal plant.
- Response:** A discussion of alternatives is provided in Section 2.7 of the EIS.
- LR-01:** Much, much more could be gained at no cost to the environment by utilizing energy efficiency. So this should be the solution rather than more dirty coal fired plants.
- Response:** The use of demand-side management (DSM) programs is discussed in Section 1.6 of the EIS; this section has been updated to include additional details. Conservation is not a reasonable alterna-

tive that meets DOE's purpose and need. The need for power is within the jurisdiction of the Mississippi Public Service Commission, which has determined that there is a need for power.

**JL-01:** I am a professional biologist and ecologist with a long history of conservation work in Mississippi.

**Response:** Comment noted.

**JO-04:** Here in rural coastal Mississippi, we are afraid to feed the fish from our ponds to children (they are more affected by mercury than adults) as it is. The mercury from another coal plant will add to the problem.

Why is Southern Co. building a biomass generating plant in Texas and a coal plant in Mississippi?

**Response:** Subsection 4.2.19.2 of the EIS has been supplemented with further discussion and assessment of potential mercury contamination of fish. The incremental increase in mercury concentration in fish and the increase in health risk associated with this increase in mercury concentration is addressed in the Final EIS.

The reason for Mississippi Power Company's choice of a coal plant in Mississippi is presented in the EIS. The basis for Southern Company's choice of a biomass plant in Texas is not relevant to this EIS.

**JM-01:** Consider the Connection to: Environmental Conservation. Our economy, health, & planet R N D balance.

**Response:** Comment noted. The issues raised are addressed in the EIS.

**HW-01:** Taking steps like this may save many many lives in the future. Your prompt attention to this matter is greatly appreciated.

**Response:** Comment noted.

**DL-01:** We have the ability already to replace all the dirty energy sources we just need a plan of action to save our planet and finances.

**Response:** Comment noted.

**ES-01:** I live on a river in Alabama which is already impaired by mercury and there is no apparent source other than neighboring coal-fired power plants. It is your job to correct this problem.

**Response:** Comment noted. Remediation of streams in Alabama impaired by mercury is not within DOE's authority.

**BB-01:** Why build it if it is unnecessary?

**Response:** Comment noted. The need for power is appropriately within the jurisdiction of the Mississippi Public Service Commission.

**ES2-01:** It is time to move beyond coal as an energy producer. Mississippi and the rest of the country should be developing alternatives on a large scale. From the environmental destruction of strip mining to the total decimation of mountaintop removal coal mining to the harmful pollution of

coal plants, it's all a negative impact on people and places. We must rethink our energy programs.

**Response:** Comment noted. The issues raised are addressed in the EIS. The Kemper County IGCC Project would not involve mountaintop removal; the proposed mine would use surface mining techniques.

**EC-01:** Please, it is time for us to not just explore but implement alternatives - methane generators are just one example.

**Response:** Discussion of alternatives is provided in Section 2.7.

**SH-01:** The only entity that would benefit is the company proposing it. It will be an environmental disaster. However, I suppose it will go through via the usual ruse of "job creation".

**Response:** Comment noted. The potential environmental impacts are addressed in the EIS.

**JW3-01:** I urge you to DENY Kemper Coal permission to further pollute the beautiful wetlands of Mississippi. To do so, places the value of human life far below that of commerce. To allow Kemper to continue with this dirty and outdated practice prevents or stagnates the search for cleaner and healthier fuels.

**Response:** Comment noted. Potential impacts to wetlands are addressed in the EIS. While DOE has programs that support renewable resources, fossil energy is expected to continue to be an important part of the nation's energy mix for the foreseeable future.

**DP-01:** We must stop these destructive practices immediately and protect future generations from our greedy and selfish attitudes. We must take responsibility for our decisions and actions.

**Response:** Comment noted.

**JG-01:** I voted for Obama with hopes of ending this type of archaic energy dinosaur. This needs to stop now!

**Response:** Comment noted.

**TBE-01:** As a mother, life long resident of Mississippi and a professional artist focused on environmental art, I strongly oppose the Kemper Coal Plant. Our natural beauty in this state and the health of our children are much more important than what would be gained from the coal plant. Please, please listen to the citizens on this issue.

**Response:** Comment noted.

**GA-01:** Mississippi alone has twelve clean energy plants that sit idle 85% of the time. Force them to use production capacity they already have. Wanting to build more dirty coal plants is pure greed. Please, for the sake of all of us, stop them.

**Response:** Please refer to the response to RL-02.

**CD-01:** Please help us Mississippians keep from destroying some of our beautiful environment, especially since this proposed plant is unnecessary because we have existing natural gas fired power plants sitting idle whose capacity far exceeds the capacity of the proposed plant, will add additional greenhouse gases to our atmosphere, will add additional mercury poisoning to our lakes

and streams, and will cause our electricity bills to increase and Mississippi become less competitive to attract new industry.

**Response:** Mr. Dana withdrew this comment by letter dated January 14, 2010.

**CD-02:** I am in complete support of the Kemper County project and feel that its successful completion is essential to meeting the electrical power needs of Mississippi. I believe this project will utilize technology that is protective of the environment and will take advantage of local resources (lignite coal) in order to provide reliable electrical power and to provide new jobs in Mississippi.

**Response:** Comment noted.

**TW2-01:** Please stop funding from the Department of Energy toward the expensive and unnecessary Kemper Coal Plant proposed in Mississippi. There are viable alternatives like the Solar plants out in the desert. The impact on our environment will impact wetlands and streams. Each year the plant will pollute our air to the degree of 63 pounds of mercury and 15 billion pounds of carbon Dioxide, that's billion, with a "B".

**Response:** Comment noted. Discussion of alternatives is provided in Section 2.7. Furthermore, as discussed in Chapter 1, alternative technologies like solar would not meet DOE's purpose and need. As noted previously, the claim of "15 billion pounds of carbon dioxide annually" is erroneous.

**DK-01:** We have one outstanding polluter in Alabama, Alabama Power, and we certainly don't need more. It is time for the coal industry to CLEAN-UP or get out. We, on the gulf coast, have unlimited clean fuel in our source of natural gas.

**Response:** Discussion of alternative fuels is provided in Section 2.7.

**CT-01:** As someone who treats the consequences of coal as an energy resource, I ask you to stop promoting the coal industry to protect the health of our people.

**Response:** Comment noted.

**LB-01:** This issue is within your control. Please take the necessary actions to end DOE funding to the Kemper Coal Plant.

**Response:** Comment noted.

**RA-01:** In this day in age there are too many truly clean sources of energy to consider building more dirty coal plants. Despite the propaganda, there is nothing clean about coal.

**Response:** While DOE has programs that support renewable resources, fossil energy is expected to continue to be an important part of the nation's energy mix for the foreseeable future.

**DN-01:** With more than 600 coal fired power plants in this country, we must find other ways to generate the electricity we need.

**Response:** While DOE has programs that support renewable resources, fossil energy is expected to continue to be an important part of the nation's energy mix for the foreseeable future.

**SP-01:** Many of us suffer from chronic respiratory problems due to emissions from coal plants.

**Response:** The potential health impacts are addressed in the EIS.

- JG2-01:** Let's spend our resources on developing renewal energy sources.
- Response:** As discussed in Chapter 1, renewable energy technologies would not meet DOE's purpose and need. While DOE has programs that support renewable resources, fossil energy is expected to continue to be an important part of the nation's energy mix for the foreseeable future.
- RM-01:** As a southern citizen, I must say that I am extremely disappointed that this proposal, which would cause a multitude of harm to our environment, is actually being taken into consideration. I urge you, once again, to stop any funding for the Kemper Coal Plant.
- Response:** Comment noted. The potential environmental impacts identified through the NEPA process would be considered as an important element of DOE's decision-making process.
- JC-01:** I know you don't read this, but I feel it is wrong to destroy this environment. This plant is saying it will supply energy for decades so what happens to future Mississippians in the years 2090-3000AD? they will be stuck with a toxic waste site instead of a beautiful environment of people and their communities of solar power, wind power and natural gas. I sure the coal industry does not want our communities powered by natural gas.
- Response:** Comment noted. While DOE has programs that support renewable resources, fossil energy is expected to continue to be an important part of the nation's energy mix for the foreseeable future.
- PB-01:** MS is far too polluted already. Please consider using the gas-fired plants and scrapping this coal-burning, toxic facility.
- Response:** Comment noted. The Mississippi Public Service Commission has the authority to determine the resource that is appropriate to meet the need for power. Please refer also to the response to RL-02.
- TP-01:** My family lives in Alabama and we do not wish to breathe any more poisons emitted by any more coal plants.
- Response:** Comment noted.
- PP-01:** It defies my comprehension that money comes before the well being of human beings and the environment!! That greed is SHAMEFUL, to say the least!!!! Please!!!! Put an end to this horrendous destruction of the world around us!! It becomes more and more difficult to repair the damage done by coal plants. It is time to stop throwing good money after bad.
- Response:** Comment noted.
- HJ-01:** Coal driven plants are sooo 20<sup>th</sup> century. Funds need to be spent on clean energy sources that will protect the environment, people and other creatures on this good earth.
- Response:** While DOE has programs that support renewable resources, fossil energy is expected to continue to be an important part of the nation's energy mix for the foreseeable future.
- BP-01:** Please don't straddle our Mississippians with the cost of building a multimillion dollar coal plant when there are natural gas plants capable of meeting the need for energy standing idle. The coal plant would denude a large area of the Mississippi landscape and pollute our land and air unnecessarily.
- Response:** Comment noted.

- FW-01:** To: Miss. Public Service Commission. Gentlemen: This letter is to express my concern as a citizen of Miss. over the proposed power plant using a low-grade type of coal as fuel. It is my understanding that lignite of the lowest grade of coal that it is possible to use as a fuel. I am concerned over the environmental impact that this project will have on our state as well as the probability of higher rates for electricity and health issues that will result from this power plant. I urge you to delay approval of this project until there is a clear and compelling need for it.
- Response:** Comment noted. This EIS assesses the potential environmental impacts of the proposed project and reasonable alternatives that meet DOE's purpose and need. DOE has no authority to determine the need for the power that would be generated by the project; that is the purview of the Mississippi PSC.
- JS-01:** I would appreciate it..if this didn't go in...I like the land like it is, the sky as clear as it is in the MS, and for the earth and all not to be tempered with by the greedy hands of man. Sometimes we are too speciescytric... have a nice day~
- Response:** Comment noted.
- FK-01:** Maximize use of natural gas-fired power plants.
- Response:** The Mississippi PSC has the authority to determine the resource that is appropriate to meet the need for power. Please refer also to the response to RL-02.
- RM2-01:** We need real innovation not just stop-gap measures that continue to pump more carbon and mercury into our children's atmosphere. The real visionaries think for the future not just for works for now; and will sacrifice some in the present to do what is right for all time. I pray your department (which is made up by people who may have grandchildren's children to worry about) will make the pro-life (truly pro-life) decision.
- Response:** Comment noted.
- EW-01:** We are at the point of no return, on energy policy. We either start using the abundant and clean energy of the sun, wind, thermal, and hydro., or we will begin our own extinction, I hope to think that we are smarter than that, too bad about greed and the easy way.
- Response:** Comment noted.
- GM-01:** We must find alternatives to all coal-generated energy. Even the cleanest coal plant is anything but clean. This particular coal plant will be located only a few miles from my home, making the environmental impact particularly threatening. For the sake of my family, our nation, and the world, please stop this plant before it begins.
- Response:** Comment noted.
- GG-01:** That's enough mercury to contaminate 50 million pounds of fish every year along with 15 billion pounds of carbon dioxide. Thanks but no thanks to dirty coal!
- Response:** Please refer to the responses to LM-07 (transcript) and JW2-01.
- ED-01:** We know mercury contamination is bad for the environment and a problem which has an enduring negative impact that will adversely affect future generations. Wouldn't we want our grandchildren to think back and say: "I'm sure glad the light bulb went off for our grandparents and

that they stood up and made their voices heard about that dumb idea about cheaper energy available from a sacrifice of our environment.”

**Response:** Subsection 4.2.19.2 of the EIS has been supplemented with further discussion and assessment of potential health risks associated with mercury deposition.

**PW-01:** I live in Alabama, and we do not want ANY “fall-out” from this coal plant. Neither should there be any reason for maintaining the Kemper Coal Plant, which would degrade the area, be an unnecessary cost and a dangerous pollutant to the environment. Please see that this is NOT funded in any way.

**Response:** Comment noted.

**RB-01:** The health of our environment and children should not be sacrificed for the sake of energy or money.

**Response:** Comment noted.

**PD-01:** You might also consider that lower Alabama and Mississippi are flatland with constant prevailing winds. They are perfect places for wind farms.

**Response:** Comment noted. Wind power would not satisfy DOE’s mandated purpose and need under the CCPI.

**MS-01:** Coal is cheap in the short run, and expensive in the long run. Let’s take the long view.

**Response:** Comment noted.

**JC-02:** Mississippi is in need of protection from the coal industry. I do not agree with the proposed Coal Plant in Kemper County.

**Response:** Comment noted.

**BC2-01:** If there is already excess generating capacity in Mississippi, thanks to electricity being generated by gas fired plants, why build a coal fired plant? Is the coal industry lobby that strong? We should use the generating capacity that we have, rather than opting for building another plant. You have the power to end this redundancy and the building of coal fired plants, just because the coal industry wants them. Please stop the Kemper Coal Plant. We all have a vested interest in protecting our environment.

**Response:** Comment noted. The Mississippi PSC has determined that Mississippi Power does have the need for additional generating capacity. The Mississippi PSC has the authority to determine the resource that is appropriate to meet the need for power.

**TD-01:** There is no such thing as clean coal.

**Response:** Comment noted.

**TR-01:** I am strongly opposed to this absolutely unacceptable coal plant which will emit very high levels of toxic mercury -- enough to contaminate 50 million pounds of fish every year -- and would affect our neighbors in Alabama as well. It definitely is not the clean energy future that Mississippi is expecting!

**Response:** Please refer to the responses to LM-07 (transcript) and JW2-01.

- JE-01:** If we don't take steps now to work for a cleaner environment, air, water, soil, food sources, and others, we are not facing up to our responsibilities as citizens and human beings. Also, what affects one area usually has an impact on nearby communities as well.
- Response:** Comment noted.
- MC2-01:** Why are we screwing up the atmosphere. We have to breathe this stuff.
- Response:** Comment noted.
- EW2-01:** James Hansen, the leading NASA scientist on Global Warming, warns that we must stop building coal fired power plants if we are to stop our annual increase in carbon dioxide output and begin to reduce it. Our civilization is at risk. This is not a petty matter.
- Response:** Comment noted.
- SW-01:** It seems to me that Mississippi Power Co. and Southern Co. are the main recipients in building this plant. There will definitely be a rate increase for everyone, 3000 acres of land destroyed, and home owners with have their property taken from them which means defacing and devaluing individuals homesteads. No, I am not in favor of building a plant that no one is sure will even work. Everyone is talking about "going green" well, a coal plant emitting mercury and carbon dioxide is not "going green".
- Response:** Comment noted.
- JP-01:** I am a resident of Mississippi and I oppose this plant proposal. My understanding of the energy field leads me to the conclusion that there are less expensive energy solutions, with fewer consequences.
- Response:** Comment noted.
- CD2-01:** We need to focus our efforts, as a nation, on renewable energy sources and conservation. The coal industry continues to misrepresent their energy source as something that is clean.
- Response:** Comment noted.
- MH-01:** My home is very near the Mississippi state line. The natural-gas plants there were a wise investment -- so why don't we use what is already there and relatively environmentally clean to supply the power needs of the region? Living in southern Alabama has been a challenge at times because of mercury dumped around Axis; this is quite enough for me, in this day filled with more than enough causes for concern. PLEASE do not add to those causes, showing the wisdom which got you into your current position.
- Response:** Comment noted.
- RJ-01:** Mississippi already has 12 natural gas power plants working only a small portion of the time, just one of which would meet Mississippi's future needs. Building this power plant would simply be wasting hundreds of millions of tax payer money to bring about this travesty.
- Response:** Please refer to the response to RL-02.
- BM-01:** I am a life long resident of Alabama and have watched and suffered as corporate interests have washed over dangerous and even illegal business practices to the detriment of me and my family. I have acquired asthma as an adult and all three of my children suffer from respiratory and/or

neurological disorders. Please stop corporate poisoning of our air, land and water for the sake of the dollar. The cost in human suffering is far than the short term profits of mindless executives.

**Response:** Comment noted.

**VM-01:** After seeing the film Mountain Top Removal I am against any more coal plants period. It is not clean energy and just seems to impact those in poverty unable to make a stand the worst.

**Response:** Comment noted. The proposed mine would not employ mountaintop removal techniques.

**SF-01:** It is essential that we maximize the resources we have at our disposal, including the 12 natural gas-fired plants already in use. Redundancy is expensive and wasteful: I cannot imagine that there is “extra” money to be put toward an unnecessary coal plant. Instead, I suggest you work instead on upgrading and keeping safe the plants safe - certainly this would qualify as “creating jobs”(one of the many arguments for the Kemper Coal Plant).

**Response:** Please refer to the response to RL-02.

**LM2-01:** As a neighbor to Mississippi, those of us in Alabama are deeply concerned about the Kemper Plant and its toll on our health and wellbeing.

**Response:** Comment noted.

**JC-03** Energy conservation is the way to go.

**Response:** Comment noted.

**MR-01:** It appears as Mississippi’s Public Service Commissioners are selling us out down the road to the highest bidders.....Mississippi Power, Inc., by their actions thus far with their agreeing that we need additional electrical power. Hogwash! They have not done their homework or if they have, they have disregarded facts and figures. It seems as though Mississippi’s politicians wants us to be last in every aspect of everyday life from education to environmental issues. Kemper County is just another ‘nail in our coffins’. It seems as though we cannot stand for our neighboring state of Louisiana to be called ‘Cancer Alley’. If one will study the cancer, autism and other health problems rate, Mississippi has passed Louisiana up hands down.

**Response:** Comment noted. An analysis of existing environmental stressors in Kemper County indicates that its residents enjoy a healthful environment when measured against state and national statistics.

**JL2-01:** I understand that we need energy production but surely there is a cleaner way to do it.

**Response:** Comment noted.

**BE-01:** Too many of our rivers and streams are already near toxic levels of life threatening chemicals such as the mercury and other controllable contaminants. For the sake of humanity and the native wildlife of Mississippi, please do not allow this project to move forward.

**Response:** Comment noted.

**DA-01:** The plan for this plant is not founded on good science and engineering. It would be a disgrace to allow such an facility to be built in 21st-century America.

**Response:** Comment noted. The proposed project, if successful, would represent a technical and environmental advancement in coal-based power generation.

**AV-01:** I unequivocally oppose this project because I do not want to sacrifice our environment and health for an experiment that could fail. The Kemper power plant and coal mine will take too much and give too little. We live in a changing world and our choices today will ripple across generations to come. We, as citizens, should get to decide what our own future looks like and be given the option of preserving our land as a legacy to our families. My specific objections are as follows:

**Response:** The opposition to the project is noted.

**AV-02:** The waters near the plant and mine will become even more polluted: Coal is dirty-even if the carbon can successfully be sequestered after burning (which is unproven at this point). The Draft Environmental Impact Statement (DEIS) states that "The proposed project would discharge no process water effluent from the site." This contaminated water must go somewhere. Contaminated water stored on site is the equivalent of a toxic waste dump. The DEIS does not examine the possible consequences or alternatives to storing toxic wastewater on site. Given the problems that the nation has seen with coal mine water pollution--from the TVA coal ash spills in Tennessee, to (reference pollution in NY Times water pollution series)--putting additional pollutants in or near the waters of Mississippi and Alabama is unacceptable.

**Response:** The IGCC power plant would not store "contaminated water" or "toxic wastewater" on the site. As discussed in Chapter 2 (Subsections 2.5.2 and 2.6.2, for example), the plant would employ a zero liquid discharge system. Most of the water used in the power plant would be used for cooling and would be evaporated (Figure 2.5-2). The remainder would be discharged to onsite treatment systems and recycled within the facility. Gasification ash is expected to be nonhazardous and could have beneficial uses (Subsection 2.6.3). If stored onsite, MDEQ regulations and permit requirements would apply.

**AV-03:** The waterways this mine and plant could adversely impact include the Chunky River (a state Scenic Stream), Okatibbee Creek, Pascagoula River, Okatibbee Lake (a designated drinking water source), and the Gulf of Mexico. These waters and surrounding lands support fishing, boating, camping, hiking, swimming, hunting, and offer a diverse array of habitat for wildlife. The Kemper coal plant and mine will potentially pollute these high quality waters due to rainwater runoff, falling toxic air emissions, and stored toxic wastewater on site that may leak into ground and surface waters. Further, the destruction of wetlands and streams will remove the natural filters from out waterways, thus allowing pollution to have more of an impact to downstream waters and communities. The impact to water quality downstream should be studied. The DEIS claims that the University of Mississippi is monitoring flow; the University should also monitor toxics, sediment, and micro and macro fauna.

**Response:** The EIS describes the measures to manage surface water runoff (Sections 2.3 and 2.4). Potential impacts on waterways due to mine operations are addressed in Subsection 4.2.4. Section 6.2 of the Final EIS has been expanded to include an analysis of the potential cumulative effects downstream in the Pascagoula River basin, including water quality and the MDEQ TMDL Program.

All waters coming in contact with the surface mining operation would be captured in sediment ponds and released when the waters met the NPDES-required quality. All wetlands and stream segments would be mitigated in accordance with the USACE 404 permit.

The IGCC power plant would be subject to federal CWA requirements. Subsections 2.5.2 and 2.6.2 in the Draft EIS describe the water uses and sources for the IGCC power plant. As noted in Subsection 2.6.2, water discharges from the plant would be limited to stormwater runoff; all process water used in the IGCC power production process would be recycled or evaporated. Be-

cause most of the supply makeup would be provided by the city of Meridian wastewater treatment plants, the diversion of these existing wastewater discharges from the referenced river system to the IGCC power plant would result in a net benefit to downstream water quality.

Water discharges from the proposed lignite mine are addressed in Subsection 4.2.4.2 of the EIS. The water management system within, and discharges from, the proposed lignite mine would be subject to both CWA and the federal Surface Mining Control and Reclamation Act (SMCRA) requirements.

The CWA permits that must be obtained by Mississippi Power and NACC prior to constructing and operating the IGCC power plant and the lignite mine will require all Mississippi Power and NACC discharges of water to be of such quality to prevent downstream waters from exceeding water quality standards. In addition, all Mississippi Power and NACC discharges must not be toxic to aquatic life (insects and fish) in order to meet CWA requirements.

Downstream monitoring of water quality by Mississippi State University is continuing to be funded by NACC. Monitoring of “toxics” is part of the ongoing program.

**AV-04:** Wetlands and streams will be lost and their function will not be replaced: According to the DEIS, approximately 6,000 acres of wetlands will be impacted and 56.5 miles of stream channel will be removed by Kemper power plant and lignite mine. The wetlands that would be impacted include those on federally owned or managed lands (such as the Okatibbee Wildlife Management Area). This destruction is completely unacceptable. While the DEIS maintains that function of degraded wetlands will be replaced however, given the destruction of land and construction of proposed levees, it is almost impossible to believe that reconstructed wetlands and streams would ever replace the natural ones that are destroyed. This plan will only compound the flooding problems at the site and the surrounding community. Given these huge impacts, it would be irresponsible for the Corps or DOE to approve this project.

**Response:** No impacts to the Okatibbee WMA have been proposed as part of the preferred alternative to the mine plan. Additionally, there are approximately 2,400 acres of proposed impacts to wetlands and not 6,000 acres. Compensation for unavoidable impacts to aquatic resources is the sole decision of USACE. Final evaluation of the proposed compensation for impacts to aquatic resources will be conducted as part of USACE’s Section 404 permitting process.

**AV-05:** High quality land and valuable cultural resources will be impacted: The proposed lignite mine directly abuts the Okatibbee Wildlife Management Area (WMA) northern boundary. The Army Corps of Engineers Mobile District website claims “The bottomland forests and numerous beaver flowages provide a paradise for the bird watcher and nature enthusiast. The endangered American Alligator is a permanent resident . . .” Also, USACE states that “public hunting is a popular activity at Okatibbee during the fall and winter. More than 6,000 acres of land are licensed to the Mississippi Department of Wildlife, Fisheries, & Parks for wildlife management purposes.”

**Response:** Comment noted. The issues raised are addressed in Subsection 4.2.15 of the EIS.

**AV-06:** Further, the Federal government cannot degrade land that is being used to mitigate for damage that occurred on other property. If it does, then it has to mitigate twice. First, it has to mitigate for the damage that originally put the property into mitigation, then it will have to mitigate for the damage to the actual site.

**Response:** The comment correctly states that if impacts were proposed to occur in a parcel associated with compensation for unavoidable impacts to aquatic resources associated with another action, then if approved the current applicant would be required to dual mitigate. This would offset the original

impacts in addition to the new proposed impacts. USACE is not aware of any mitigation areas within the footprint of disturbance associated with the mine or other project components. Likewise, no impacts to the Okatibbee WMA have been proposed as part of the preferred alternative to the mine plan.

**AV-07:** In conclusion, the magnitude of the environmental impacts of the Kemper IGCC and associated coal mine far exceeds the possible intellectual gains of the project. Mitigation would not sufficiently address these impacts. This project cannot be economically justified given the significant environmental damage the state of Mississippi will sustain as a result. Further the DOE and Corps have not taken a hard look at alternatives to this project, as well as all of the potential environmental impacts. Because of this, as a concerned citizen, I request that the Corps permit be denied, and that the DOE not allow this project to proceed as proposed.

**Response:** USACE evaluated alternate sites in addition to onsite design/plan criteria proposed by the applicants in accordance with 33 CFR 230 and 325. This evaluation of alternatives for the USACE process would be conducted based upon the basic project purpose and the overall project purpose. This evaluation includes avoidance (i.e., site selection), minimization (i.e., onsite design criteria), and compensation for any unavoidable impacts to aquatic resources (i.e., mitigation). The USACE process is to evaluate the alternatives in accordance with the least environmentally damaging, yet most practicable alternative. Further information regarding alternatives can be found in Section 2.7 of the EIS.

Compensation for unavoidable impacts to aquatic resources is the sole responsibility and decision of USACE. This proposal and evaluation shall be held in accordance to the 33 CFR 325, the new Compensatory Mitigation Rule, and the standards of the Mobile District. Final evaluation of the proposed compensation for impacts to aquatic resources will be conducted as part of USACE's Section 404 permitting process.

DOE will consider the potential environmental impacts described in the EIS when deciding whether to provide financial assistance in the form of funding under CCPI or a loan guarantee for the project.

**RA2-01:** I LIVE AT THE MOUTH OF THE WEST PAS. RIVER SYSTEM, (THE SINGING RIVER), AND I DO NOT WANT TO SEE THE RIVER I WAS RAISED ON MY ENTIRE LIFE DESTROYED BY ANY POLLUTING INDUSTRY OP ANY KIND. THE ONLY REASON FOR BUILDING ANY SUCH INDUSTRY ON A STREAM OR RIVER IS FOR THE EASY DISPOSAL OF PROCESSING WATERS AND DISCHARGES THAT EFFECT THE ENVIRONMENT AND HAS DEVASTATING CIRCUMSTANCES. THE FINES IMPOSED ARE JUST A GENERAL EXPENSE AND CHEAPER THAN OTHER LAWFUL DISPOSALS. I REJECT THIS LIS'G TO BE ISSUED.

**Response:** Comment noted. The issues raised are addressed in Section 6.2 of the EIS, which has been expanded.

**MS2-01:** PLEASE HEAR THE VOICES OF ACTUAL MISSISSIPPIANS. WE DO NOT WANT ANOTHER COAL PLANT. THIS IS LESS AN "IN MY BACKYARD" ISSUE AND MORE A "UNIVERSAL DEGRADATION OF OUR ENVIRONMENT" ISSUE. WE ARE TIRED OF BEING MANIPULATED, WE ARE TIRED OF BEING BEHIND THE TIMES. GREEN JOBS NOW! WE DESERVE BETTER AND CAN DO BETTER!

**Response:** Comment noted.

**BW-01:** Please think about the fact that the days of fossil fuel for energy are dying fast. We must move in new directions in order to survive and, while we are saving the human race, we must also think in terms of preserving the animals and the environment.

**Response:** Comment noted.

**From:** Julia O'Neal [mailto:joneal@wildblue.net]  
**Sent:** Wednesday, December 02, 2009 2:02 PM  
**To:** Kemper-EIS@netl.doe.gov  
**Subject:** December 1 comments attached

### Mississippi Power's Rejection of the Standards of Energy Policy Act of 2005

First, I commend DOE & Secretary Chu for emphasis on developing "clean" energy technologies and diversification of energy sources. We were looking forward to the energy future of our renewable-rich state until Mississippi Power (MPCO) & Entergy successfully lobbied our Public Service Commission to reject all of the standards of the Energy Policy Act of 2005 (interconnection, smart metering, fossil fuel generation efficiency, fuel source standards [e.g., a renewable portfolio] and net metering).

JO-05

MPCO should not be awarded a loan guarantee "pursuant to" (p. S-2 in the Summary) EAct'05. Although it is commendable that one of the purposes of this plant is to "enhance the fuel diversity and asset mix of MPCO's generating fleet" (S-6), MPCO has fought tooth and nail to keep renewable resources out of the state, *limiting fuel diversity to only fossil fuels*.

JO-06

Someone asked at our last county Forestry Association meeting why Southern Co. was building a biomass plant in Texas and a coal plant in MS. The answer is that Texas has adopted the fuel source standards of the EAct'05 (a renewable energy component) and Mississippi has not.

JO-07

### CO<sub>2</sub> Emissions Calculations

The amount of carbon dioxide emitted by the plant itself (estimate 1.8-2.6 mil tons per year emissions, excluding the sequestered amount for sale, chart p. S-10) does not include what will be emitted by the process of **constructing** the pipelines and the plant, and the ongoing **process of mining**. These should be added to the total emissions produced by the plant—not just ongoing operational emissions.

JO-08

A travel writer in the November 29 *New York Times* quoted Teddy Roosevelt: "We have gotten past the stage, my fellow-citizens, when we are to be pardoned if we treat any part of our country as something to be skinned." The writer commented: "Alas, he had no idea what was coming."

JO-09

One of the effects of the skinning (strip mining) that this EIS neglects to calculate is the carbon sequestration that the destroyed trees would have contributed, had they lived. The plant site is 1,650 acres. The mine will disturb 12,275 acres (S-11). P. S-13: "most of the rural areas are densely wooded (including pine plantations)" and p. S-15 "Roughly 3/4 of the project areas are forested." The life of the mine is expected to be 40 years. A good tree takes 40 years to reach full maturity. *The amount of carbon*

JO-10

*dioxide that would have been sequestered annually by those 9750 acres of mature trees should also be added to the total CO<sub>2</sub> emissions of the project.\**

JO-10  
(contd.)

### Effects on Ground Water

Not only do the trees sequester CO<sub>2</sub>, 4021 acres of bottomland forest along streamsides and floodplains would be removed (p. 3-148 chart and p. 3-150). *“These wetlands were often high quality due to a lack of frequent or significant human disturbance.”*

JO-11

Even fifth graders know that wetlands filter ground water. Removing these riparian zones and letting the “filter” be a strip mine leads to polluted groundwater, which you admit: “Postmining ground water quality could be impacted within the reclaimed mine area...would likely have higher TDS [total dissolved solids] than premining ground water” (S-17).

NYTimes 9/12/09: Toxic Waters: Coal in the Water.

[http://www.nytimes.com/2009/09/13/us/13water.html?\\_r=1&scp=4&sq=Coal%20in%20the%20Water&st=cse](http://www.nytimes.com/2009/09/13/us/13water.html?_r=1&scp=4&sq=Coal%20in%20the%20Water&st=cse) People who live only 17 miles from Charleston, W. Virginia, cannot let their skin contact the water from their tap. Although you say that the mining company will provide “alternative supplies” (S-17), you don’t say HOW.

JO-12

From Wikipedia’s explanation of IGCC process: “The first generation of IGCC plants polluted less than contemporary coal-based technology, but also polluted water; for example, the Wabash River Plant was out of compliance with its water permit during 1998–2001 because it emitted arsenic, selenium and cyanide.”

JO-13

### Ash Stored “onsite” Renders Watershed Vulnerable

P. S-2: lignite is “high ash” (6-19% vs. 6-12% for bituminous coal). *60 Minutes* Oct 4 2009—last December the TVA’s coal ash inundated a Tennessee Valley town. <http://www.cbsnews.com/stories/2009/10/01/60minutes/main5356202.shtml?tag=contentMain:cbsCarousel>

JO-14

Proposal here is to store it onsite (S-9 and elsewhere). From 550-560 thousand tons per year just piled around the plant, waiting for the kind of rain that came to Tennessee—that ash was also piled next to the plant. Here, the plant and the mine are in the Pascagoula River basin (watershed).

### Other Points

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\* From US EPA web site: “Pine plantations in the Southeast can accumulate almost 100 metric tons of carbon per acre after 90 years, or roughly one metric ton of carbon per acre per year (Birdsey 1996).” [1 metric ton = approx. 1.1 U.S. tons]

Permits from the Corps of Engineers (USACE) are integrally involved in this project—such that “Denial of any application [for permits under Corps of Engineers, USACE] would equate to DOE’s no-action alternative” (S-6). The citizens of this state, this county, should have access to all those permit deliberations, and consider them as important as this EIS. S-22: “...reclamation and mitigation plans have not yet been developed.” Those permits should not happen until reclamation and mitigation plans ARE developed.

JO-15

Hope the people who enjoy Okatibbee Lake can suspend their activities for the “time period of mine-related activities” (40 years) since the “timing and quality of flows” to the lake would be impacted. (S-16) They probably do not realize how hot this water will be.

JO-16

The history of reclamation in the U.S. is not good. The generation that agrees to this plan will not be alive when the reclamation activity is conducted (“impacted streams would be restored” p. S-16).

JO-17

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- JO-05:** First, I commend DOE & Secretary Chu for emphasis on developing “clean” energy technologies and diversification of energy sources. We were looking forward to the energy future of our renewable-rich state until Mississippi Power (MPCO) & Entergy successfully lobbied our Public Service Commission to reject all of the standards of the Energy Policy Act of 2005 (interconnection, smart metering, fossil fuel generation efficiency, fuel source standards [e.g., a renewable portfolio] and net metering).
- Response:** Comment noted.
- JO-06:** MPCO should not be awarded a loan guarantee “pursuant to” (p. S-2 in the Summary) EAct’05. Although it is commendable that one of the purposes of this plant is to “enhance the fuel diversity and asset mix of MPCO’s generating fleet” (S-6), MPCO has fought tooth and nail to keep renewable resources out of the state, *limiting fuel diversity to only fossil fuels*.
- Response:** Comment noted.
- JO-07:** Someone asked at our last county Forestry Association meeting why Southern Co. was building a biomass plant in Texas and a coal plant in MS. The answer is that Texas has adopted the fuel source standards of the EAct’05 (a renewable energy component) and Mississippi has not.
- Response:** Comment noted.
- JO-08:** The amount of carbon dioxide emitted by the plant itself (estimate 1.8-2.6 mil tons per year emissions, excluding the sequestered amount for sale, chart p. S-10) does not include what will be emitted by the process of **constructing** the pipelines and the plant, and the ongoing **process of mining**. These should be added to the total emissions produced by the plant—not just ongoing operational emissions.
- Response:** The EIS does include a lifecycle analysis of GHG emissions to account for the other activities associated with the construction and operation of the Kemper County IGCC Project. Refer to Subsection 6.1.2.
- JO-09:** A travel writer in the November 29 *New York Times* quoted Teddy Roosevelt: “We have gotten past the stage, my fellow-citizens, when we are to be pardoned if we treat any part of our country as something to be skinned.” The writer commented: “Alas, he had no idea what was coming.”
- Response:** Comment noted.
- JO-10:** One of the effects of the skinning (strip mining) that this EIS neglects to calculate is the carbon sequestration that the destroyed trees would have contributed, had they lived. The plant site is 1,650 acres. The mine will disturb 12,275 acres (S-11). P. S-13: “most of the rural areas are densely wooded (including pine plantations)” and p. S-15 “Roughly  $\frac{3}{4}$  of the project areas are forested.” The life of the mine is expected to be 40 years. A good tree takes 40 years to reach full maturity. *The amount of carbon dioxide that would have been sequestered annually by those 9750 acres of mature trees should also be added to the total CO<sub>2</sub> emissions of the project.*
- Response:** As stated in the response to JO-02, an analysis of the sequestration potential lost due to mining has been added to Subsection 6.1.2 in the Final EIS. In summary, the total sequestration potential lost over the life-of-mine period is estimated to be 86,000 tons.

- JO-11:** Not only do the trees sequester CO<sub>2</sub>, 4021 acres of bottomland forest along streambanks and floodplains would be removed (p. 3-148 chart and p. 3-150). *“These wetlands were often high quality due to a lack of frequent or significant human disturbance.”*
- Even fifth graders know that wetlands filter ground water. Removing these riparian zones and letting the “filter” be a strip mine leads to polluted groundwater, which you admit: “Postmining ground water quality could be impacted within the reclaimed mine area....would likely have higher TDS [total dissolved solids’ than premining ground water” (S-17).
- Response:** Not all of the 4,021 acres of bottomland forest would be removed; this was the amount classified within the 31,000-acre study area. Impacted wetlands would be mitigated offsite or through reclamation procedures when approved by USACE.
- JO-12:** NYTimes 9/12/09: Toxic Waters: Coal in the Water. [http://www.nytimes.com/2009/09/13/us/13water.html?\\_r=1&scp=4&sq=Coal%20in%20the%20Water&st=cse](http://www.nytimes.com/2009/09/13/us/13water.html?_r=1&scp=4&sq=Coal%20in%20the%20Water&st=cse) People who live only 17 miles from Charleston, W. Virginia, cannot let their skin contact the water from their tap. Although you say that the mining company will provide “alternative supplies” (S-17), you don’t say HOW.
- Response:** Potential mining effects on ground water quality are addressed in Subsection 4.2.5.2. As noted therein, the principal water supply aquifer in Kemper County is the Lower Wilcox aquifer. Water quality in the Lower Wilcox aquifer would not be expected to be adversely affected.
- Alternative supplies of potable water would be provided if it was determined the mine activity impacted them. Examples include drilling a replacement potable water well or connecting the residence to a community potable water system.
- JO-13:** From Wikipedia’s explanation of IGCC process: “The first generation of IGCC plants polluted less than contemporary coal-based technology, but also polluted water; for example, the Wabash River Plant was out of compliance with its water permit during 1998–2001 because it emitted arsenic, selenium and cyanide.”
- Response:** The proposed facility would employ a zero liquid discharge design for process water. Subsection 4.2.4.2 analyzes the potential impacts of the IGCC facility on surface waters. The Wabash River Plant does not incorporate zero liquid discharge design.
- JO-14:** P. S-2: lignite is “high ash” (6-19% vs. 6-12% for bituminous coal). *60 Minutes* Oct 4 2009—last December the TVA’s coal ash inundated a Tennessee Valley town. <http://www.cbsnews.com/stories/2009/10/01/60minutes/main5356202.shtml?tag=contentMain;:cbsCarousel> Proposal here is to store it onsite (S-9 and elsewhere). From 550-560 thousand tons per year just piled around the plant, waiting for the kind of rain that came to Tennessee—that ash was also piled next to the plant. Here, the plant and the mine are in the Pascagoula River basin (watershed).
- Response:** Gasification ash that is not beneficially reused would be managed in a dry ash unit, which is similar to landfilling. This is different than the slurry/pond wet storage system employed at the facility referenced in the comment. The ash management unit would be subject to regulation by MDEQ to ensure the safety of the unit. Subsection 4.2.14.2 has been revised to note the dry nature of the proposed storage system.
- JO-15:** Permits from the Corps of Engineers (USACE) are integrally involved in this project—such that “Denial of any application [for permits under Corps of Engineers, USACE] would equate to DOE’s no-action alternative” (S-6). The citizens of this state, this county, should have access to all those permit deliberations, and consider them as important as this EIS. S-22: “...reclamation

and mitigation plans have not yet been developed.” Those permits should not happen until reclamation and mitigation plans ARE developed.

- Response:** All DA permit applications shall be evaluated by USACE in accordance with 33 CFR 325. This evaluation includes proposed compensation to unavoidable impacts to aquatic resources. Reclamation plans associated with mining activity fall under the purview of the Office of Surface Mining and MDEQ as part of their process and not that of USACE.
- JO-16:** Hope the people who enjoy Okatibbee Lake can suspend their activities for the “time period of mine-related activities” (40 years) since the “timing and quality of flows” to the lake would be impacted. (S-16) They probably do not realize how hot this water will be.
- Response:** Impacts of surface water quality and quantity were evaluated for the Draft EIS (see Subsection 4.2.4).
- As noted in that analysis, mining would disturb less than 2 percent of the lake’s contributing watershed at any given time, and the total mine disturbance would be less than 12 percent of the watershed. Thus, DOE concludes that temperature changes in streams caused by removal of the tree canopy, if any, prior to reestablishment of riparian forests adjacent to created streams, would be localized and would not be significant in Okatibbee Lake.
- JO-17:** The history of reclamation in the U.S. is not good. The generation that agrees to this plan will not be alive when the reclamation activity is conducted (“impacted streams would be restored” p. S-16).
- Response:** Stream mitigation is distinct from reclamation and will be subject to approval by USACE should the NACC Section 404 permit application be approved. As noted in Subsection 2.4.2.2, USACE has an established framework for determining the type and magnitude of stream mitigation, as well as permit conditions necessary to reduce or eliminate the risk of failure. These procedures will be implemented during USACE’s evaluation of the NACC permit application.

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**From:** Richard Hargis [Richard.Hargis@NETL.DOE.GOV]

**Sent:** Friday, December 04, 2009 7:07 AM

**To:** Jeff Meling

**Subject:** Fwd: coal mine

comment on DEIS

>>> "Tracy Harbour" <tharbour4421@yahoo.com> 12/3/2009 5:22 PM >>>

PLEASE do whatever it takes to get this thing in construction. I have a house that needs to be sold, construction would bring in much needed potential, not to mention a boost to the area.

TH-01

Make construction earning a realization, and maybe less people would be pettling drugs for a living.

**TH-01:** PLEASE do whatever it takes to get this thing in construction. I have a house that needs to be sold, construction would bring in much needed potential, not to mention a boost to the area. Make construction earning a realization, and maybe less people would be pettling drugs for a living.

**Response:** Comment noted.

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**From:** Richard Hargis [Richard.Hargis@NETL.DOE.GOV]

**Sent:** Friday, December 04, 2009 7:09 AM

**To:** Jeff Meling

**Subject:** Fwd: coal plant

comments on DEIS

>>> "tony cawthorn" <jtcc31722@yahoo.com> 12/3/2009 5:57 PM >>>

I would like to take this opportunity to voice my opinion about the possibility of the Kemper County Lignite Coal Plant. I have lived in Kemper County all of my life. This county used to be full of life and had a vital economy and good schools. We have been struggling for years with our economy. With the current recession, jobs are even more scarce. All of our schools are suffering due to the lack of tax base (public, private, and collegiate). County officials and the school systems are the largest employers of the county at this point. Very few people pay taxes in this county so the ones that do carry the load. We need this plant in order to boost our economy and revitalize our county. I hope that people will see the need not only for the benefits of energy but all of the additional luxuries I'm praying it will bring as you all have indicated in presentations. I hope that you stand by your word in saying that the bulk of the employees will be "hometown" people. I hope that this business will get involved with the community and schools as a whole. I know many are worried about environmental issues, but after researching a similar plant in Ackerman - the benefits outweigh the risks. I hope and pray that this venture is the answer Kemper County residents need to have a new beginning and brighter future!

TC-01

Sincerely,

The Cawthorn's

**TC-01:** I would like to take this opportunity to voice my opinion about the possibility of the Kemper County Lignite Coal Plant. I have lived in Kemper County all of my life. This county used to be full of life and had a vital economy and good schools. We have been struggling for years with our economy. With the current recession, jobs are even more scarce. All of our schools are suffering due to the lack of tax base (public, private, and collegiate). County officials and the school systems are the largest employers of the county at this point. Very few people pay taxes in this county so the ones that do carry the load. We need this plant in order to boost our economy and revitalize our county. I hope that people will see the need not only for the benefits of energy but all of the additional luxuries I'm praying it will bring as you all have indicated in presentations. I hope that you stand by your word in saying that the bulk of the employees will be "hometown" people. I hope that this business will get involved with the community and schools as a whole. I know many are worried about environmental issues, but after researching a similar plant in Ackerman - the benefits outweigh the risks. I hope and pray that this venture is the answer Kemper County residents need to have a new beginning and brighter future!

**Response:** Comment noted.

---

**From:** Richard Hargis [Richard.Hargis@NETL.DOE.GOV]

**Sent:** Friday, December 04, 2009 7:10 AM

**To:** Jeff Meling

**Subject:** Fwd: ?

comment on the DEIS

>>> "Bob Wilson" <bobwilson@bellsouth.net> 12/3/2009 6:26 PM >>>  
What exactly is a lignite coal plant?

| BW2-01

**BW2-01:** What exactly is a lignite coal plant?

**Response:** The EIS does not use the term “lignite coal plant;” however, in the context of this project, the term could be defined as an electric generating power plant designed to operate on lignite as a fuel (see Subsection 2.1.2 for a technology and project description).

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**From:** Richard Hargis [Richard.Hargis@NETL.DOE.GOV]

**Sent:** Friday, December 04, 2009 9:26 AM

**To:** Jeff Meling

**Subject:** Fwd:

comment on DEIS

>>> "olivia walters" <walters\_o@bellsouth.net> 12/4/2009 9:17 AM >>>

I want to express my support for the lignite coal plant being brought to Kemper County. This would produce much needed jobs and tax base for Kemper County

OW-01

**OW-01:** I want to express my support for the lignite coal plant being brought to Kemper County. This would produce much needed jobs and tax base for Kemper County

**Response:** Comment noted.

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**From:** Richard Hargis [Richard.Hargis@NETL.DOE.GOV]

**Sent:** Friday, December 04, 2009 11:21 AM

**To:** Carol Ann Pittman

**Subject:** Re: yes to the coal plant

| CP-01

Ms. Pittman,

Thanks for your comments.

Richard Hargis

>>> "Carol Ann Pittman" <CAPittman@EMEPa.com> 12/4/2009 11:12 AM >>>

**CP-01:** Yes to the coal plant

**Response:** Comment noted.

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**From:** Richard Hargis [Richard.Hargis@NETL.DOE.GOV]  
**Sent:** Monday, December 07, 2009 9:37 AM  
**To:** Robbie McKee  
**Subject:** Re: Kemper Co. lignite project

Robbie McKee,

Thanks for your comments.

Richard Hargis

>>> "Robbie McKee" <rmckee@mpsd.k12.ms.us> 12/7/2009 9:34 AM >>>

I attended the public hearing for the presentation of the environmental impact of constructing the lignite power plant in Kemper Co., MS. I am one of the people with mixed emotions. The area is in dire need of the financial gains and jobs that will be created. As you know, the area is very rural and there are some instances of poverty. The fact that it is so rural poses some problems for some...they must use their own deep wells to obtain water. If they are already dealing with a poverty issue, there may be an inability to get on the local water line. My father, my sister and myself have deep wells. Fortunately, we are educated and have good jobs. I worry about the people that won't be able to get on the public water if there is an instance of contamination. And, if there is contamination, will we know it, before it is too late.

Of course, any large industrial project would have associated health risks. My main concern here is the emission of air pollutants, and hazardous materials of mercury, ammonia and CO2. I worry about the cancer risks associated with these factors. Again, the people dealing with poverty, probably do not have insurance. I feel that they will be the ones that are most adversely affected.

Thank you for your consideration.  
Robbie McKee

RM3-01

**RM3-01:** I attended the public hearing for the presentation of the environmental impact of constructing the lignite power plant in Kemper Co., MS. I am one of the people with mixed emotions. The area is in dire need of the financial gains and jobs that will be created. As you know, the area is very rural and there are some instances of poverty. The fact that it is so rural poses some problems for some...they must use their own deep wells to obtain water. If they are already dealing with a poverty issue, there may be an inability to get on the local water line. My father, my sister and myself have deep wells. Fortunately, we are educated and have good jobs. I worry about the people that won't be able to get on the public water if there is an instance of contamination. And, if there is contamination, will we know it, before it is too late.

Of course, any large industrial project would have associated health risks. My main concern here is the emission of air pollutants, and hazardous materials of mercury, ammonia and CO<sub>2</sub>. I worry about the cancer risks associated with these factors. Again, the people dealing with poverty, probably do not have insurance. I feel that they will be the ones that are most adversely affected.

**Response:** The issues raised are addressed in the EIS. The comments relate in part to environmental justice, which is addressed in Subsection 4.2.12. DOE has concluded that the potential environmental and other effects would not be expected to result in "disproportionately high and adverse" impacts to EJ populations.

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**From:** Richard Hargis [Richard.Hargis@NETL.DOE.GOV]

**Sent:** Tuesday, December 08, 2009 8:53 PM

**To:** Bobbie Harbour

**Subject:** Re: lignite plant in Kemper County

Thanks for your comments.

Richard Hargis

>>> "Bobbie Harbour" <bharbour@pharmapacllc.com> 12/8/2009 10:15 AM >>>

I worked as County Administrator for Kemper County for 10 years and I know and understand the revenue and expenditure system of county government. I know that the lignite plant will be the "golden egg" for Kemper County. This is an opportunity for the county to reap the benefit of a resource that we are blessed with. I am confident that everything has been done to make this a safe operation. As a citizen of Kemper County I look forward to seeing your plant become a reality and believe that Kemper County will be a much better place to live because of it. I support you and your efforts to build this lignite plant.

BH-01

**BH-01:** I worked as County Administrator for Kemper County for 10 years and I know and understand the revenue and expenditure system of county government. I know that the lignite plant will be the “golden egg” for Kemper County. This is an opportunity for the county to reap the benefit of a resource that we are blessed with. I am confident that everything has been done to make this a safe operation. As a citizen of Kemper County I look forward to seeing your plant become a reality and believe that Kemper County will be a much better place to live because of it. I support you and your efforts to build this lignite plant.

**Response:** Comment noted.

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**From:** Richard Hargis [Richard.Hargis@NETL.DOE.GOV]  
**Sent:** Wednesday, December 09, 2009 8:40 AM  
**To:** Nancy Abercrombie  
**Subject:** Re: You must stop the devastation of Kemper County

Ms. Abercrombie,

Thank you for your comments.

Richard Hargis

>>> "Nancy Abercrombie" <abercrombiemusic@cox.net> 12/9/2009 1:29 AM >>>  
My grandmother Etta Murphy's acreage 2.5 miles from the proposed coal plant that is going to ruin the land forever. Our family lived there for generations, growing our own food in a clean air environment.

The DOE should be insisting on alternatives to coal. Coal is the dirtiest polluter that anyone can use for fuel. It's understandable in countries that cannot afford alternative systems, but a total outrage in the United States.

My cousin Barbara Correro moved to that area, specifically to escape city pollution and grow organic food. She has led a one-woman campaign to stop this devastation. Her food will be soot, if you allow this.

Surely jobs can be created through other means than destroying breathable air and drinkable water. Have we not progressed beyond the point where people must sacrifice their health just to have a job?

Nancy Abercrombie  
author of "Save the Playground"  
[www.abercrombiemusic.net/playground.htm](http://www.abercrombiemusic.net/playground.htm).

NA-01

**NA-01:** My grandmother Etta Murphy's acreage 2.5 miles from the proposed coal plant that is going to ruin the land forever. Our family lived there for generations, growing our own food in a clean air environment. The DOE should be insisting on alternatives to coal. Coal is the dirtiest polluter that anyone can use for fuel. It's understandable in countries that cannot afford alternative systems, but a total outrage in the United States. My cousin Barbara Correro moved to that area, specifically to escape city pollution and grow organic food. She has led a one-woman campaign to stop this devastation. Her food will be soot, if you allow this. Surely jobs can be created through other means than destroying breathable air and drinkable water. Have we not progressed beyond the point where people must sacrifice their health just to have a job?

**Response:** Comment noted. The issues raised are addressed in Section 2.7 and Chapter 4 of the EIS.

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**From:** Postmaster@NETL.DOE.GOV on behalf of EIS Kemper [Kemper-EIS@NETL.DOE.GOV]  
**Sent:** Monday, December 14, 2009 4:11 PM  
**To:** Jennifer Aitken  
**Subject:** Re: Kemper IGCC project DEIS and USACE PermitsSAM-2008-1759-DMY and SAM-2009-1149-DMY (Kemper County IGCC Project)

Thank you for your comments.

Richard Hargis

>>> jena 12/14/09 16:10 >>>

Richard Hargis, Jr,  
United States Department of Energy  
626 Cochran's Mill Road  
PO Box 10940  
Pittsburgh, PA 15236  
US

To whom it may concern:,

I live in Mississippi and I say"  
DON'T DO IT.

Sincerely,

Jennifer Aitken

Jennifer Aitken  
212 Ballentine  
Bay St Louis, MS 39520

JA-01

**JA-01:** I live in Mississippi and I say “DON’T DO IT.

**Response:** Comment noted.

**From:** Postmaster@NETL.DOE.GOV on behalf of EIS Kemper [Kemper-EIS@NETL.DOE.GOV]  
**Sent:** Monday, December 14, 2009 5:19 PM  
**To:** Deb Berry  
**Subject:** Re: Kemper IGCC project DEIS and USACE PermitsSAM-2008-1759-DMY and SAM-2009-1149-DMY (Kemper County IGCC Project)

Thank you for your comments.

Richard Hargis

>>> debbiecberry 12/14/09 17:18 >>>

Richard Hargis, Jr,  
United States Department of Energy  
626 Cochrans Mill Road  
PO Box 10940  
Pittsburgh, PA 15236  
US

To whom it may concern:

Re: Department of Energy Kemper County IGCC project Draft Environmental Impact Statement, the IGCC Project Mississippi Power Company / ECO-Systems, Inc. (SAM-2008-1759-DMY) permit application, and the IGCC Project North American Coal Corporation / Barry A. Vittor and Associates (SAM-2009-1149-DMY) permit application.

In the current economic environment this project likely could go bust due to:

-- the fact that it is not needed since the generation from natural gas is no where close to full capacity

--existing cleaner natural gas facilities will be the preferred energy source in the future due to fines/penalties/lawsuits and the like that will be associated with continuing to send more and more dirty air towards the east. Cities in your eastern path have already had to eliminate some business opportunities due the quality of air in the area.

--what goes up must come down and waterways have all the pollution they need from more and more pollutants falling from the sky.

In summary, due to economics, lack of need and the threat to the environment, this project should be squashed.

Sincerely,

Deb Berry  
860 Alford Avenue  
Hoover, AL 35226

DB-01

**DB-01:** In the current economic environment this project likely could go bust due to:

-- the fact that it is not needed since the generation from natural gas is no where close to full capacity

--existing cleaner natural gas facilities will be the preferred energy source in the future due to fines/penalties/lawsuits and the like that will be associated with continuing to send more and more dirty air towards the east. Cities in your eastern path have already had to eliminate some business opportunities due the quality of air in the area.

--what goes up must come down and waterways have all the pollution they need from more and more pollutants falling from the sky.

In summary, due to economics, lack of need and the threat to the environment, this project should be squashed.

**Response:** Comment noted. The EIS addresses the environmental issues raised in the comments. Also, please refer to the response to RL-02.

**From:** Postmaster@NETL.DOE.GOV on behalf of EIS Kemper [Kemper-EIS@NETL.DOE.GOV]  
**Sent:** Monday, December 21, 2009 12:08 PM  
**To:** rusty kynerd  
**Subject:** Re: kemper county IGCC project (Kemper County IGCC Project)

Thank you for your comments.

Richard Hargis

>>> jrkynerd 12/21/09 12:06 >>>

MR. Hargis :

We spoke at the Kemper co. IGCC Project PUBLIC HEARING / Dec. 1, 2009 concerning the amount of CO2 that would be released from terrestrial sequestration during the life of this project. I did not find this information listed in the DRAFT ENVIRONMENTAL IMPACT STATEMENT. If this information is in the STATEMENT, would you notify myself as to the location in the STATEMENT.

If not in STATEMENT, would the DOE consider performing :

A Baseline Quantative analysis of Sequestered tonnage of CO2 in and on all proposed acreage to be actively impacted by the proposed Kemper CO. IGCC Power Plant Project.

Quantative analysis of : Soil Storage Capacity of all activitly effected acreage  
 effected acreage Biomass Storage Capacity of all activitly effected acreage

Locations :	Proposed Power Plant Acreage
Durationion of Project	Mine study Area (active Mine acreage)
	Proposed Linear Facility Corridors
	Reclaimed Water Pipeline
	Natural Gas Pipeline
	Carbon Dioxide Pipeline
	New Transmission Lines
	Upgraded Transission Lines

Purpose : (1) To determine the amount of increase of CO2 in the atmosphere due to reduction of Terrestrial Sequestration Capacity from effected acreage in the project area.  
 (2) To establish a Baseline from which a Reclamation Plan would be devised for Enhanced Carbon uptake and storage by Terrestrial Biotic Systems.  
 (3) To develop Domestic Terrestrial Biotic Carbon Storage Systems by which Carbon Credits would be generated for use in Offset Programs in Carbon Cap and Trade Schemes.  
 (4) Development of Reclaimed Mined Topography with Bioenergy Feedstock of Short Rotation with Positive Carbon Sequestration Capacity.

If futher explanation is needed Contact @ jrkynerd@bellsouth.net (601) 917-4822

Thanks

John R. Kynerd (Rusty)

JK-01

**JK-01:** We spoke at the Kemper co. IGCC Project PUBLIC HEARING / Dec. 1, 2009 concerning the amount of CO<sub>2</sub> that would be released from terrestrial sequestration during the life of this project. I did not find this information listed in the DRAFT ENVIRONMENTAL IMPACT STATEMENT. If this information is in the STATEMENT, would you notify myself as to the location in the STATEMENT.

If not in STATEMENT, would the DOE consider performing:

A Baseline Quantitative analysis of Sequestered tonnage of CO<sub>2</sub> in and on all proposed acreage to be actively impacted by the proposed Kemper CO. IGCC Power Plant Project.

Quantitative analysis of:	Soil Storage Capacity of all activity effected acreage Biomass Storage Capacity of all activity effected acreage
Locations:	Proposed Power Plant Acreage Mine study Area (active Mine acreage)
Durationion of Project	Proposed Linear Facility Corridors  Reclaimed Water Pipeline  Natural Gas Pipeline  Carbon Dioxide Pipeline  New Transmission Lines  Upgraded Transmission Lines

Purpose:

- (1) To determine the amount of increase of CO<sub>2</sub> in the atmosphere due to reduction of Terrestrial Sequestration Capacity from effected acreage in the project area.
- (2) To establish a Baseline from which a Reclamation Plan would be be devised for Enhanced Carbon uptake and storage by Terrestrial Biotic Systems.
- (3) To develop Domestic Terrestrial Biotic Carbon Storage Systems by which Carbon Credits would be generated for use in Offset Programs in Carbon Cap and Trade Schemes.
- (4) Development of Reclaimed Mined Topography with Bioenergy Feedstock of Short Rotation with Positive Carbon Sequestration Capacity.

**Response:** An estimate of the annual reduction in sequestration by terrestrial ecosystems has been included in Subsection 6.1.2. However, the development of terrestrial sequestration systems for carbon credits is beyond the scope of this EIS.

**From:** Postmaster@NETL.DOE.GOV on behalf of EIS Kemper [Kemper-EIS@NETL.DOE.GOV]  
**Sent:** Tuesday, December 22, 2009 12:01 AM  
**To:** prometheusclone@aim.com  
**Subject:** Re: Comments re Draft EIS - Kemper IGCC (Kemper County IGCC Project)

Thank you for your comments.

Richard Hargis

>>> prometheusclone 12/21/09 23:59 >>>

The Mississippi Public Utility Staff has stated its position that environmental impacts may be determined and mitigated after the Certificate of Convenience and Necessity has been granted.

The assessment of groundwater quality for the scenario of the proposed action does not support permit grant(s) from the Army Corps of Engineers.

While the Record does mention functions such as Erodibility, Permeability, Transmissivity, Leakage, Hydrostratigraphy, and Hydrogeology, the Record would suggest that ground water quality is primarily a function of elevation. Consider the fact that the Army Corps of Engineers Joint Public Notice with respect to the North American Coal Corporation's application for permits attaches only Topographic Data Maps and Siting Indices in support of their evaluation of probable impacts involving deposits of dredged or fill material into waters of the United States.

Groundwater quality is impacted by Recharge and Solubility. The following excerpts set forth the extent of the discussion relevant to these two hydrogeochemical characteristics:

"Ground water quality within a given aquifer is typically freshest near the outcrop area where the aquifer is recharged by rainwater. Ground water salinity normally increases in areas stratigraphically down-dip from the outcrop recharge area (Gandl, 1982). In the project region, the down-dip areas are toward the southwest from the outcrop areas. This concept is schematically illustrated in Figure 3.7-1 (Strom and Mallory, 1995). The mine study area and power plant site are located within the outcrop recharge area of the Middle Wilcox aquifer. . . . Eighteen springs were located in the mine study area based on the results of the water resources inventory; the locations of these springs are shown in Figure 3.7-4. Only two of the springs had measurable flow, while the other 16 were either dry or spring flow was not measurable. Based on the spring location and the regional physiography, it is likely that these springs are local features that occur where sandy soil caps hilltops. The springs are recharged by infiltration of precipitation, and the water moves laterally along the contact between the sandy soils and underlying clay. Springs emanate along hillsides at the lower elevations of the contact between the sandy soils and underlying clay. . . . The mine study area and power plant site are situated within the recharge area for the Middle Wilcox aquifer. The Middle Wilcox aquifer is recharged primarily by infiltration of rainwater and also by downward infiltration of surface water through creek beds under some circumstances. Water discharges from the Middle Wilcox aquifer via downward leakage to the Lower Wilcox aquifer, discharge to springs, discharge to creeks, and ground water pumpage from water supply wells."

"Laboratory analyses for dissolved metals indicates dissolved chromium concentrations ranged from ND to 0.00325 mg/L, dissolved copper concentrations ranged from ND to 0.00537 mg/L, dissolved lead concentrations ranged from ND to 0.00117 mg/L, dissolved nickel concentrations ranged from ND to 0.0045 mg/L, and dissolved zinc concentrations ranged from ND to 0.0487 mg/L. Some of the dissolved metals concentrations exceeded the chronic and/or acute water quality value listed in the MWQCIIC1. The dissolved copper concentration of 0.00537 mg/L detected in the sample collected from SW-8, during the high flow event, exceeded the chronic health standard of 0.005 mg/L. Dissolved lead concentrations ranging from 0.00118 to 0.00174 mg/L were detected in the samples collected

QS-01

from SW-1, SW-2, SW 4, SW-5, SW-7, SW-8, SW-9 SW-12, and SW-13, which meets or exceeds the chronic standard of 0.00118 mg/L. Concentrations of dissolved lead that exceeded or met the chronic standard were from samples collected during high flow conditions at six of the nine sites. None of the remaining analytes listed in Table 5 of Appendix D were detected above method detection limits. . . .

"The ground water data in Table 3.7-6 is reflective of the sand intervals of the Wilcox aquifer. It is likely that water produced from less transmissive sand, sandy clay, and lignite intervals may have higher concentrations of dissolved minerals due to higher residence times."

Draft EIS Chapter Three Affected Environment discussing quantities of dissolved gases, metals and organics ignores the fact that lignite has a high affinity for gases, metals and organics. The mining operation will disrupt the reduction-oxidation ("redox") hydrogeochemistry, such that this affinity will decrease and the levels of dissolved substance will increase.

The soils decreased capacity to bind and complex will diminish the quality of recharge.

Concentrations of dissolved minerals is less a function of residence time than of mineral-humic complexing.

Lastly, the Draft EIS does not quantify the effect of geologic sequestration of CO2 intrusion into shallow aquifers.

In closing, I find it interesting that the lignite coal mining proposal by Nort American Coal Corporation for the Kemper County, Mississippi IGCC plant has not made the ECP list. The Wall Street Journal quoted the Associated Press on the EPA intervening in the largest mountaintop mining project in Appalachia, "The practice [mountain-top removal mining] is widely opposed by environmental groups, include the Sierra Club, that have criticized President Barack Obama for not doing more to eliminate it." Yet, the Sierra Club, intervening in the Kemper County case before the Mississippi Public Service Commission and the DOE's Environmental Impact Statement NEPA proceeding, has not criticized the mining of lignite in Mississippi. The assessment of Kemper IGCC lignite mining impact on ground water begs further scrutiny by the EPA, similar to that for the Mountaintop Mining Projects in Appalachia. I guess with major, federal-contractor KBR involved on the Kemper IGCC project, oversight takes on a entirely different meaning; Too Big to Fail is definitely the watch-word these days, in all industries. Just as the EPA halts the largest mountaintop mining project in Appalachia, it too should halt the Kemper IGCC mining project.

Respectfully submitted,

Queshaun Sudbury  
(601) 595-1604

QS-01  
(contd.)

**QS-01:** The Mississippi Public Utility Staff has stated its position that environmental impacts may be determined and mitigated after the Certificate of Convenience and Necessity has been granted.

The assessment of groundwater quality for the scenario of the proposed action does not support permit grant(s) from the Army Corps of Engineers.

While the Record does mention functions such as Erodibility, Permeability, Transmissivity, Leakance, Hydrostratigraphy, and Hydrogeology, the Record would suggest that ground water quality is primarily a function of elevation.

Consider the fact that the Army Corps of Engineers Joint Public Notice with respect to the North American Coal Corporation's application for permits attaches only Topographic Data Maps and Siting Indices in support of their evaluation of probable impacts involving deposits of dredged or fill material into waters of the United States.

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**Response:** Ground water and surface water impacts were evaluated for the Draft EIS. Ground water and surface water baseline information is in Sections 3.6 and 3.7 of the EIS, and ground water and surface water impact evaluations are in Subsections 4.2.4 and 4.2.5.

MDEQ would assess the hydrologic data including all probably hydrologic consequences prior to granting the mining permit. If a permit for mining operations is granted, MDEQ would require quarterly monitoring of ground water resources adjacent to the mining operations.

The process to mine coal in Kemper County would be a surface, strip mine. It is called *strip mining* because the overburden removal and coal extraction process occurs in strips across the mine area. Once coal is extracted from the pit strip, the next volume of overburden is placed in the hole and then reclaimed. All of the overburden is used in the subsequent pit to achieve approximate original contour and to facilitate reclamation. This process continues until the project area has been mined and reclaimed.

The strip mining process is markedly different than mountaintop removal, in which part of the overburden is not used in the reclamation process and is wasted as fill in the valley areas next to the removal process. In mountaintop removal mining, the approximate original contour is much more difficult to achieve. There are major differences in surface coal mining and coal extraction processes as you move from the eastern to the western United States. They do not have the same

types of impacts, they cannot be evaluated in the same manner, and their final reclamation is not comparable.

The record describes that the water quality in the formations that are closer to the ground surface are fresher and that high salinity concentration is present in aquifers that are found in deeper formations. This is the norm in deeper coastal aquifers like those near the Gulf Coast of the United States. The record in Table 3.7-6 also indicates that the all ground water samples collected in the shallower Wilcox sand strata and the Lower Wilcox aquifer do not exhibit detectable limits of dissolved metals like chromium or lead. (Zinc and nickel are not reported in Table 3.7-6.) The mining process does not add chemicals that have not been encountered in the natural waters and therefore no metals that have been absent prior to mining will be present after mining, although oxidation of some compounds like pyrite may result in higher concentration of sulfates and iron than those already in existence under natural conditions.

Surface water quality data reported in Appendix D do exhibit punctual concentrations of dissolved chromium from ND to 0.00325 mg/L, dissolved copper from ND to 0.00537 mg/L, dissolved lead concentrations ranged from ND to 0.00117 mg/L, dissolved nickel concentrations ranged from ND to 0.0045 mg/L, and dissolved zinc concentrations ranged from ND to 0.0487 mg/L. These punctual data exceed, within the margins of accuracy, the chronic and/or acute water quality value listed in the MWQCIIC. However, as stated in the record, the acute and chronic criteria are based on total dissolved concentrations and are applied at the 7-day average low stream flow with a 10-year occurrence period. Small presence of the aforementioned trace metals in the surface water and in Okatibbee Lake only indicates that the premining surface water has occurrences of these trace elements in or barely above detectable limits. Since data in ground water wells does not exhibit detectable concentration of trace metals like chromium and lead, this suggests that small traces of these metals may occasionally occur in the surface water at low levels. Nothing in the mining and reclamation process would add to this natural or premining occurrence.

Lignite does have adsorptive properties that may contribute to reduction of dissolved metals from ground water. NACC proposes to remove lignite from approximately 10,224 acres within the Wilcox Formation outcrop (see Subsection 4.2.3.2), which comprises approximately 0.4 percent of the total Wilcox aquifer recharge area. Even though NACC intends to maximize the removal of lignite from the impact area, clay and mica minerals are also capable of adsorbing dissolved metals from ground water. NACC does not plan to mine clay or micaceous deposits from the project area. Thus, subsurface sediments should retain the capability to bind and complex the trace amounts of dissolved metals detected in some of the surface water samples collected within the study area.

It is true that the quality of ground water may change as it travels through geologic formations. Indeed, the chemical nature of the water sampled within the project area reflects this evolution. Saline water found with depth has an increasing salt concentration as it becomes closer to the Gulf of Mexico. This is the result of long periods of leaching of salts that continue to date but that has not been completed. Upgradient (shallower) water is fresher; downgradient (deeper) water is more saline. The chemical evolution of water within the shallower Middle Wilcox sands is reflected in the quality of water reported in the record. The concentration of TDS is in the range of 100 to 350 mg/L and the pH is basically neutral. Most of the TDS concentration comes from calcium and bicarbonate ions. Magnesium, sodium, potassium, sulfate, and chloride are also found but in lesser quantities. These are the elements that are expected to be found in the wells in the reclaimed area of the mine. The evolution of water in the Lower Wilcox aquifer is also documented in the record. The result of this evolution has resulted in water of low TDS content, in the order of 70 mg/L.; the pH is slightly less than 7, and the ions found in greater concentration are bicarbonate, silicon, and sodium. Small concentrations of barium are detected in the Lower

Wilcox aquifer. The presence of silicon and barium (absent in the water from Middle Wilcox sands) is an example of evolution. Nothing that will be done at the mine will change this natural process. The intervening clays that separate the Middle Wilcox and the Lower Wilcox sands will be untouched by mining operations.

Water in the upper layer of sand in the Middle Wilcox has a pH of around 7. No carbonate or carbonic acid is feasible in this range of pH. No chemicals that can produce gases are found in the overburden; removal of lignite will not alter this water characteristic.

The normal cycle of nitrification-denitrification encountered in the reclaimed areas of the mine will continue as bacteria will not disappear in the shallow areas of the root zone. Gases produced in this shallow zone will continue to be released to the atmosphere as before mining. Evidence in existing mines indicates that TDS may, on occasions, increase. This has been observed primarily in areas where sulfides or other easily oxidizable salts are encountered. Overburden data and water quality data from the shallow ground water in the middle Wilcox and springs (sulfate data is an indicator) suggest that this is unlikely in this mine project area.