APPENDIX A

CONSULTATION LETTERS UNDER SECTION 7 OF THE ENDANGERED SPECIES ACT

United States Department of the Interior

FISH AND WILDLIFE SERVICE
6620 Southpoint Drive South
Suite 310
Jacksonville, Florida 32216-0912

IN REPLY REFER TO:
FWS/R4/ES-JAFL

JUN - 9 1998

Lisa K. Hollingsworth
NEPA Document Manager
Environmental, Safety & Health Division
U.S. Department of Energy
3610 Collins Ferry Road
P.O. Box 88-
Morgantown, WV 26507-0880

Dear Ms. Hollingsworth:

This is in response to your letter of May 28, 1998, requesting information on the threatened and endangered species that may occur in Duval County, the area of your proposed Jacksonville Electric Authority project. The Service does not have site-specific records for these species but depending on habitats found in the project area, some of these species may occur on-site.

If you have any further questions, you may call Don Palmer at (904) 232-2580 ex 115. Please reference the FWS log number 98-653E.

Sincerely,

Don Palmer

for Michael M. Bentzien
Assistant Field Supervisor

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
Southeast Regional Office
9721 Executive Center Drive North
St. Petersburg, FL 33702

JUN 25 1998

F/SER3:JBM

Ms. Lisa K. Hollingsworth
NEPA Document Manager
Federal Energy Technology Center
U.S. Department of Energy
P.O. Box 880
Morgantown, WV 26507-0880

Dear Ms. Hollingsworth:

This is in response to your May 28, 1998 letter, concerning environmental impacts resulting from the Federally-funded circulating fluidized-bed combustors project proposed for the Jacksonville Electric Authority's Northside Generating Station, Jacksonville, Florida. Your preliminary list of identifiable environmental issues mentions sighting of green turtles near the cooling water intake structure. However, aside from green turtles, loggerhead and Kemp's ridley sea turtles may also be present in the project area. There is insufficient information to allow us to make a final determination regarding the extent of effects to listed species of endangered and threatened marine life under the jurisdiction of the National Marine Fisheries Service. We will again review the project for potential effects upon receipt of the Draft Environmental Impact Statement.

If you have any questions or we can be of further assistance, please contact Colleen Coogan at 813-570-5312.

Sincerely yours,

Charles A. Oravetz

Charles A. Oravetz
Assistant Regional Administrator
for Protected Resources Division

APPENDIX B

CONSULTATION LETTERS UNDER SECTION 106 OF THE NATIONAL HISTORIC PRESERVATION ACT

FLORIDA DEPARTMENT OF STATE
Office of the Secretary
Office of International Relations
Division of Administrative Services
Division of Corporations
Division of Cultural Affairs

MEMBER OF THE FLORIDA CABINET
Division of Library & Information Services
Division of Historical Resources
Ringling Museum of Art
Division of Licensing
Division of Elections

FLORIDA DEPARTMENT OF STATE
Sandra B. Mortham
Secretary of State
DIVISION OF HISTORICAL RESOURCES

December 22, 1997

Ms. Jan K. Wachter
Federal Energy Technology Center
U.S. Department of Energy
P.O. Box 880
Morgantown West Virginia 26507-0880.

In Reply Refer To:
Frank J. Keel
Historic Preservation Planner
Project File No. 976219

RE: Cultural Resource Assessment Request
Jacksonville Electric Authority (JEA) Circulating Fluidized Bed Combuster
Project – Northside Generating Station
Duval County, Florida

Dear Ms. Wachter:

In accordance with the procedures contained in 36 C.F.R., Part 800 ("Protection of Historic Properties"), we have reviewed the referenced project(s) for possible impact to historic properties listed, or eligible for listing, in the *National Register of Historic Places*. The authority for this procedure is the National Historic Preservation Act of 1966 (Public Law 89-665), as amended.

It is the opinion of this agency that because of the project nature it is considered unlikely that archaeological or historical sites will be affected. Therefore, it is the opinion of this office that the proposed project will have no effect on any sites listed, or eligible for listing in the National Register. The project may proceed without further involvement with this agency.

If you have any questions concerning our comments, please do not hesitate to contact us. Your interest in protecting Florida's historic properties is appreciated.

Sincerely,

Laura A. Kammerer

for George W. Percy, Director
Division of Historical Resources
and
State Historic Preservation Officer

GWP/Kfk

DIRECTOR'S OFFICE
R.A. Gray Building • 500 South Bronough Street • Tallahassee, Florida 32399-0250 • (850) 488-1480
FAX: (850) 488-3353 • WWW Address http://www.dos.state.fl.us

☐ ARCHAEOLOGICAL RESEARCH
(850) 487-2299 • FAX: 414-2207

☒ HISTORIC PRESERVATION
(850) 487-2333 • FAX: 922-0496

☐ HISTORICAL MUSEUMS
(850) 488-1484 • FAX: 921-2503

DIVISIONS OF FLORIDA DEPARTMENT OF STATE
Office of the Secretary
Office of International Relations
Division of Elections
Division of Corporations
Division of Cultural Affairs
Division of Historical Resources
Division of Library and Information Services
Division of Licensing
Division of Administrative Services

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Florida Land and Water Adjudicatory Commission
Siting Board
Division of Bond Finance
Department of Revenue
Department of Law Enforcement
Department of Highway Safety and Motor Vehicles
Department of Veterans' Affairs

FLORIDA DEPARTMENT OF STATE
Katherine Harris
Secretary of State

DIVISION OF HISTORICAL RESOURCES

Mr. Robert Johnson
Florida Archaeological Services, Inc.
4250 Melrose Avenue
Jacksonville, FL 32210

July 28, 1999

RE: DHR Project File No. 994761
A Cultural Resource Assessment Survey of the Jacksonville Electric Authority Northside Units 1 & 2 Repowering Project, Duval County, Florida. By Florida Archaeological Services, Inc., May 1999.

Dear Mr. Johnson:

In accordance with the procedures contained in 36 C.F.R., Part 800 ("Protection of Historic Properties"), as well as Chapter 267.061, *Florida Statues*, implemented through 1A-46 *Florida Administrative Code*, we have reviewed the results of the referenced project and find them to be complete and sufficient.

Based on the information provided in the above report, we note that four previously recorded sites, DU 91, DU 101, DU 102 and DU 105, and five newly recorded sites, DU13923 - DU13927, were located and assessed as a result of the above survey. We concur with the conclusions and recommendations in the report that four of these sites, DU91, DU 13924, DU13925 and DU13927 are not eligible. We further concur that sites DU101, DU102, DU105 and DU13923 are potentially eligible. We recommended that these four sites (DU101, 102, 105 and 13923) be avoided by any development activities.

We note from the report that current plans would will place three of the potentially eligible sites DU101 (the San Carlos West Site), DU102 (the San Carlos West Burial Mound Site), and DU105 the Jacksonville Power Plant Site), within a conservation area. It is our understanding from the report that there have been problems with looting in the past at burial site DU102. We agree with the recommendations in the report for providing locked gates or some protection against looting for this site. A protection plan for this site should be coordinated with the project archaeologist and this agency to insure that the site is not affected by installation of fencing etc.

Regarding site DU 13923 the Light Bulb Site, we note that this potentially eligible site is not included in the proposed conservation area. We therefore recommend avoidance of DU13923. If avoidance is not possible then Phase II testing will be necessary. We note from the report that when site DU13926 was found to be outside the current project area, work on it was suspended. There is therefore insufficient information to make a determination of its eligibility. Should project activities involve this site area in the future, it would need to be evaluated. If the above recommendations are followed, it is the opinion of this office that the proposed project will have no effect on sites listed, or eligible for listing, in the *National Register of Historic Places*, or otherwise of historic or archaeological value.

R.A. Gray Building • 500 South Bronough Street • Tallahassee, Florida 32399-0250 • http://www.flheritage.com

☐ Director's Office (850) 488-1480 • FAX: 488-3355
☐ Archaeological Research (850) 487-2299 • FAX: 414-2207
☑ Historic Preservation (850) 487-2333 • FAX: 922-0496
☐ Historical Museums (850) 488-1484 • FAX: 921-2503
☐ Historic Pensacola Preservation Board (850) 595-5985 • FAX: 595-5989
☐ Palm Beach Regional Office (561) 279-1475 • FAX: 279-1476
☐ St. Augustine Regional Office (904) 825-5045 • FAX: 825-5044
☐ Tampa Regional Office (813) 272-3843 • FAX: 272-2340

Mr. Johnson
July 28, 1999
Page 2

If you have any questions concerning our comments, please contact Ms. Robin Jackson, Historic Sites Specialist at (850) 487-2333 or 1-(800) 847-7278. Your interest in protecting Florida's historic properties is appreciated.

Sincerely,

Laura A. Kammerer

for George W. Percy, Director
Division of Historical Resources and
State Historic Preservation Officer

GWP/Jrj

DIVISIONS OF FLORIDA DEPARTMENT OF STATE
Office of the Secretary
Office of International Relations
Division of Elections
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Florida Land and Water Adjudicatory Commission
Siting Board
Division of Bond Finance
Department of Revenue
Department of Law Enforcement
Department of Highway Safety and Motor Vehicles
Department of Veterans' Affairs

FLORIDA DEPARTMENT OF STATE
Katherine Harris
Secretary of State

DIVISION OF HISTORICAL RESOURCES

Mr. Robert Johnson
Florida Archaeological Services, Inc.
4250 Melrose Avenue
Jacksonville, FL 3221o

August 3, 1999

RE: DHR Project File No. 995628
Cultural Resource Assessment Request
A Phase II Archaeological Investigation of Site 8DU13923 at the Jacksonville Electric Authority Northside Generating Station, Duval County, Florida. By Florida Archaeological Services, Inc. July 1999.

Dear Mr. Johnson:

In accordance with the procedures contained in 36 C.F.R., Part 800 ("Protection of Historic Properties"), we have reviewed the results of the referenced project and find them to be complete and sufficient.

Based on the information provided in the above report, we note that a Phase II investigation was conducted for site 8DU13923. Based on the results of this investigation, the site was determined to not be eligible. We concur with the conclusions and recommendation in the report. We note from the Phase I survey of this project area that sites DU101, DU102 and DU105, were found to be potentially eligible. It is our understanding that these sites will be put in a conservation easement. It is therefore the opinion of this agency that the proposed project will have no effect on site s listed, or eligible for listing, in the *National Register of Historic Places.*

If you have any questions concerning our comments, please contact Ms. Robin Jackson, Historic Sites Specialist at (850) 487-2333 or 1-(800) 847-7278. Your interest in protecting Florida's historic properties is appreciated.

Sincerely,

for Laura A. Kammerer
George W. Percy, Director
Division of Historical Resources and
State Historic Preservation Officer

GWP/Jrj

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☐ Historic Pensacola Preservation Board (850) 595-5985 • FAX: 595-5989
☐ Palm Beach Regional Office (561) 279-1475 • FAX: 279-1476
☐ St. Augustine Regional Office (904) 825-5045 • FAX: 825-5044
☐ Tampa Regional Office (813) 272-3843 • FAX: 272-2340

APPENDIX C

CONSULTATION LETTERS ASSOCIATED WITH THE FLORIDA STATE CLEARINGHOUSE

STATE OF FLORIDA

DEPARTMENT OF COMMUNITY AFFAIRS

"Helping Floridians create safe, vibrant, sustainable communities"

LAWTON CHILES
Governor

JAMES F. MURLEY
Secretary

November 17, 1997

Mr. Lloyd Lorenzi
United States Department of Energy
Federal Energy Technology Center
3610 Collins Ferry Road
Morgantown, West Virginia 26507-0880

RE: U.S. Department of Energy - Scoping Letter for Jacksonville Electric Authority Circulating Fluidized Bed Combustor Project - Duval County, Florida
SAI: FL9710020730C

Dear Mr. Lorenzi:

The Florida State Clearinghouse has received your notification of the above-described project, and has forwarded it to the appropriate state agencies for review. In order to receive comments from all agencies, an additional fifteen days is requested for completion of the review. Therefore, the clearance letter due date for this project will be extended from November 17, 1997, to December 2, 1997. If all comments are received prior to the extended date, every effort will be made to forward the clearance letter to you at an earlier date.

Thank you for your understanding. If you have any questions regarding this matter, please contact Ms. Cherie Trainor, Clearinghouse Coordinator, at (850) 922-5438.

Sincerely,

Ralph Cantral, Executive Director
Florida Coastal Management Program

RC/cc

2555 SHUMARD OAK BOULEVARD • TALLAHASSEE, FLORIDA 32399-2100
Phone: 850.488.8466/Suncom 278.8466 FAX: 850.921.0781/Suncom 291.0781
Internet address: http://www.state.fl.us/comaff/dca.html

FLORIDA KEYS
Area of Critical State Concern Field Office
2796 Overseas Highway, Suite 212
Marathon, Florida 33050-2227

GREEN SWAMP
Area of Critical State Concern Field Office
155 East Summerlin
Bartow, Florida 33830-4641

SOUTH FLORIDA RECOVERY OFFICE
P.O. Box 4022
8600 N.W. 36th Street
Miami, Florida 33159-4022

STATE OF FLORIDA

DEPARTMENT OF COMMUNITY AFFAIRS

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LAWTON CHILES
Governor

JAMES F. MURLEY
Secretary

December 2, 1997

Mr. Lloyd Lorenzi
United States Department of Energy
Federal Energy Technology Center
3610 Collins Ferry Road
Morgantown, West Virginia 26507-0880

RE: U.S. Department of Energy - Scoping Letter for Jacksonville Electric Authority Circulating Fluidized Bed Combustor Project - Duval County, Florida
SAI: FL9710020730C

Dear Mr. Lorenzi:

The Florida State Clearinghouse, pursuant to Presidential Executive Order 12372, Gubernatorial Executive Order 95-359, the Coastal Zone Management Act, 16 U.S.C. §§ 1451-1464, as amended, and the National Environmental Policy Act, 42 U.S.C. §§ 4321, 4331-4335, 4341-4347, as amended, has coordinated a review of the above-referenced project.

The Department of Environmental Protection (DEP) offers comments addressing specific concerns that may arise during further development of the proposed Environmental Impact Statement (EIS). Please refer to the enclosed DEP comments.

The Department of Community Affairs (Department) notes that the project is located in the 100-year floodplain as well as a Category 1 to 3 hurricane storm surge zone. The Department has identified issues which should be included in the EIS. The applicant is also advised to coordinate the project design and construction activities with Duval County's emergency management office to ensure compliance with the County's floodplain and emergency planning requirements. Please refer to the enclosed DCA comments.

The Department of Transportation (DOT) indicates that the project will not impact the State Transportation System. However, a re-evaluation of the project will be conducted during the environmental documentation or permitting stage. Please refer to the enclosed DOT comments.

2555 SHUMARD OAK BOULEVARD • TALLAHASSEE, FLORIDA 32399-2100
Phone: 850.488.8466/Suncom 278.8466 FAX: 850.921.0781/Suncom 291.0781
Internet address: http://www.state.fl.us/comaff/dca.html

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155 East Summerlin
Bartow, Florida 33830-4641

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P.O. Box 4022
8600 N.W. 36th Street
Miami, Florida 33159-4022

The referenced scoping notice is not subject to consistency review; however, the notice is provided by the applicant to ensure that the state's comments and concerns are addressed in the draft and final Environmental Impact Statement (EIS). The draft and final EIS are subject to consistency review. The documents should be provided to the State Clearinghouse prior to the decision to proceed to each subsequent stage of project development. The draft and final EIS should be accompanied by a federal consistency determination in accordance with 15 CFR 930, Subpart C. The state appreciates the early coordination efforts. The applicant is also advised that based on our preliminary evaluation of the proposed action and the adoption of the recommendations provided by our reviewing agencies, at this stage, the state does not object to the continued development of the project. Comments received from the Northeast Florida Regional Planning Council are also enclosed for your review.

If you have any questions regarding this letter, please contact Ms. Cherie Trainor, Clearinghouse Coordinator, at (850) 922-5438.

Sincerely,

G. Steven Pfeiffer
Assistant Secretary

GSP/cc

Enclosures

cc: April Williford, Department of Environmental Protection
Gustave Rappold, Northeast Florida Regional Planning Council

STATE OF FLORIDA

DEPARTMENT OF COMMUNITY AFFAIRS

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Governor

JAMES F. MURLEY
Secretary

MEMORANDUM

TO: Cherie Trainor, State Clearinghouse

FROM: G. Steven Pfeiffer, Assistant Secretary

SUBJECT: Scoping Letter - Environmental Impact Statement for Jacksonville Electric Authority Circulating Fluidized Bed Combustor Project - Duval County, Florida
SAI: FL9710020730C

DATE: December 2, 1997

The Department of Community Affairs (Department), pursuant to its role as the state's land planning and emergency management agency, has reviewed the above-referenced project for consistency with its statutory responsibilities under the Florida Coastal Management Program (FCMP). The Department has determined that, at this stage, the project is consistent with its FCMP responsibilities. However, the Department has identified issues, as outlined below, which should be included in the Environmental Impact Statement for the proposed project.

The Department notes that the project is located in the 100-year floodplain and a Category 1 to 3 hurricane storm surge zone. Therefore, the EIS should include a thorough evaluation of the following:

1. The predicted maximum storm surge heights, using the SLOSH model, relative to the base elevation of the new power generating equipment;

2. The probability of storms and storm surge flooding at the site;

3. The probable damage to the new power generating equipment from hurricane-induced flooding and high winds for each category of hurricane;

4. The types of collateral offsite damage to persons and property that may result from hurricane-induced damage to the new power generating equipment and related facilities, and the estimated probability and severity of such damage;

5. The process, procedures, equipment and time required for the restoration and reconstruction of the plant from storm

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Miami, Florida 33159-4022

surge, freshwater flooding and wind related damage, as well as a detailed analysis of the expected costs for cleanup, restoration and reconstruction, proposed financing methods, and funding sources; and

6. Based on the foregoing, a description of the need for developing storm preparation and response plans, including the identification of measures for the minimization of damage to the plant and the surrounding area, plans for the restoration of power after hurricanes, and identification of those responsible for the preparation of such plans.

In addition, the applicant is advised to coordinate the project design and construction activities with Duval County's emergency management office to ensure compliance with the County's floodplain and emergency planning requirements.

Thank you for the opportunity to comment on this project. If you require assistance or additional information, please contact Paul Darst, Division of Resource Planning and Management at (850) 487-4545 or Rosalyn Kilcollins, Florida Coastal Management Program at (850) 414-6580 or at the address above.

GSP/rk

Department of Environmental Protection

Lawton Chiles
Governor

Marjory Stoneman Douglas Building
3900 Commonwealth Boulevard
Tallahassee, Florida 32399-3000

[illegible] B. Wetherell
[illegible]ary

November 20, 1997

Cherie Trainor
State Clearinghouse
Department of Community Affairs
2555 Shumard Oak Boulevard
Tallahassee, Florida 32399-2100

RE: DOE/Scoping Letter for Proposed EIS - Construction of New Combustion System at Jacksonville Electric Authority's Northside Generating Station, Duval County

SAI: FL9710020730C

Dear Ms. Trainor:

The Department of Environmental Protection has reviewed the referenced scoping letter submitted by the U. S. Department of Energy regarding the proposal to repower an existing steam turbine by constructing a new combustion system at the Jacksonville Electric Authority's Northside Generating Station. The Department's Office of Siting, Division of Marine Resources, and Northeast District Office have provided the following comments to address specific concerns that may arise during further development of the proposed EIS.

- The proposed repowering project is exempt from the mandatory provisions of the Florida Electrical Power Plant Siting Act. The JEA may use the provisions of 403.5175 to license the conversion.

- A NPDES permit administered by the Department will address the proposed repowering.

- The project has a potential for impacting wetlands and changing consumptive use of ground water. The applicant should contact the Department's Northeast District and the St. Johns River Water Management District to obtain necessary information on required permits.

- The St. Johns River and its tributaries in the vicinity of the existing power plant are documented manatee habitat. Currently there is not enough information available to determine if the proposed project poses any adverse impacts to manatees or their habitat. However, adverse impacts may result from in-water construction, increased vessel traffic and the discharge of warm water effluent into waters that are accessible to manatees.

  The following information is required to begin an assessment of the proposed project and to determine if manatees or their habitat will be adversely impacted. Scaled site maps should be provided showing the location of any proposed structures and the location of any proposed in-water access sites and the routes to and from the access sites.

  1. Will any in-water construction be required during the proposed project?

SAI 97-0730C
Page Two

2. Is there a canal connecting the project site to the St. Johns River? If not, will a canal be constructed?

3. Will any barge facilities be constructed along the St. Johns River?

4. Is vessel traffic associated with the power plant expected to increase due to the proposed modifications (e.g., delivery of fuel via barges)?

5. In conjunction with the modifications, will the power plant discharge heated water into the St. Johns River or waters connected to the St. Johns River?

We appreciate the opportunity to provide comments during the scoping phase of the proposed project. If you require additional information or have any questions, please contact me at (850) 487-2231.

Sincerely,

April D. Williford
Environmental Specialist
Office of Intergovernmental Programs

/adw
CC: Mark Latch, Recreation and Parks
Ron Mezich, Marine Resources
Hamilton Oven, Siting
Alisha Simpson, Northeast District
Fritz Wettstein, Marine Resources

COUNTY: Duval

DATE: 10/03/97
COMMENTS DUE-2 WKS: 10/18/97
CLEARANCE DUE DATE: 11/17/97
SAI#: FL9710020730C

Message:

STATE AGENCIES	WATER MANAGEMENT DISTRICTS	OPB POLICY UNITS
Community Affairs Environmental Protection X OTED State Transportation	St. Johns River WMD RECEIVED OCT 09 1997 State of Florida Clearinghouse	Environmental Policy/C & ED

The attached document requires a Coastal Zone Management Act/Florida Coastal Management Program consistency evalutation and is categorized as one of the following:

— Federal Assistance to State or Local Government (15 CFR 930, Subpart F). Agencies are required to evaluate the consistency of the activity.

_X_ Direct Federal Activity (15 CFR 930, Subpart C). Federal Agencies are required to furnish a consistency determination for the State's concurrence or objection.

— Outer Continental Shelf Exploration, Development or Production Activities (15 CFR 930, Subpart E). Operators are required to provide a consistency certification for state concurrence/objection.

— Federal Licensing or Permitting Activity (15 CFR 930, Subpart D). Such projects will only be evaluated for consistency when there is not an analogous state license or permit.

Project Description:

U.S. Department of Energy - Scoping Letter for Jacksonville Electric Authority Circulating Fluidized Bed Combustor Project - Duval County, Florida.

To: Florida State Clearinghouse
Department of Community Affairs
2555 Shumard Oak Boulevard
Tallahassee, FL 32399-2100
(850) 922-5438 (SC 292-5438)
(904) 414-0479 (FAX)

EO. 12372/NEPA	Federal Consistency
☒ No Comment	☒ No Comment/~~Consistent~~
☐ Comments Attached	☐ Consistent/Comments Attached
☐ Not Applicable	☐ Inconsistent/Comments Attached
	☐ Not Applicable

From:
Division/Bureau: OTTED
Reviewer: M Blakeley
Date: 10/6/97

COUNTY: Duval

Message:

DATE: 10/03/97
COMMENTS DUE-2 WKS: 10/18/97
CLEARANCE DUE DATE: 11/17/97
SAI#: FL9710020730C

STATE AGENCIES	WATER MANAGEMENT DISTRICTS	OPB POLICY UNITS
Community Affairs Environmental Protection OTED X State Transportation	St. Johns River WMD BEONATT	Environmental Policy/C & ED DUVAL SAI-DOE 975210

The attached document requires a Coastal Zone Management Act/Florida Coastal Management Program consistency evalutation and is categorized as one of the following:

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Project Description:

U.S. Department of Energy - Scoping Letter for Jacksonville Electric Authority Circulating Fluidized Bed Combustor Project - Duval County, Florida.

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State of Florida Clearinghouse

To: Florida State Clearinghouse
Department of Community Affairs
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(850) 922-5438 (SC 292-5438)
(904) 414-0479 (FAX)

EO. 12372/NEPA

☑ No Comment
☐ Comments Attached
☐ Not Applicable

Federal Consistency

☑ No Comment/Consistent
☐ Consistent/Comments Attached
☐ Inconsistent/Comments Attached
☐ Not Applicable

From:
Division/Bureau: Historical Resources
Reviewer: Laura A. Kammerer
Date: 10/20/97 10-21-97

FLORIDA DEPARTMENT OF TRANSPORTATION

LAWTON CHILES
GOVERNOR

THOMAS F. BARRY Jr.
SECRETARY

P.O. Box 1089
Lake City, Fl 32056-1089
October 13, 1997

Ms. Keri Akers
Florida State Clearinghouse
Department of Community Affairs
2255 Shumard Oak Blvd.
Tallahassee, Fl 32399-2100

Subject: SAI # FL9710020730C
JEA

Dear Ms. Akers:

Based on the information provided, we find that the subject project does not have a direct impact on the State Transportation System. The project has been reviewed under Presidential Executive Order 12372 and the Florida Coastal Zone Management Program for consistency for the following:

- Florida Transportation Plan, modal systems and work program plans directly related to this project.
- Level of Service Standards
- Access Management Standards
- Right-of-way costs and advanced acquisition
- Intergovernmental coordination
- Chapters 334 and 339, Laws of Florida

A re-evaluation of this project will be conducted during the environmental documentation or permitting stage, as required. Future consistency of this project will be dependent upon the proper consideration of our comments offered in this and subsequent reviews.

If you have any questions regarding this response, please contact me at SC 881-3682.

Sincerely,

James W. Killian
Transportation Statistics Administrator

cc: Aage Schroder
Sandra Whitmire

COUNTY: Duval

Message:

DATE: 10/03/97
COMMENTS DUE-2 WKS: 10/18/97
CLEARANCE DUE DATE: 11/17/97
SAI#: FL9710020730C

STATE AGENCIES	WATER MANAGEMENT DISTRICTS	OPB POLICY UNITS
Community Affairs Environmental Protection OTED State X Transportation	St. Johns River WMD	Environmental Policy/C & ED

The attached document requires a Coastal Zone Management Act/Florida Coastal Management Program consistency evalutation and is categorized as one of the following:

— Federal Assistance to State or Local Government (15 CFR 930, Subpart F). Agencies are required to evaluate the consistency of the activity.

_X_ Direct Federal Activity (15 CFR 930, Subpart C). Federal Agencies are required to furnish a consistency determination for the State's concurrence or objection.

— Outer Continental Shelf Exploration, Development or Production Activities (15 CFR 930, Subpart E). Operators are required to provide a consistency certification for state concurrence/objection.

— Federal Licensing or Permitting Activity (15 CFR 930, Subpart D). Such projects will only be evaluated for consistency when there is not an analogous state license or permit.

Project Description:

U.S. Department of Energy - Scoping Letter for Jacksonville Electric Authority Circulating Fluidized Bed Combustor Project - Duval County, Florida.

To: **Florida State Clearinghouse**
Department of Community Affairs
2555 Shumard Oak Boulevard
Tallahassee, FL 32399-2100
(850) 922-5438 (SC 292-5438)
(904) 414-0479 (FAX)

EO. 12372/NEPA

☐ No Comment
☐ Comments Attached
☐ Not Applicable

Federal Consistency

☐ No Comment/Consistent
☐ Consistent/Comments Attached
☐ Inconsistent/Comments Attached
☐ Not Applicable

From:

Division/Bureau: _____

Reviewer: _____

Date: _____

COUNTY: Duval

Message:

DATE: 10/03/97
COMMENTS DUE-2 WKS: 10/18/97
CLEARANCE DUE DATE: 11/17/97
SAI#: FL9710020730C

STATE AGENCIES	WATER MANAGEMENT DISTRICTS	OPB POLICY UNITS
Community Affairs Environmental Protection OTED State Transportation	X St. Johns River WMD	Environmental Policy/C & ED

RECEIVED
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State of Florida Clearinghouse

OCT - 6 1997

The attached document requires a Coastal Zone Management Act/Florida Coastal Management Program consistency evalutation and is categorized as one of the following:

— Federal Assistance to State or Local Government (15 CFR 930, Subpart F). Agencies are required to evaluate the consistency of the activity.

_X_ Direct Federal Activity (15 CFR 930, Subpart C). Federal Agencies are required to furnish a consistency determination for the State's concurrence or objection.

— Outer Continental Shelf Exploration, Development or Production Activities (15 CFR 930, Subpart E). Operators are required to provide a consistency certification for state concurrence/objection.

— Federal Licensing or Permitting Activity (15 CFR 930, Subpart D). Such projects will only be evaluated for consistency when there is not an analogous state license or permit.

Project Description:

U.S. Department of Energy - Scoping Letter for Jacksonville Electric Authority Circulating Fluidized Bed Combustor Project - Duval County, Florida.

To: Florida State Clearinghouse
Department of Community Affairs
2555 Shumard Oak Boulevard
Tallahassee, FL 32399-2100
(850) 922-5438 (SC 292-5438)
(904) 414-0479 (FAX)

EO. 12372/NEPA

- ☐ No Comment
- ☐ Comments Attached
- ☐ Not Applicable

Federal Consistency

- ☒ No Comment/Consistent
- ☐ Consistent/Comments Attached
- ☐ Inconsistent/Comments Attached
- ☐ Not Applicable

From:

Division/Bureau: Policy & Planning

Reviewer: Margaret H. Spontak

Date: 10-27-97

COUNTY: Duval

Message:

DATE: 10/03/97
COMMENTS DUE-2 WKS: 10/18/97
CLEARANCE DUE DATE: 11/17/97
SAI#: FL9710020730C

STATE AGENCIES	WATER MANAGEMENT DISTRICTS	OPB POLICY UNITS
Community Affairs Environmental Protection OTED State Transportation	St. Johns River WMD	X Environmental Policy/C & ED

RECEIVED
NOV 21 1997
State of Florida Clearinghouse

RECEIVED
OCT 6 1997
OFFICE OF PLANNING & BUDGETING
ENVIRONMENTAL POLICY UNIT

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Project Description:

U.S. Department of Energy - Scoping Letter for Jacksonville Electric Authority Circulating Fluidized Bed Combustor Project - Duval County, Florida.

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EO. 12372/NEPA

☑ No Comment
☐ Comments Attached
☐ Not Applicable

Federal Consistency

☑ No Comment/Consistent
☐ Consistent/Comments Attached
☐ Inconsistent/Comments Attached
☐ Not Applicable

From:
Division/Bureau: EOG/OPPENV
Reviewer: Paula LaMoreaux
Date: Nov. 18, 1997

Northeast Florida Regional Planning Council

Baker • Clay • Duval • Flagler • Nassau • Putnam • St. Johns

9143 Philips Highway, Suite 350, Jacksonville, Florida 32256
(904)363-6350 FAX (904) 363-6356
Suncom 874-6350 Suncom FAX 874-6356

October 24, 1997

Florida State Clearinghouse
Department of Community Affairs
2555 Shumard Oak Boulevard
Tallahasee, Florida 32399-2100

Att.: Glenn Church

SAI# : FL9710020730C Scoping Letter for Jacksonville Electric Authority Circulating Fluidized Bed Combustor Project - Duval County, Florida.

The Northeast Florida Regional Planning Council staff has reviewed the above cited Direct Federal Activity. The attached local response or comment was received.

Based on the information contained in the Project Description and after a review of the Comprehensive Regional Policy Plan (CRPP) goals and policies the NEFRPC staff finds the proposal to be "consistent" with the CRPP and in accord with the following policies:

Policy: 17.1.1.3. Local governments should plan for the upgrading of existing public facilities where needed.

Policy: 17.2.1.2. Provisions for necessary public facilities should be made in advance of anticipated development to reduce the cost of such facilities.

This Federal Activity generally conforms with the other policies, plans, and programs of the Northeast Florida Regional Planning Council and the Northeast Florida Regional Planning Council staff has no objection to the above cited Direct Federal Activity.

Sincerely,

Gustave A. Rappold
ICAR Coordinator

Enclosures

FLORIDA STATE CLEARINGHOUSE
RPC INTERGOVERNMENTAL COORDINATION AND RESPONSE SHEET

SAI #: FL9710020730C DATE: 10/03/97

COMMENTS DUE TO CLEARINGHOUSE: 11/02/97

AREA OF PROPOSED ACTIVITY: COUNTY: Duval County CITY: Jacksonville

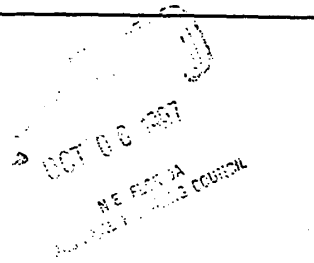
☐ FEDERAL ASSISTANCE ☒ DIRECT FEDERAL ACTIVITY ☐ FEDERAL LICENSE OR PERMIT ☐ OCS

PROJECT DESCRIPTION

U.S. Department of Energy - Scoping Letter for Jacksonville Electric Authority Circulating Fluidized Bed Combustor Project - Duval County, Florida.

ROUTING: RPC

X NE Florida RPC



PLEASE CHECK ALL THE LOCAL GOVERNMENTS BELOW FROM WHICH COMMENTS HAVE BEEN RECEIVED; ALL COMMENTS RECEIVED SHOULD BE INCLUDED IN THE RPC'S CLEARINGHOUSE RESPONSE PACKAGE. IF NO COMMENTS WERE RECEIVED, PLEASE CHECK "NO COMMENT" BOX AND RETURN TO CLEARINGHOUSE.

COMMENTS DUE TO RPC: 10/24/97

____Duval County

NO COMMENTS: ____

(IF THE RPC DOES NOT RECEIVE COMMENTS BY THE DEADLINE DATE, THE RPC SHOULD CONTACT THE LOCAL GOVERNMENT TO DETERMINE THE STATUS OF THE PROJECT REVIEW PRIOR TO FORWARDING THE RESPONSE PACKAGE TO THE CLEARINGHOUSE.)

NOTES:

ALL CONCERNS OR COMMENTS REGARDING THE ATTACHED PROJECT (INCLUDING ANY RPC COMMENTS) SHOULD BE SENT IN WRITING BY THE DUE DATE TO THE CLEARINGHOUSE. PLEASE ATTACH THIS RESPONSE FORM AND REFER TO THE SAI # IN ALL CORESPONDENCE.

IF YOU HAVE ANY QUESTIONS REGARDING THE ATTACHED PROJECT, PLEASE CONTACT THE STATE CLEARINGHOUSE AT (904) 922-5438 OR SUNCOM 272-5438.

PLANNING AND DEVELOPMENT DEPARTMENT

Florida Theatre Building, Suite 700, 128 East Forsyth Street, Jacksonville, Florida 32202
Telephone (904) 630-1900 Fax (904) 630-2912

October 10, 1997

Mr. Michael Brown
Northeast Florida Regional Planning Council
9143 Philips Highway, Suite 350
Jacksonville, Florida 32256

RE: SAI#I: FL9710020730C—DESIGN, CONSTRUCTION AND OPERATION OF A NE COMBUSTION SYSTEM TO REPOWER AN EXISTING STEAM TURBINE, UNIT 2, JACKSONVILLE ELECTRIC AUTHORITY'S NORTHSIDE GENERATING SYSTEM

Dear Mr. Brown:

In response to your recent request, please be advised that the Planning and Development Department endorses this project.

Sincerely,

John H. Crofts, AICP
Chief, Comprehensive Planning Division

Attachment

JHC/cds

OUR MISSION—To continually enhance the quality of life for a unified Jacksonville through visionary leadership and citizen involvement while providing necessary and cost effective services to all citizens.

APPENDIX D

CALCULATIONS OF HUMAN HEALTH RISK FROM INHALATION OF TOXIC AND CARCINOGENIC SUBSTANCES

APPENDIX D

CALCULATIONS OF HUMAN HEALTH RISK FROM INHALATION OF TOXIC AND CARCINOGENIC SUBSTANCES

Table D.1 uses EPA reference doses and carcinogenic potency to evaluate the human health risk from inhalation of toxic air pollutants from the proposed project. The first column of Table D.1 lists potential toxic air pollutants emitted from the stack of the proposed project. In the second and third columns, annual tons of pollutant emissions are given for one repowered unit assuming that only coal and only petroleum coke, respectively, were used as fuel. The fourth column is derived by taking the higher of the pollutant emissions in columns 2 and 3 and then converting the units to grams per second, which are the units required as input for the air dispersion modeling. The fifth column indicates maximum annual modeled ground-level concentrations in the ambient air for each of the toxic air pollutants (in units of milligrams per cubic meter), as calculated by the ISCST3 air dispersion model. The sixth column is the EPA reference dose (a no-effect dose set by the EPA for noncarcinogenic compounds) in units of milligrams of the substance taken into the body per kilogram of body weight per day. Based on the assumption that air is inhaled at a rate of 26 yd^3 per day by a person weighing 154 lb, the maximum modeled concentrations were converted to doses and compared with the EPA reference doses; the seventh column presents this comparison as the percentage of the EPA reference dose. The eighth column gives the carcinogenic potency in risk per milligram of the substance taken into the body per kilogram of body weight per day. The ninth column is the carcinogenic risk, which is derived from the maximum modeled concentrations (column 5) and the carcinogenic potency (column 8).

Table D.1. Emissions and maximum modeled concentrations of toxic air pollutants resulting from the proposed project compared with EPA reference doses and carcinogenic potency[a]

Toxic air pollutant	Predicted emissions by fuel type: Coal[b] (tons/year)	Predicted emissions by fuel type: Petroleum coke[c] (tons/year)	Maximum emissions for one unit[d] (g/s)	Maximum modeled concentration[e] (mg/m^3)	EPA reference dose[f] (mg/kg-day)	Percentage of EPA reference dose	Carcinogenic potency[g] (kg-day/mg)	Carcinogenic risk
Antimony	1.09×10^{-2}	0	3.14×10^{-4}	1.88×10^{-9}	4×10^{-4}	1.35×10^{-4}		
Arsenic	2.48×10^{-1}	4.37×10^{-2}	7.15×10^{-3}	4.28×10^{-8}	3×10^{-4}	4.08×10^{-3}		
Beryllium	7.51×10^{-3}	2.65×10^{-3}	2.16×10^{-4}	1.3×10^{-9}			8.4	3.11×10^{-9}
Cadmium	3.09×10^{-2}	1.26×10^{-2}	8.9×10^{-4}	2.68×10^{-9}	5.71×10^{-5}	2.67×10^{-3}	6.3	9.6×10^{-9}
Chromium (total): (III)	1.57×10^{-1}	8.33×10^{-3}	4.52×10^{-3}	2.71×10^{-8}	5.71×10^{-7}	1.36		
Chromium (VI)	4.78×10^{-2}	6.15×10^{-3}	1.38×10^{-3}	8.25×10^{-9}			4.2×10^{1}	9.9×10^{-8}
Cobalt	6.05×10^{-2}	0	1.74×10^{-3}	1.05×10^{-8}	6×10^{-2}	4.97×10^{-6}		
Lead	6.72×10^{-2}	6.74×10^{-1}	1.94×10^{-2}	1.17×10^{-7}	4.29×10^{-4}	7.75×10^{-3}		
Magnesium	6.66	0	1.92×10^{-1}	1.15×10^{-6}				
Manganese	2.97×10^{-1}	1.30×10^{-1}	8.55×10^{-3}	5.1×10^{-8}	1.43×10^{-5}	1.03×10^{-1}		
Mercury (inorganic)	9.72×10^{-2}	2.07×10^{-2}	2.8×10^{-3}	1.68×10^{-8}	8.57×10^{-5}	5.6×10^{-3}		
Nickel	5.39×10^{-2}	1.38	3.97×10^{-2}	2.38×10^{-7}	2×10^{-2}	3.40×10^{-4}		
Selenium	7.87×10^{-1}	7.96×10^{-2}	2.27×10^{-2}	1.36×10^{-7}	5×10^{-3}	7.75×10^{-4}		
Vanadium	2.61×10^{-1}	9.22	2.65×10^{-1}	1.59×10^{-6}	7×10^{-3}	6.5×10^{-3}		
Subtotal carcinogenic risk								**1.12×10^{-7}**

Table D.1. Continued

Toxic air pollutant	Predicted emissions by fuel type: Coal[b] (tons/year)	Predicted emissions by fuel type: Petroleum coke[c] (tons/year)	Maximum emissions for one unit[d] (g/s)	Maximum modeled concentration[e] (mg/m^3)	EPA reference dose[f] (mg/kg-day)	Percentage of EPA reference dose	Carcinogenic potency[g] (kg-day/mg)	Carcinogenic risk
Dioxins/furans								
2,3,7,8-TCDD	0	0	0	0			1.16×10^{5}	0
Total TCDD	2.38×10^{-7}	1.83×10^{-7}	6.85×10^{-9}	4.11×10^{-14}			1.16×10^{5}	1.36×10^{-9}
Total PeCDD	4.27×10^{-7}	3.29×10^{-7}	1.23×10^{-8}	7.35×10^{-14}			5.8×10^{4}	1.22×10^{-9}
Total HxCDD	1.82×10^{-6}	1.40×10^{-6}	5.25×10^{-8}	3.14×10^{-13}			4.55×10^{-3}	4.08×10^{-16}
Total HpCDD	6.05×10^{-6}	4.66×10^{-6}	1.74×10^{-7}	1.05×10^{-12}			1.16×10^{3}	3.46×10^{-10}
Total OCDD	1.74×10^{-5}	1.34×10^{-5}	5.0×10^{-7}	3.0×10^{-12}			1.16×10^{2}	1.0×10^{-10}
2,3,7,8-TCDF	0	0	0	0			1.16×10^{5}	0
Total TCDF	1.51×10^{-6}	1.16×10^{-6}	4.34×10^{-8}	2.61×10^{-13}			1.16×10^{4}	8.65×10^{-10}
Total PeCDF	2.93×10^{-6}	2.25×10^{-6}	8.4×10^{-8}	5.01×10^{-13}			5.8×10^{4}	8.4×10^{-9}
Total HxCDF	7.69×10^{-6}	5.91×10^{-6}	2.21×10^{-7}	1.33×10^{-12}			1.16×10^{4}	4.4×10^{-9}
Total HpCDF	2.66×10^{-5}	2.04×10^{-5}	7.7×10^{-7}	4.59×10^{-12}			1.16×10^{3}	1.52×10^{-9}
Total OCDF	8.29×10^{-5}	6.38×10^{-5}	2.39×10^{-6}	1.43×10^{-11}			1.16×10^{2}	4.74×10^{-10}
Subtotal carcinogenic risk								**1.87×10^{-8}**

Table D.1. Continued

Toxic air pollutant	Predicted emissions by fuel type: Coal[b] (tons/year)	Predicted emissions by fuel type: Petroleum coke[c] (tons/year)	Maximum emissions for one unit[d] (g/s)	Maximum modeled concentration[e] (mg/m^3)	EPA reference dose[f] (mg/kg-day)	Percentage of EPA reference dose	Carcinogenic potency[g] (kg-day/mg)	Carcinogenic risk
Polynuclear aromatics								
Biphenyl	1.03×10^{-3}	0	2.96×10^{-5}	1.78×10^{-10}	5×10^{-2}	1.02×10^{-7}		
Acenaphthene	3.09×10^{-4}	6.05×10^{-4}	1.74×10^{-5}	1.05×10^{-10}	6×10^{-2}	4.97×10^{-8}		
Acenaphthylene	1.51×10^{-4}	3.56×10^{-4}	1.03×10^{-5}	6.2×10^{-11}	3×10^{-2}	5.85×10^{-8}		
Anthracene	1.27×10^{-4}	1.78×10^{-4}	5.1×10^{-6}	3.07×10^{-11}	3×10^{-1}	2.93×10^{-9}		
Benzo(a)anthracene	4.84×10^{-5}	1.83×10^{-4}	5.3×10^{-6}	3.16×10^{-11}			6.1×10^{-1}	5.5×10^{-12}
Benzo(a)pyrene	2.30×10^{-5}	1.04×10^{-4}	2.99×10^{-6}	1.8×10^{-11}			6.1	3.13×10^{-11}
Benzo(b,j, or k)fluoranthene	6.66×10^{-5}	3.24×10^{-4}	9.3×10^{-6}	5.6×10^{-11}			6.1×10^{-1}	9.75×10^{-12}
Benzo(g,h,i)perylene	1.63×10^{-5}	1.07×10^{-4}	3.08×10^{-6}	1.85×10^{-11}			6.1×10^{-3}	3.22×10^{-14}
Chrysene	6.05×10^{-5}	5.68×10^{-4}	1.64×10^{-5}	9.8×10^{-11}			6.1×10^{-3}	1.71×10^{-13}
Fluoranthene	4.30×10^{-4}	9.27×10^{-4}	2.67×10^{-5}	1.60×10^{-10}	4×10^{-2}	1.14×10^{-7}		
Fluorene	5.51×10^{-4}	1.14×10^{-3}	3.28×10^{-5}	1.97×10^{-10}	4×10^{-2}	1.41×10^{-7}		
Indeno(1,2,3-cd)pyrene	5.10×10^{-3}	1.04×10^{-4}	2.99×10^{-6}	1.8×10^{-11}			6.1×10^{-1}	3.13×10^{-12}
Napthalene	7.87×10^{-3}	5.82×10^{-2}	1.68×10^{-3}	1.01×10^{-8}	4×10^{-2}	7.2×10^{-6}		
Phenanthrene	1.63×10^{-3}	7.12×10^{-3}	2.05×10^{-4}	1.23×10^{-9}	3×10^{-2}	1.17×10^{-6}		
Pyrene	1.20×10^{-4}	2.17×10^{-3}	6.3×10^{-5}	3.75×10^{-10}	3×10^{-2}	3.57×10^{-7}		
5-methyl chrysene	1.33×10^{-5}	0	3.83×10^{-7}	2.3×10^{-12}			4.1×10^{-1}	2.69×10^{-13}
Subtotal carcinogenic risk								**5.0×10^{-11}**

Table D.1. Continued

Toxic air pollutant	Predicted emissions by fuel type: Coal[b] (tons/year)	Predicted emissions by fuel type: Petroleum coke[c] (tons/year)	Maximum emissions for one unit[d] (g/s)	Maximum modeled concentration[e] (mg/m^3)	EPA reference dose[f] (mg/kg-day)	Percentage of EPA reference dose	Carcinogenic potency[g] (kg-day/mg)	Carcinogenic risk
Acetaldehyde	3.45×10^{-1}	0	9.9×10^{-3}	5.95×10^{-8}			7.7×10^{-3}	1.31×10^{-10}
Acetophenone	9.08×10^{-3}	0	2.61×10^{-4}	1.57×10^{-9}	5.71×10^{-6}	7.85×10^{-3}		
Acrolein	1.76×10^{-1}	0	5.05×10^{-3}	3.04×10^{-8}	5.71×10^{-6}	1.52×10^{-1}		
Benzene	7.87×10^{-1}	7.45×10^{-3}	2.27×10^{-2}	1.36×10^{-7}			2.9×10^{-2}	1.13×10^{-9}
Benzyl chloride	4.24×10^{-1}	0	1.22×10^{-2}	7.3×10^{-8}			1.7×10^{-1}	3.56×10^{-9}
bis(2-exthylhexyl)phthalate	4.42×10^{-2}	0	1.27×10^{-3}	7.6×10^{-9}			1.4×10^{-2}	3.05×10^{-11}
Bromoform	2.36×10^{-2}	0	6.8×10^{-4}	4.07×10^{-9}			3.85×10^{-3}	4.48×10^{-12}
Carbon disulfide	7.87×10^{-2}	0	2.27×10^{-3}	1.36×10^{-8}	2×10^{-1}	1.94×10^{-6}		
2-Chloroacetophenone	4.24×10^{-3}	0	1.22×10^{-4}	7.3×10^{-10}	8.57×10^{-6}	2.44×10^{-3}		
Chlorobenzene	1.33×10^{-2}	0	3.83×10^{-4}	2.3×10^{-9}	5.71×10^{-3}	1.15×10^{-5}		
Chloroform	3.57×10^{-2}	0	1.03×10^{-3}	6.15×10^{-9}			8.05×10^{-2}	1.42×10^{-10}
Cumene	3.21×10^{-3}	0	9.25×10^{-5}	5.55×10^{-10}	2.57×10^{-3}	6.2×10^{-6}		
Cyanide	1.51	0	4.34×10^{-2}	2.61×10^{-7}	2×10^{-2}	3.72×10^{-4}		
Subtotal carcinogenic risk								**4.99×10^{-9}**

Table D.1. Continued

Toxic air pollutant	Predicted emissions by fuel type: Coal[b] (tons/year)	Predicted emissions by fuel type: Petroleum coke[c] (tons/year)	Maximum emissions for one unit[d] (g/s)	Maximum modeled concentration[e] (mg/m^3)	EPA reference dose[f] (mg/kg-day)	Percentage of EPA reference dose	Carcinogenic potency[g] (kg-day/mg)	Carcinogenic risk
2,4-Dinitrotoluene	1.69×10^{-4}	0	4.86×10^{-6}	2.92×10^{-11}	2×10^{-3}	4.17×10^{-7}		
Dimethyl sulfate	2.91×10^{-2}	0	8.35×10^{-4}	5.0×10^{-9}			4.1×10^{-1}	5.9×10^{-10}
Ethyl benzene	5.69×10^{-2}	0	1.64×10^{-3}	9.8×10^{-9}	2.86×10^{-1}	9.8×10^{-7}		
Ethyl chloride	2.54×10^{-2}	0	7.3×10^{-4}	4.38×10^{-9}	2.86	4.38×10^{-8}		
Ethylene dichloride	2.42×10^{-2}	0	6.95×10^{-4}	4.18×10^{-9}			9.1×10^{-2}	1.09×10^{-10}
Ethylene dibromide	7.26×10^{-4}	0	2.09×10^{-5}	1.25×10^{-10}			7.7×10^{-1}	2.76×10^{-11}
Formaldehyde	1.45×10^{-1}	0	4.17×10^{-3}	2.5×10^{-8}			4.55×10^{-2}	3.25×10^{-10}
Hexane	4.06×10^{-2}	0	1.17×10^{-3}	7.0×10^{-9}	5.71×10^{-2}	3.51×10^{-6}		
Isophorone	3.51×10^{-1}	0	1.01×10^{-2}	6.05×10^{-8}			9.5×10^{-4}	1.65×10^{-11}
Methyl bromide	9.69×10^{-2}	0	2.79×10^{-3}	1.67×10^{-8}	1.43×10^{-3}	3.34×10^{-4}		
Methyl chloride	3.21×10^{-1}	0	9.25×10^{-3}	5.55×10^{-8}			6.3×10^{-3}	1.0×10^{-10}
Methyl ethyl ketone	2.36×10^{-1}	0	6.8×10^{-3}	4.07×10^{-8}	2.86×10^{-1}	4.07×10^{-6}		
Methyl hydrazine	1.03×10^{-1}	0	2.96×10^{-3}	1.78×10^{-8}			1.1	5.6×10^{-9}
Methyl methacrylate	1.21×10^{-2}	0	3.48×10^{-4}	2.09×10^{-9}	8×10^{-2}	7.45×10^{-7}		
Methyl tertbutyl ether	2.19×10^{-2}	0	6.3×10^{-4}	3.78×10^{-9}	8.57×10^{-1}	1.26×10^{-7}		
Methylene chloride	1.76×10^{-1}	0	5.05×10^{-3}	3.04×10^{-8}			1.64×10^{-3}	1.43×10^{-11}
Phenol	9.69×10^{-3}	0	2.79×10^{-4}	1.67×10^{-9}	6×10^{-1}	7.95×10^{-8}		
Propionaldehyde	2.30×10^{-1}	0	6.6×10^{-3}	3.97×10^{-8}				

Table D.1. Concluded

Toxic air pollutant	Predicted emissions by fuel type: Coal[b] (tons/year)	Predicted emissions by fuel type: Petroleum coke[c] (tons/year)	Maximum emissions for one unit[d] (g/s)	Maximum modeled concentration[e] (mg/m^3)	EPA reference dose[f] (mg/kg-day)	Percentage of EPA reference dose	Carcinogenic potency[g] (kg-day/mg)	Carcinogenic risk
Tetrachloroethylene	2.60×10^{-2}	0	7.5×10^{-4}	4.49×10^{-9}			2.03×10^{-3}	2.6×10^{-12}
Toluene	1.45×10^{-1}	0	4.17×10^{-3}	2.5×10^{-8}	1.14×10^{-1}	6.25×10^{-6}		
1,1,1-Trichloroethane	1.21×10^{-2}	0	3.48×10^{-4}	2.09×10^{-9}	2.86×10^{-1}	2.09×10^{-7}		
Styrene	1.51×10^{-2}	0	4.34×10^{-4}	2.61×10^{-9}	2.86×10^{-1}	2.6×10^{-7}		
Xylenes	2.24×10^{-2}	0	6.45×10^{-4}	3.87×10^{-9}	2	5.5×10^{-8}		
Vinyl acetate	4.60×10^{-3}	0	1.33×10^{-4}	7.95×10^{-10}	5.71×10^{-2}	3.97×10^{-7}		
Acid gases								
HCl	3.63×10^{1}	3.19	1.05	6.25×10^{-6}	5.71×10^{-3}	3.14×10^{-2}		
HF	6.08	1.48	1.75×10^{-1}	1.05×10^{-6}	7×10^{-4}	4.28×10^{-2}		
Subtotal carcinogenic risk								**6.75×10^{-9}**
Total carcinogenic risk								**1.42×10^{-7}**

[a]Abbreviations: Cr = chromium; HCl = hydrogen chloride; HF = hydrogen fluoride; mg/kg-day = milligram/kilogram-day; HpCDD = heptachlorodibenzodioxin; HpCDF = heptachlorodibenzofuran; HxCDD = hexachlorodibenzodioxin; HxCDF = hexachlorodibenzofuran; OCDD = octachlorodibenzodioxin; OCDF = octachlorodibenzofuran; PeCDD = pentachlorodibenzodioxin; PeCDF = pentachlorodibenzofuran; TCDD = 2,3,7,8-tetrachlorodibenzo-p-dioxin; TCDF = tetrachlorodibenzofuran.

[b]Emissions per unit if only coal were used.

[c]Emissions per unit if only petroleum coke were used.

[d]Emissions per unit for the greater of 100% coal used or 100% petroleum coke used.

[e]Maximum annual ground-level concentration in the ambient air.

[f]EPA reference dose (a no-effect dose for noncarcinogenic compounds) in milligrams of the substance taken into the body per kilogram of body weight per day.

[g]Carcinogenic potency in risk per milligram of the substance taken into the body per kilogram of body weight per day.

Source: Data taken from: http://www.epa.gov/reg3hwmn/risk/riskmenu.htm (accessed July 17, 1998).

APPENDIX E

ORGANIZATIONAL CONFLICT OF INTEREST STATEMENT

NEPA DISCLOSURE STATEMENT FOR PREPARING AN ENVIRONMENTAL IMPACT STATEMENT ON THE JEA CIRCULATING FLUIDIZED BED COMBUSTOR PROJECT

CEQ Regulations at 40 CFR 1506.5(c), which have been adopted by the DOE (10 CFR 1021), require contractors who will prepare an EIS to execute a disclosure specifying that they have no financial or other interest in the outcome of the project. The term "financial interest or other interest in the outcome of the project" for purposes of this disclosure is defined in the March 23, 1981 guidance "Forty Most Asked Questions Concerning CEQ's National Environmental Policy Act Regulations." 46 FR 18026-18038 at Questions 17a and b.

"Financial or other interest in the outcome of the project" includes "any financial benefit such as a promise of future construction or design work in the project, as well as indirect benefits the contractor is aware of (e.g., if the project would aid proposals sponsored by the firm's other clients)". 46 FR 18026-18038 at 1803.

In accordance with these requirements Lockheed Martin Energy Research Corporation (COMPANY NAME) hereby certifies as follows:

Fill in either (a) or (b)

(a) Lockheed Martin Research Corp. (COMPANY NAME) has no financial or other interest in the outcome of the JEA Circulating Fluidized Bed Combustor Project.

(b) _____ (COMPANY NAME) has the following financial or other interest in the outcome of the JEA Circulating Fluidized Bed Combustor Project and hereby agrees to divest itself of such interest prior to initiating any technical analysis in support of this project.

Financial or Other Interests

1.
2.
3.

Certified by:

David C. Rice 7/19/99

SIGNATURE DATE

David C. Rice

NAME

Director, Contracts

TITLE

APPENDIX F

ESSENTIAL FISH HABITAT ASSESSMENT

U.S. Department of Energy
National Energy Technology Laboratory

3610 Collins Ferry Road
P.O. Box 880
Morgantown, WV 26507-0880

626 Cochrans Mill Road
P.O. Box 10940
Pittsburgh, PA 15236-0940

NETL

We Solve National Energy and Environmental Problems

January 24, 2000

Andreas Mager, Jr.
Assistant Regional Administrator
Habitat Conservation Division
Southeast Regional Office
National Marine Fisheries Service
9721 Executive Center Drive N.
St. Petersburg, Florida 33702

Dear Mr. Mager,

In response to your letter of September 30, 1999, regarding your review of the Draft Environmental Impact Statement for the proposed JEA Circulating Fluidized Bed Combustor Project, please find attached our Essential Fish Habitat (EFH) Assessment for this project. The proposed project involves cost-shared funding for the demonstration of circulating fluidized bed combustion technology at JEA's existing Northside Generating Station in Jacksonville, Florida.

It is our assessment that the proposed project would not adversely affect EFH and, therefore, no consultation is required. Please contact me at (304) 285-4992 or at the address shown above if you require additional information or if your findings should disagree. Please note that our Center, formerly the Federal Energy Technology Center, is now the National Energy Technology Laboratory. We are currently preparing the Final Environmental Impact Statement for the project, so we would appreciate a timely response should you have any concerns, so that we may address those concerns as soon as possible. Thank you.

Sincerely,

Lisa K. Hollingsworth

Lisa K. Hollingsworth
NEPA Document Manager

JEA Circulating Fluidized Bed Combustor Project
Jacksonville, Florida
Essential Fish Habitat Assessment

Proposed Project. The proposed project is to design, construct, and demonstrate a new circulating fluidized bed (CFB) combustor that would repower the existing Unit 2 steam turbine at JEA's (formerly the Jacksonville Electric Authority's) Northside Generating Station in Jacksonville, Florida. CFB technology is an advanced method for burning coal and other fuels efficiently while removing air emissions inside the sophisticated combustor system. By generating nearly 300 MW of electricity, the proposed project would be built at a scale large enough to allow the power industry to assess technical, environmental, and financial data from the project and determine the potential of the technology for commercial application. DOE is preparing an environmental impact statement (EIS) as part of the National Environmental Policy Act (NEPA) process to assist in making a decision on whether to provide approximately $73 million (about 24% of the total project cost of $309 million) in cost-shared funding to design, construct, and demonstrate the CFB technology. JEA has indicated that construction may begin at their own risk without DOE funding prior to the completion of the NEPA process in early 2000 and would continue for more than 2 years. Demonstration of the proposed project would be conducted during a 2-year period from approximately March 2002 until March 2004. If the demonstration is successful, commercial operation would follow. The design life of the facility is 30 years. JEA also plans to repower the currently operating Unit 1 steam turbine without cost-shared funding from DOE. The Unit 1 steam turbine would be essentially identical to the turbine for Unit 2 and would be repowered about 6 to 12 months after the Unit 2 repowering.

The proposed CFB combustor would use bituminous coal and petroleum coke to produce steam to drive the existing Unit 2 steam turbine, a 297.5-MW unit that has been out of service since 1983, and generate electricity. Piping and related infrastructure would be constructed to link the new combustor with the existing steam turbine. During the demonstration, Unit 2 would be operated on several different types and blends of coal and petroleum coke to explore the flexibility of the CFB technology. The coal would be transported by ship (from areas such as Columbia and Venezuela), by train (primarily from the central Appalachian region such as West Virginia and eastern Kentucky), and by a combination of train and ship (train from West Virginia and eastern Kentucky to Newport News, Virginia, and ship from Newport News to Jacksonville). The petroleum coke would be transported by ship from oil refineries in Venezuela and the Caribbean region. Limestone for the CFB combustor probably would be transported by ship from the Caribbean region and the Yucatan Peninsula of Mexico. The proposed project is expected to demonstrate emission levels of sulfur dioxide (SO_2), oxides of nitrogen (NO_x), and particulate matter that would be lower than Clean Air Act limits while at the same time producing power more efficiently and at less cost than conventional coal utilization technologies. JEA's management has established a target of a 10% reduction in annual stack emissions of each of 3 pollutants (SO_2, NO_x, and particulate matter) from Northside Generating Station (Units 1, 2, and 3),

as compared to emissions during a recent typical 2-year operating period (1994–95) of the station (Units 1 and 3). Also targeted for a 10% reduction is the total annual groundwater consumption of Northside Generating Station, as compared to 1996 levels. These reductions are to be accomplished while increasing the total annual energy output of the station.

Northside Generating Station occupies a 400-acre industrial site along the north shore of the St. Johns River about 9 miles northeast of the downtown area of Jacksonville. The local terrain is flat and there is a mix of industrial, commercial, residential, and agricultural land use in the vicinity. The property contains a number of wetland areas, especially in the perimeter areas. The industrial 1,650-acre St. Johns River Power Park borders Northside Generating Station to the northeast, and the 46,000-acre Timucuan Ecological and Historic Preserve borders the site to the east. Blount Island, located immediately to the southeast in the St. Johns River, is a major port with facilities for docking, loading, and unloading large ocean-going vessels. The proposed project would occupy a total of about 75 acres of land on the Northside Generating Station and St. Johns River Power Park property.

Analysis of EFH Effects. A Draft EIS was prepared for the project in accordance with the requirements of NEPA and was released for review in August 1999. The draft EIS examined potential project impacts on air quality, surface water, groundwater, floodplains and wetlands, ecological resources, noise, transportation, solid waste, and cultural and socioeconomic resources. Findings related to EFH are summarized below.

With regard to surface water resources, no change in the existing utilization or consumption of surface water would occur during the construction phase of the proposed project. All construction would be performed in accordance with an erosion and sedimentation control plan. Impacts attributable to construction-related runoff, turbidity-causing agents, erosion, and sedimentation would be negligible.

Because Unit 2 has not operated since 1983, the proposed project (the repowering of Unit 2) would increase the demand for noncontact cooling water. After Unit 2 is repowered, the demand by the entire 3-unit plant would be approximately the same as when the three units operated together from approximately 1978 until 1980. The sustained flow of the back channel of the St. Johns River would not be depleted by this diversion because nearly all of the withdrawn cooling water would be returned to the river after passing through the condensers. The amount of heat discharged to the St. Johns River would also increase as a consequence of the proposed project. However, modeling shows that the size of the thermal plume would not increase because simultaneous operation of all three units would increase the discharge velocity and enhance mixing. Bottom-dwelling organisms such as macroinvertebrates would not experience effects as a result of thermal discharges because the discharge plume is directed upward and is largely a surface phenomenon.

Construction and demonstration of the proposed project would not measurably affect estuarine emergent macrophytes identified as EFH. No more than 1.8 acres of isolated hardwood wetland habitat would be lost

during construction of the ash storage area and disturbance of salt marsh habitats during construction of the solid fuel delivery system would be negligible. Wetlands associated with the upper salt marsh communities would not be measurably affected because nearly all of the conveyor system for solid fuel delivery associated with either unloading option would span these habitats (salt marsh systems) using existing structures and would involve no clearing or earthmoving activities. Option 1 is to construct a second unloader at the existing St. Johns River coal terminal that receives coal and petroleum coke delivered by ship and conveys the fuel to the St. Johns River Power Park. Option 2 is to construct a new unloading terminal to receive coal, petroleum coke, and limestone delivered by ship, as part of an upgraded unloading facility that would replace Northside's existing fuel oil unloading dock. Although some pilings could need to be installed at the upper fringes of the salt marsh and in San Carlos Creek, any impacts resulting from piling installation would be very localized and temporary and would not measureably affect the normal structural and functional dynamics of the salt marsh and nearby estuarine ecosystems. To offset the loss of 1.8 acres of hardwood wetlands during construction of the ash storage area, JEA would purchase 3 credits (slightly greater than 3 acres) of wetlands from an offsite mitigation bank and would restore 1 acre of salt marsh, which together would result in a mitigation ratio of greater than 2.2 to 1 (more than 4 acres of wetlands gained to 1.8 acres lost). The 1.8 acres of hardwood wetlands are not high quality habitats as evaluated by the Corps of Engineers WRAP (Wetlands Rapid Assessment Procedure). The site for the ash storage area includes a 200-ft buffer zone extending to the San Carlos Creek floodplain, which would minimize or avoid any impacts to the San Carlos Creek system. The project would result in a net increase of EFH compared with existing EFH. Both the Corps of Engineers and the Florida Department of Environmental Protection have given approval for this plan of action.

JEA plans to set aside and preserve 15 acres of undisturbed, uplands maritime oak hammock along the west bank of San Carlos Creek. By preserving the land, JEA would maintain habitat for wildlife, help protect the water quality of the creek, and leave a high-quality forested buffer area in a developing industrial area.

During construction, standard engineering practices such as straw berms, liners, cover materials, and grading would be implemented as required to minimize runoff, erosion, and sedimentation near the site. Accidental spills of construction materials such as solvents, paint, caulk, oil, and grease that could contain hazardous substances would be cleaned up in a timely manner and in accordance with a spill prevention, control, and countermeasure plan. Runoff from facilities that would be built as part of the proposed project would be used in plant processes or routed through detention basins equipped with baffles or oil skimmers before being discharged at stormwater outfalls. The detention basins would reduce the maximum rate of stormwater discharge by increasing the length of time during which the discharge occurred. The baffles or oil skimmers would collect contaminants such as oil and grease that float on top of the stormwater. Accidental spills from the proposed facility would be cleaned up in a timely manner in accordance with a spill prevention, control, and countermeasure plan and the best management practices plan for the facility. Tanks containing liquids

such as fuel oils, waste oils, turbine lubrication oils, and fuel additives are either surrounded by berms or dikes that would contain accidental leaks or spills, or have controlled drainage areas whose runoff is routed to and collected in sumps that are piped into the wastewater treatment system. Impacts associated with transfer piping failure or leakage would be minimized because the piping is inspected on a daily basis and more frequently while pumping is in progress, and most pipeline failures manifest themselves as small-scale, gradually increasing leaks that would be detected during routine inspection before excess leakage would impact the environment.

Determination. Based on the scope and nature of impacts expected from the proposed project and the measures identified above, DOE has determined that there would be no measurable adverse individual or cumulative effects on EFH at the project location resulting from the proposed project.

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE

Southeast Regional Office
9721 Executive Center Drive North
St. Petersburg, Florida 33702

February 23, 2000

Ms. Lisa K. Hollingsworth
National Environmental Policy Act Document Manager
U.S. Department of Energy, Federal Energy Technology Center
3610 Collins Ferry Road
P.O. Box 880
Morgantown, West Virginia 26507-0880

Dear Ms. Hollingsworth:

The National Marine Fisheries Service (NMFS) has reviewed your letter dated January 24, 2000, regarding the Draft Environmental Impact Statement regarding the JEA (formerly the Jacksonville Electric Authority) Circulating Fluidized Bed Combustor Project, in Jacksonville, Florida. The project is located adjacent to San Carlos Creek, St. Johns River, in Duval County, Florida.

The direct wetland impacts associated with this project include the filling of 1.8 acres of isolated hardwood wetlands from the construction of the ash storage area. To mitigate wetland impacts, the JEA would purchase approximately 3 acres of wetlands from an off-site mitigation bank and restore 1 acre of salt marsh. In our letter, dated September 30, 1999, the NMFS identified estuarine emergent wetlands as Essential Fish Habitat (EFH) and requested that any impacts to this habitat be identified. The NMFS is concerned about the secondary impact to tidal wetlands from the potential shading of the conveyor system associated with the two proposed unloading options.

The Department of Energy has determined that the construction and demonstration of the proposed project would not have an adverse effect on EFH. However, the NMFS would like more information on the secondary impacts to tidal wetlands and those impacts quantified. The NMFS would also like specific information addressing the proposed tidal wetland restoration. Thank you for your consideration of our comments. If you have questions, please contact Jennifer Robinson of our Panama City Office at 850/234-5061.

Sincerely,

W. Mark Thompson for

Andreas Mager, Jr.
Assistant Regional Administrator
Habitat Conservation Division

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE

Southeast Regional Office
9721 Executive Center Drive North
St. Petersburg, Florida 33702

March 27, 2000

Ms. Lisa K. Hollingsworth
National Environmental Policy Act Document Manager
U.S. Department of Energy, Federal Energy Technology Center
3610 Collins Ferry Road
P.O. Box 880
Morgantown, West Virginia 26507-0880

Dear Ms. Hollingsworth:

The National Marine Fisheries Service (NMFS), per telephone conversation on March 1, 2000, with Robert Miller, Oak Ridge National Laboratories, was provided with additional information regarding the Draft Environmental Impact Statement for the JEA (formerly the Jacksonville Electric Authority) Circulating Fluidized Bed Combustor Project, in Jacksonville, Florida. The project is located adjacent to San Carlos Creek, St. Johns River, in Duval County, Florida.

The NMFS was concerned about the secondary impact to tidal wetlands from the potential shading of the conveyor system associated with the two proposed unloading options. Based upon our conversation, the conveyor system would be 10 feet wide, be elevated 7-8 feet above the marsh, and approximately 950 feet of length of the conveyor would cross tidal wetlands. Therefore, the conveyor system would shade approximately 0.22 acre of tidal wetlands. To mitigate wetland impacts, the applicant proposes to restore 1 acre of tidal wetlands. The proposed mitigation site was filled in the 1960's for an equipment storage site and restoration activities involve scraping down the area and planting tidal vegetation.

The Department of Energy has determined that the construction and demonstration of the proposed project would not have an adverse effect on Essential Fish Habitat (EFH). The NMFS concurs with this determination that the project would not adversely affect EFH. Therefore, the NMFS will have no further objection to this project. We appreciate working with your staff to resolve our concerns. If you have questions, please contact Jennifer Robinson of our Panama City Office at 850/234-5061.

Sincerely,

Jennifer Robinson

for Andreas Mager, Jr.
Assistant Regional Administrator
Habitat Conservation Division

APPENDIX G

TRANSCRIPT OF AND RESPONSES TO THE PUBLIC HEARING

AND

PUBLIC COMMENT LETTERS AND RESPONSES

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PART 1

PUBLIC HEARING TESTIMONY
AND
RESPONSES

UNITED STATES DEPARTMENT OF ENERGY

FEDERAL ENERGY TECHNOLOGY CENTER

TRANSCRIPT OF PROCEEDINGS

Public Hearing

PROPOSED JEA CIRCULATING FLUIDIZED BED

COMBUSTOR PROJECT

Northside Generating Station

Jacksonville, Florida

Florida Community College at Jacksonville

North Campus, C Building, Auditorium

4501 Capper Road

Jacksonville, Florida

September 30, 1999

7:00 p.m.

PANEL MEMBERS

Lisa Hollingsworth

Tom Sarkus

Jerry Hebb

Jim Johnson

TABLE OF CONTENTS

- - -

P R O C E E D I N G S

September 30, 1999 7:15 p.m.

- - -

LISA HOLLINGSWORTH: Good evening. I think I've met most of you. The room seems a little bigger than it was before (laughter), but, hopefully, you can all hear me well. Let me know if there's any problem at all.

I'm Lisa Hollingsworth. I work for the Department of Energy at the Federal Energy Technology Center. We call that FETC. There's a FETC office in Pittsburgh, Pennsylvania. There's one in Morgantown, West Virginia. And that's where I'm from.

I'm supposed to tell you some facility info. You probably all already know it. And, if you go out these doors on either side to the next building, on your way there, there are restrooms on the ground floor.

In the unlikely event of a fire alarm or anything like that, you see the exits on the side, and you can exit to safety. I don't think we're going to have anything like that tonight.

Anyway, first off, I'd like to go over our agenda of what I'm going to talk about here. This presentation is just a brief overview of what we have in the Draft Environmental Impact Statement. There's a lot more information in there, if you need more details.

And, of course, we'll have the question and comments session later on.

First off, we're just going to go over the purpose of the hearing, who's who, tell you a little bit about the Clean Coal Technology Program and circulating fluidized bed combustion.

We'll describe the JEA project a little bit and give a summary of the expected environmental impacts.

We'll talk a little about the National Environmental Policy Act schedule, and we'll talk about how to provide comments and how you can speak at this hearing.

So I'm going to try to make this brief, since I think most of you are familiar with the project.

Okay. The purpose of this hearing. The National Environmental Policy Act, we call that NEPA, requires us to do several things. One is to evaluate the environmental impacts of our proposed actions, to identify alternatives to those actions, and to solicit input and comments from you, the public, regarding our proposed actions.

The main purpose of this hearing that we're here at tonight is to solicit your comments on the Draft Environmental Impact Statement.

I think many of you have a copy of that; if not, we do have some up front, or you can sign up. You can also sign up at the same time to get a copy of the final EIS.

I think most of you know that JEA was formerly the Jacksonville Electric Authority. Now we just refer to them as JEA. Okay.

The Proposed Action. In this case, the proposed action is to provide $73.1 million in cost-shared funding to JEA to repower the Northside Station Unit 2 to demonstrate utility-scale circulating fluidized bed combustion technology. We

usually refer to that as CFB technology.

JEA also plans to repower the currently operating Unit 1 with the same technology, but we wouldn't provide any funding for that. However, in the Draft EIS, we evaluate the effects of both as a related action.

Who's Who. The Department of Energy, well, we're the funding agency that's proposing to provide the cost-shared funding to repower Unit 2.

We have a large system of checks and balances to help us implement the NEPA process correctly.

To my right here, first we have Jim Johnson. Wave, Jim. Good. Jim is from DOE headquarters in Washington.

He's the Fossil Energy NEPA Compliance Officer, and he gives us guidance and oversight on our documents that we do.

Next, I have Denise Freeman. Denise wasn't able to come, and, also, Lloyd Lorenzi, who works at the FETC. He wasn't able to come.

After that, we have Tom Sarkus. There's

Tom. He's the Director of the division at FETC in Pittsburgh, Pennsylvania, that manages this project for DOE.

And Jerry Hebb. He's also in that division. And Jerry is the project manager for this project on the DOE side.

And I'm Lisa Hollingsworth. I am the NEPA Document Manager. I am the person who is primarily responsible for implementing the NEPA process for this project, and I'm also the main point of contact, if you have any comments or want to receive any documents.

You have my name and address and everything all through here. And please contact me. I'll get you whatever information I can or anything you need. Okay.

From JEA, JEA is the proposer of the new units at Northside Generating Station. I only have a couple of names on here. We're lucky to have some more people.

Joey Duncan, who's the Project Manager on the JEA side. Susan Hughes, I have her here as

Environmental Coordinator. I know she also handles most of the permitting stuff.

We also have P.T. Nielsen, Badie Hassan, and Jackie Leduc, at various places around here. I also noted on here that Foster Wheeler is the designer for the units.

Next, I'd like to take a second just to tell you in brief about the Clean Coal Technology Program that DOE has.

It's a government-industry partnership program that Congress mandated back in 1985, and it involves cost sharing of different, innovative, fossil-fuel-based energy technologies.

The goal is to make available to the U.S. energy marketplace a number of advanced, more efficient, and economically advantageous, and environmentally responsive technologies for coal utilization.

It includes 40 projects in 17 states, and federal funding of over $2 billion, along with matching industrial funds well in excess of $2 billion. So it's a big program.

The next thing I'd like to tell you about is just to give you a generic overview of CFB technology. This is a generic schematic, and this is something I did take from the Draft EIS.

I'm going to try and use the large-size laser pointer here. There we go. We have coal and limestone that gets injected into the combustor, along with -- this is where primary air goes in and secondary air goes in (indicating).

And this air fluidizes the bed where the actual combustion takes place. The limestone removes something like 98 percent of the sulfur that comes in with the fuel.

Hot gases then move over into the cyclone, where large particles are then returned to the bed. The hot gases continue on into some different heat exchangers, where more heat is removed from the hot gases.

Then it goes on into the cleanup or any polishing devices you have, where particulate is removed, and in some cases NO_x. Then it goes ahead to the atmosphere through the stack. Let's see now.

Water is heated in the boiler tubes of the combustor and also in the heat exchangers to steam, which then goes to the steam turbine, and electricity is created.

Also, there is bottom ash periodically removed from the combustor, and also fly ash from cleanup devices at the end. This is either disposed of or, hopefully, sold as a byproduct.

The next overhead is just to give you the general location of the proposed project, in case you aren't real familiar.

There's the generating station (indicating). Some of the major landmarks, we've got Interstate 95 right over here (indicating), and the Saint Johns River Power Park (indicating), and Heckscher Drive right there (indicating), and, if I can say this correctly, the Timucuan preserve, right in that area (indicating). Okay, next.

This is a computerized drawing. You saw a larger version outside, I hope. If not, you can still look at it later.

This shows the general area, what it looks

like at the station. And this is what the two new units would look like (indicating). Okay.

The next overheard just kind of, I wanted to give you an idea of what the land requirements were for the proposed project.

Once again, this figure is in the Draft EIS and there's more details there. The Power Park would be in this area up here (indicating), just to orient you.

I just wanted to point out the existing Power Block and where the proposed Power Block would be (indicating), along with some of the storage that will be used for ash storage (indicating). Okay.

Next, I'd like to give you some of the project characteristics, to give you an idea of the scale of the units we're talking about.

These are quantities that are input (indicating). And this is, like I said, just a brief summary.

You have your coal. We show numbers for the repowered Unit 2 and both units together -- it's just double of that -- and petroleum coke

(indicating).

The bottom, the Note, these numbers are given as if we were burning a hundred percent of either, because the proportion of coal burned versus petroleum coke burned hasn't been determined for the demonstration phase. This one says a hundred percent. We're evaluating burning either a hundred percent of either just to be conservative.

This shows output, showing the generating capacity in total megawatts: for the repowered Unit 2, 297.5. And repowered Units 1 and 2 would be double that.

Particulate emissions in tons per year, 121, 242. We also give oxides of nitrogen in tons per year, sulfur dioxide emissions in tons per year, and wastewater in millions of gallons per day.

There is a range due to transition between the units. And, also, ash, in 1,000 tons per year, showing the range, depending on fuel blends and other operating characteristics.

Next, I'd like to tell you a little bit about the issues we examined when we were writing the

Draft EIS, and some of these we did come up with based on input from the public at the Scoping Meeting that was held here before.

We have air quality, water quality and use, including thermal discharges, groundwater usage, floodplains, wetlands, hydrogeology, storm surge, human health and safety, pollution prevention, waste management, ecological resources, including terrestrial and aquatic, biodiversity, threatened and endangered species, cultural resources, socioeconomics, including environmental justice, transportation, noise, and land use and aesthetics.

Next, I'd like to do a quick summary of the expected environmental impacts if we were to implement our proposed action.

With air quality, temporary localized increases in gaseous pollutants and fugitive dust during construction would be expected.

No detectable changes in ozone concentrations would be expected.

There'd be some variation in results over time for particulate, oxides of nitrogen and sulfur

dioxide concentrations, including slight degradations in certain areas under certain conditions, and slight improvements in certain areas under certain conditions.

That's another area where there's more information on this in the draft. I'm just trying to give you a summary at this point.

Cancer risk was calculated from carcinogenic substances, and it was conservatively estimated to be one in a million.

Next, we have water quality and usage. Temporary, localized increases in turbidity from construction would be expected.

An increase in usage of noncontact cooling water of 203 million gallons per day, most of which is returned to the Saint Johns River.

No difference in the size of the thermal plume from cooling-water discharge due to increased discharge velocity, and a ten-percent decrease in groundwater drawn from the upper Floridan Aquifer, based on a JEA commitment.

For ecological resources, there'd be a

loss of 28 acres of pine plantation and 10 acres of upland hardwood-pine habitat, and a small net gain in wetlands area due to mitigative measures such as using wetlands credits.

Biodiversity would not be measurably affected, based on our studies.

Threatened and endangered species, our main species of concern is the manatee, but we also looked at the gopher tortoise, various sea turtles, and shortnose sturgeon.

Mitigative measures would eliminate or minimize any impacts to these. For example, the design of the dock would minimize the possibility of manatees being crushed, if there were a ship there and manatees happened to be there.

Cultural resources, there are culturally significant sites that could be located near the proposed project.

We have here that JEA will conduct an archaeological survey prior to construction. I believe that's already been done at this point. And they're required to notify the appropriate agencies

upon discovery of any artifacts.

Socioeconomic Resources, no appreciable impacts on local services are anticipated. And this is what we're talking about when we say environmental justice. No disproportionately high and adverse impacts of low-income and minority populations are expected, based on what we have seen.

Transportation. Localized traffic congestion is anticipated during construction. Rail traffic is not expected to increase, based on economic projections.

By this, we mean that the cost from shipping by rail is not projected...we're not expecting to use rail, based on the costs that they have now.

Should economic conditions change, rail traffic could increase by up to three additional train deliveries per week, which could cause additional problems that some members of the public have mentioned, including noise, vibration, and blocked roads, access to emergency vehicles, that type of thing. No impacts to marine traffic are

anticipated.

Next, we have noise. Some construction noise would exceed the city limits ordinance levels of 65 decibels.

Intermittent construction noise of up to 99 decibels is possible at some nearby residences, based on our studies.

JEA has said that they would use a public-awareness plan to try to mitigate noise effects. Based on our analysis, operational noise would not be expected to be noticeably different than current noise levels if the project is implemented.

Transportation noise from worker vehicles during construction or trains, if they were used for transporting fuel, could affect nearby residents.

That's the end of the summary of the environmental impacts. It is a very small summary, but, if you want more information, like I said, look to the draft or, you know, ask us.

Next, I wanted to go over the NEPA schedule. A Notice of Intent to prepare an Environmental Impact Statement was put in the Federal

Register on November 13th, 1997.

And a Public Scoping Meeting was held in Jacksonville, Florida, on December 3rd, '97. As I said, we did receive several comments, which we've used in preparation of the Draft EIS.

The Draft EIS was released on August 27th of this year. And we tried to have a Public Hearing on September 16th, but Hurricane Floyd was against it. So we rescheduled for today. I'm glad that some of you could still come.

There's a 45-day public comment period associated with the Draft EIS, and that comment period closes on October 15th of this year. So we need to have your comments by October 15th, or to have them postmarked by October 15th.

We will do our very best to address comments received after that time, but, with our schedule, we may not be able to. So, if you want to be certain to have your comment addressed, get it to us or have it postmarked by October 15th.

The Final EIS will be released later this year. When will depend a lot on the amount of

comments that we get.

So far, we've gotten about six written comments from the public. And that's a relatively small amount. It will depend on how long it will take for us to address those.

We will address all comments received in the Final EIS. They will be written out, with a response. Let's see.

The Record of Decision will then be published one month after the Final EIS is published. And, in that Record of Decision, DOE will make the decision whether or not we proceed with our proposed action, which is to provide the funding to JEA.

The next thing I have is how to provide comments. That's my name and address. This is my work 'phone number (indicating). I also have voice mail there. If you need it to get any of these documents or you just have some questions you want to talk about or give comments, that's the number to call.

There's also an 800 number. That has voice mail only, but, if you leave comments there, we

will transcribe them and put them in the EIS.

Fax, e-mail (indicating), comment in any way and we'll appreciate your comments and do our very best to address them. Next.

Next I want to tell you, if you want to speak at this hearing, how to do that. Speakers who have registered first get to speak first. Everyone else may speak on a first-come basis.

We haven't had anyone registered yet. So lucky you, whoever you are, you can be the very first one. We were going to limit people to ten minutes per speaking session just to make sure everyone gets a chance to talk. It looks like we may have plenty of time here. Anyway, if you want to speak, we'll stay as long as you want to speak.

We may answer limited questions in order to clarify issues, if you have specific questions. But I do want to make sure you understand that the expectation is that your comments will be studied, and we will address them, for the most part, in the Final EIS.

We will do our best to answer what

questions you have, if we can clarify something. But most of them will be addressed in the Final EIS.

Transcripts of this hearing will be available in the public reading rooms. Your local reading room is the Highlands Branch Library on Dunn Avenue. And we're being transcribed right now.

This is the end of my part of the presentation. I was told to keep it to thirty minutes or less, and I think I did that.

I will ask, if you want to speak, we need you to state your name and then to spell your last name so that we can get it correct in the transcripts, and also to give your affiliation.

I would say, still, that we do have several JEA people. If you didn't get to talk to someone you wanted to talk to out front, I think we'll be able to, at the end of the hearing, also discuss things, if you want.

And there are also some other documents out front you might want to get a copy of.

So, with that, I'm going to turn the lights on, and then we'll see if anybody wants to

talk. Here's the microphone for whoever wants to speak first (indicating). Anybody?

Is there anything anybody would like to make a comment on or needs clarification on? Because we're staying until nine o'clock, no matter what. Of course, you don't all have to.

DOT MATHIAS: Well, I guess I have a comment. It's just a commendation, really. My name is Dot Mathias, M-a-t-h-i-a-s. And I reside at 341 Basin Road, here in Jacksonville. T-1

I'm the first vice-president for the Northside Civic Association, which is the governmental affairs chairman, also.

I would just like to say that probably the reason that we don't have any comments and that you're not having a hue and cry from the public is because JEA has worked so closely with the community, and we're very deeply appreciative, you know, of that.

We've had our meetings in the north Jacksonville area, and they have certainly answered a lot of our questions and our concerns. And that

means a lot to a community, particularly when you're building a coal-fired plant in the area.

So we have been very, very grateful to them for meeting with us, because any questions that we had at that time, I think they have allayed our fears with them. And thank you so much.

LISA HOLLINGSWORTH: Thank you. I appreciate that. And I'm sure they do, too.

If you can think of a question, we'd love to hear it. Sometimes at these hearings, you know, you have a large number of people, a hundred or more, and sometimes you spend two hours or more fielding comments and questions, and sometimes you have two or three meetings.

(Recess from 7:40 to 8:15 p.m.)

LISA HOLLINGSWORTH: Hi, everybody. It's now 8:15. Since we don't have any new speakers, I'd like to thank you all for coming. And we're going to adjourn this Public Hearing. Thanks.

(Whereupon, at 8:15 p.m., the Public Meeting was concluded.)

- - -

CERTIFICATE

STATE OF FLORIDA)

COUNTY OF DUVAL)

I, Gayle J. Featheringill, CVR-CM-PNSC, certify that I was authorized to and did report the foregoing proceedings and that this transcript is a true and complete record of my notes taken therein.

DATED this 6th day of October, A.D. 1999.

_____

GAYLE J. FEATHERINGILL, CVR-CM-PNSC

COMMENTS AND RESPONSES
FROM THE PUBLIC HEARING
ON THE DRAFT EIS FOR THE
PROPOSED JEA CIRCULATING
FLUIDIZED BED COMBUSTOR PROJECT
JACKSONVILLE, FLORIDA

September 30, 1999

Commenter: Dot Mathias, Northside Civic Association, 341 Baisden Road, Jacksonville, FL 32218

Comment T-1, pp. G-28–29:

"Well, I guess I have a comment. It's just a commendation, really. My name is Dot Mathias, M-a-t-h-i-a-s. And I reside at 341 Basin [sic] Road, here in Jacksonville.

I'm the first vice-president for the Northside Civic Association, which is the governmental affairs chairman, also.

I would just like to say that probably the reason that we don't have any comments and that you're not having a hue and cry from the public is because JEA has worked so closely with the community, and we're very deeply appreciative, you know, of that.

We've had our meetings in the north Jacksonville area, and they have certainly answered a lot of our questions and our concerns. And that means a lot to a community, particularly when you're building a coal-fired plant in the area.

So we have been very, very grateful to them for meeting with us, because any questions that we had at that time, I think they have allayed our fears with them. And thank you so much."

Response:

Comments noted.

PART 2

WRITTEN COMMENTS
AND
RESPONSES

Letter No. 1

Reproduced from copy submitted

8/27/99

Dear Lisa,

thank you again for the opportunity to participate with the US Dept. of Energy.

The goal is of course to provide energy and to protect life. Life requires water and air, as clean as the day we used it. I will coincide we are not yet ready to do better than that.

It is unacceptable (expected response ha!) to put anything in to the St. Johns River unless it is of a better quality than what you took it out. And because you are introducing water for energy exchange into an actuary, and at this time the chemistry of the organic matter is not stable in an industrialized water body, adding heat and possible refined levels of poison is unacceptable.

In the climate of political and human intervention to the impact of industrial co- ownership of the environment we should be striving to make a statement of a higher value of a foundation of expected behavior. It is unacceptable in 2000 + to be introduction any foreign bodies in to the river. 1-1

Water use should be considered a machine and it is owned and re-used until it needs replacing. The goal of steward-ship of water is to keep it usable.

Water at the proposed plant should be re-cycled and cooled with out the introduction or use of the river. It can be cooled by more water ground depth and you can use up some free units of power from Ga. Power and Light. If the re-fitting was done with the intent to be a front runner in technology.. there would have been gov. grants available. And the power grid would have been part of the plan. 1-2

In the future technology will be looked at as an all or nothing proposal for energy. All for the extension of a quality resource. Air and water are going to be protected first. Why spend more $$ later. You know the water and air standards are going to change. I hope this plant will continue to consider it's self a good neighbor.

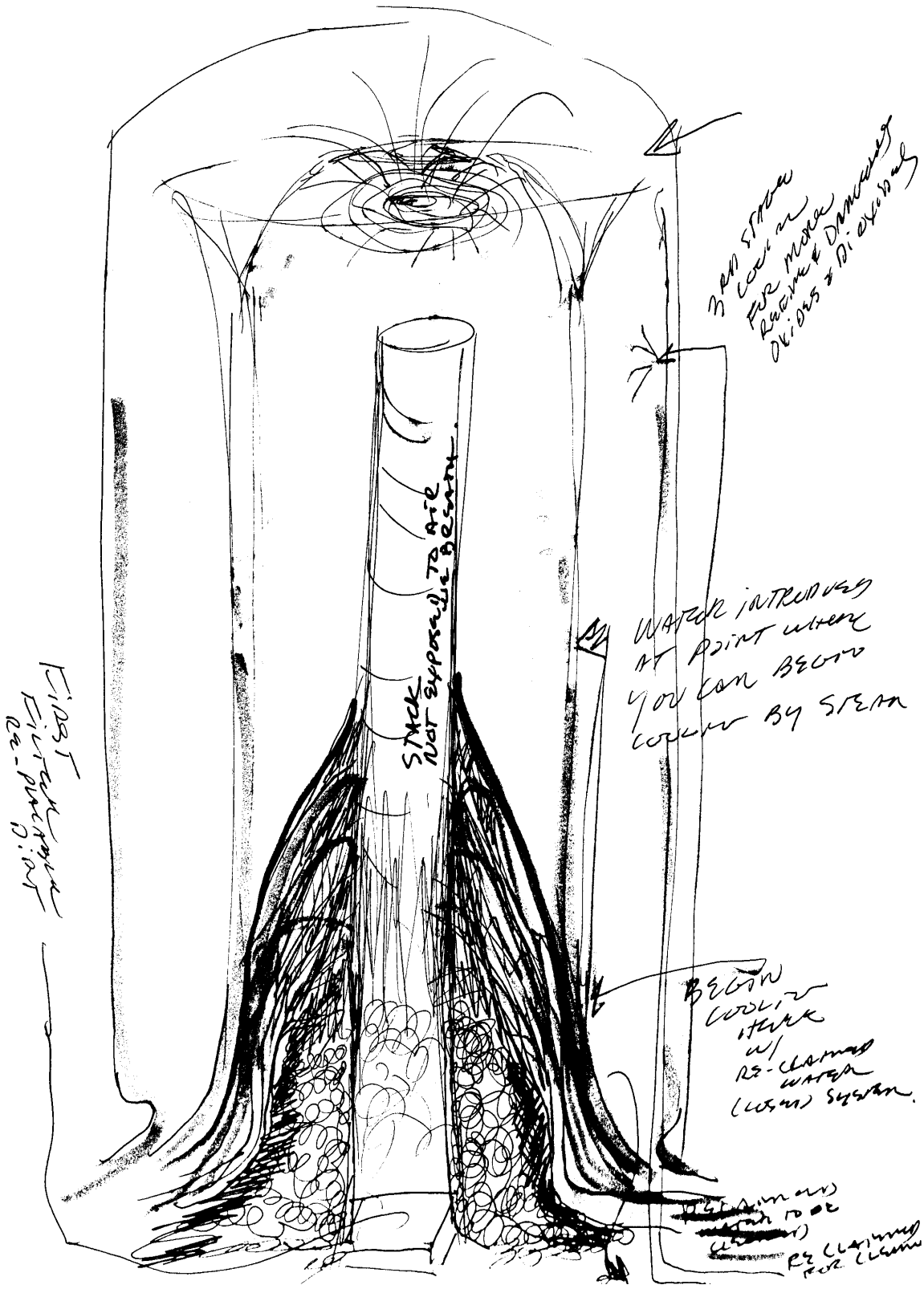
Just a philosophical note: The Dept. Of Energy will be subservient to NASSA, unless that is the National Design, by limiting the concept of energy to all roads lead to ELECTRICITY.

Sincerely,

Pat Pillmore

Pat Pillmore
996 Camelia St., Atlantic Beach, Fla. 32233

cc: Don Donaldson
John Delaney, Mayor of Jacksonville Fla.


STACK NOT SUPPORTED TO AIR HEATER
WATER INTRUDES AT POINT WHERE YOU CAN BEGIN COOLING BY STEAM
BEGIN COOLING HEATER W/ RE-CLAIMED WATER

Letter No. 1

Pat Pillmore, 996 Camelia Street, Atlantic Beach, Florida 32233

Comment 1–1:

"It is unacceptable (expected response ha!) to put anything in to the St. Johns River unless it is of a better quality than what you took it out [sic]. And because you are introducing water for energy exchange into an actuary [sic], and at this time the chemistry of the organic matter is not stable in an industrialized water body, adding heat and possible refined levels of poison is unacceptable.

In the climate of political and human intervention to the impact of industrial co-ownership of the environment we should be striving to make a statement of a higher value of a foundation of expected behavior. It is unacceptable in 2000 + to be introduction [sic] any foreign bodies in to the river.

Water use should be considered a machine and it is owned and re-used until it needs replacing. The goal of steward-ship of water is to keep it usable.

Water at the proposed plant should be re-cycled and cooled with out the introduction or use of the river."

Response:

As discussed in Section 4.1.3.2 of the EIS, the proposed project would increase the quantity of cooling water taken from the St. Johns River (however, not above permitted quantities). If Unit 2 is repowered, the entire 3-unit plant would withdraw 827 Mgd (574,000 gpm) from the back channel of the river. This would be approximately the same rate at which cooling water was used when the three units operated together from approximately 1978 until 1980. The sustained flow of the back channel would not be depleted by this diversion because 815 Mgd (566,000 gpm) would be returned to the river after passing through the condensers. The tidal movement of seawater to and from the Atlantic Ocean, located about 10 miles east of Northside Generating Station, ensures that the facility would have a continuous supply of cooling water from the St. Johns River, even under conditions of prolonged drought.

Although the rate at which the cooling water would reject heat to the St. Johns River would increase from the current operating level, the size of the thermal plume would not increase because the simultaneous operation of all three units would increase the discharge velocity, which would promote mixing and heat dissipation. The thermal plume would be approximately the same size as when all three units operated at full capacity from 1978 until 1980. The

temperature and total surface area of the thermal plume would not exceed the regulatory limits defined in the NPDES permit.

Several measures are being implemented to minimize liquid discharges associated with the proposed project. Runoff from facilities that would be built for the proposed project would be used in plant processes or routed through detention basins equipped with baffles or oil skimmers prior to being discharged at stormwater outfalls. The detention basins would reduce the maximum rate of stormwater discharge by increasing the length of time during which the discharge occurred. The baffles or oil skimmers would collect contaminants such as oil and grease that float on top of the stormwater. Accidental spills from the proposed facility would be cleaned up in a timely manner in accordance with a spill prevention, control, and countermeasure plan and the best management practices plan for the facility. The rapid cleanup of an accidental spill would minimize runoff into San Carlos Creek or the back channel of the St. Johns River. Wastewater from processes such as demineralizer regeneration, boiler blowdown, and carbon purifier backwash would be routed to the chemical waste treatment facility. After being treated in this facility, most of the water would be reused within the scrubber and ash conditioning systems.

Comment 1–2:
"It can be cooled by more water ground depth [sic] and you can use up some free units of power from Ga. Power and Light. If the re-fitting was done with the intent to be a front runner in technology.. there would have been gov. grants available. And the power grid would have been part of the plan."

Response:
The suggested use of groundwater for cooling water would require expensive new infrastructure that would replace the existing infrastructure that withdraws water from the St. Johns River. The use of 827 Mgd (574,000 gpm) of groundwater for cooling water would run counter to the target established by JEA's management to reduce the total annual groundwater consumption of Northside Generating Station by 10%, as compared to 1996 levels. As discussed in Section 3.4.2.1 of the EIS, the potentiometric surface of the upper Floridan aquifer, from which Northside Generating Station currently withdraws groundwater from four deep wells, has been declining in northeastern Florida and is expected to continue to decline an additional 3 to 15 ft between 1995 and 2020 (based on projected increased groundwater use). Groundwater resources likely would be strained severely by the large increase in groundwater use associated with the action suggested in the comment. The use of cooling towers or cooling ponds would reduce the quantity of water required but would be expensive and/or could result in potentially significant

environmental impacts. Instead, cooling water for the proposed project would be drawn from the St. Johns River, as discussed in Section 4.1.3.2 of the EIS. Also, see response to Comment 1-1.

See response to Comment 5-3 for a discussion of the EIS's reasonably foreseeable scenario under the no-action alternative, in which JEA would purchase electricity from other utilities to meet JEA's projected demand rather than repowering Unit 2. Under the proposed action, DOE would provide approximately $73 million (about 24% of the total cost of approximately $309 million) to demonstrate CFB technology at Northside Generating Station.

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE

Southeast Regional Office
9721 Executive Center Drive North
St. Petersburg, FL 33702
(727) 570-5312, FAX 570-5517

AUG 30 1999 F/SER3:EGH

Ms. Lisa K. Hollingsworth
NEPA Document Manager
Federal Energy Technology Center
3610 Collins Ferry Road
P.O. Box 880
Morgantown, WV 26507 - 0880

Letter No. 2

Reproduced from copy submitted

Dear Ms. Hollingsworth:

This responds to your letter dated August 20, 1999 requesting review and comment on the U.S. Department of Energy's Draft Environmental Impact Statement (EIS) for the JEA Circulating Fluidized Bed Combustor Project, Jacksonville, Florida (DOE/EIS-0289). We previously commented on this project in June 1998.

The EIS acknowledges that "four or five *juvenile* (italics added for emphasis) loggerhead, Kemp's ridley, and/or green sea turtles were sighted (in the back channel of the St. Johns River) in the intake basin of the Northside Generating Station on one occasion during the summer of 1997." The EIS notes that Jacksonville Electric Authority (JEA) subsequently installed on the intake trash rakes a finer grid of mesh bars (welded wire screen on 6-inch centers contrasted to the old 12-inch centers) to reduce the possibility of sea turtle entrainment. We believe that the modification will exclude larger sea turtles, however, we believe that juvenile loggerheads and greens could still be entrained, and endangered Kemp's ridleys would very likely be entrained.

We suggest a further, small reduction (to 4-inch centers) in the size of the welded wire screen over the intake trash rakes. Turtle Excluder Devices (TEDs), required on shrimp trawlers operating in the Gulf of Mexico and Atlantic, use metal excluder grids (akin to trash rakes) with bar spacing not greater than 4 inches wide. This figure was arrived at based on statistical evidence that this minimum bar spacing would exclude (i.e., prevent from passing through the grid) most Kemp's ridley sea turtles which were inadvertently scooped up by shrimp trawl nets in the course of trawling operations. The turtles get out of the net through an escape opening cut into the net adjacent to the TED grid. 2-1

Since JEA has already indicated that it intends to regularly inspect the intake trash rakes to monitor any increased clogging and increase the frequency of cleaning if necessary, this seems like an eminently workable solution to the entrainment problem. We believe that the possibility that shortnose sturgeon may be entrained through a 4-inch grid is remote. Reducing the grid size to 4 inches would eliminate all our endangered species concerns.

We appreciate the opportunity to comment. If you have any questions, please call Eric Hawk or Bob Hoffman at (727) 570-5312.

Sincerely,

Charles A. Oravetz
Chief, Protected Resources Division

o:\section7\informal\fetc-sjr.doe
File: 1514-22 .m.3. DOE Florida 1999

Letter No. 2

Charles A. Oravetz, Chief, Protected Resources Division, United States Department of Commerce, National Oceanic and Atmospheric Administration, National Marine Fisheries Service, Southeast Regional Office, 9721 Executive Center Drive North, St. Petersburg, Florida 33702

Comment 2–1:

"We believe that the modification will exclude larger sea turtles, however, we believe that juvenile loggerheads and greens could still be entrained, and endangered Kemp's ridleys would very likely be entrained.

We suggest a further, small reduction (to 4-inch centers) in the size of the welded wire screen over the intake trash rakes. Turtle Excluder Devices (TEDs), required on shrimp trawlers operating in the Gulf of Mexico and Atlantic, use metal excluder grids (akin to trash rakes) with bar spacing not greater than 4 inches wide. This figure was arrived at based on statistical evidence that this minimum bar spacing would exclude (i.e., prevent from passing through the grid) most Kemp's ridley sea turtles which were inadvertently scooped up by shrimp trawl nets in the course of trawling operations. The turtles get out of the net through an escape opening cut into the net adjacent to the TED grid.

Since JEA has already indicated that it intends to regularly inspect the intake trash rakes to monitor any increased clogging and increase the frequency of cleaning if necessary, this seems like an eminently workable solution to the entrainment problem. We believe that the possibility that shortnose sturgeon may be entrained through a 4-inch grid is remote. Reducing the grid size to 4 inches would eliminate all our endangered species concerns."

Response:

As part of the Northside Generating Station dredging permit (199500468) issued by the COE on July 21, 1995, a special condition was incorporated that requires JEA to fully inspect the intake gates prior to each dredging activity and replace the gates if corrosion has caused holes in the trash rakes. This condition in the COE permit was in response to a U.S. Fish and Wildlife Service comment upon their review of the permit application in which they expressed concern about sea turtles entering the intake flume and becoming trapped. Also in response to their concern, JEA offered to install new trash rakes with attached epoxy-coated fence screen with 6-in. square openings to prevent juvenile sea turtles from entering the intake. The design features of the intake structures, including installation of the 6-in. centers, were discussed with Mr. Marc Epstein of the U.S. Fish and Wildlife Service, who felt that the screen size was adequate to exclude the turtles, and with the COE's Ms. Lois Obenchain. An informal agreement

was reached between JEA, the U.S. Fish and Wildlife Service, and the COE that resulted in the fabrication and installation of the new trash rakes and screen. JEA has committed to inspect and, if necessary, repair the screen consistent with the inspection requirements for the trash rakes in the COE permit (J. A. Leduc, JEA, personal communication to R. L. Miller, ORNL, February 10, 2000). JEA's commitment ensures that this equipment will be maintained in a condition adequate to exclude smaller turtles from entering the intake.

Even with the current 6-in. centers, the openings in the screens become rapidly clogged with biofouling marine organisms, resulting in a pressure drop across the intake. With three units operating using 4-in. screens, the pressure drop could limit the capability of the intake pumps. With a large pressure drop and during low tides, levels in the intake pump sumps could drop enough to cause a vortex condition, possibly resulting in pump damage or an inability to pump sufficient cooling water and/or causing overly elevated discharge temperatures. In addition, the water velocity at the intake would increase because the same amount of water would flow through a reduced area as a consequence of the marine growth buildup. Extensive maintenance would be required to prevent excessive marine growth buildup and the resultant pressure drop. Because of the above reasons and because there have been no observations or evidence that turtles have entered the intake after the installation of the 6-in. screens, no plans exist to reduce the mesh size at the intakes to 4 in.

TO: LISA K. HOLLINGSWORTH
NEPA DOCUMENT MGR.
FEDERAL ENERGY TECH CTR
FAX: 304 285-4403

LISA: MR. BEATTIE IS A PROFESSIONAL, PRACTICING GEOLOGIST AND WAS HAPPY TO REVIEW THIS DRAFT EIS FOR OUR AUDUBON CHAPTER AND THE FLORIDA WILDLIFE FEDERATION.

To: Sara Bailey- 904-287-1763 FAX: 904-230-1187
From: Don Beattie (904-287-0222)
Subject: Review of Draft EIS for JEA CFB combustor project
Date: 9-10-99

Letter No. 3

Reproduced from copy submitted

After a quick review of the subject EIS, here are some questions or concerns that I have.

1. Although the EIS indicates that a number of such power plants are operating or under construction (Table 1.3.1), all smaller than the proposed JEA plant, it does not provide any numbers based on operating experience to back up the claims that this plant will achieve the removal of SO2, NOx, and particulates as advertised. I believe that due diligence requires JEA and other local, state and federal agencies to request and review the operating experience of these other plants and satisfy themselves that this technology will offer an improvement over other technologies that are available, probably at a lower cost and less risk than a CFB plant. 3-1

2. It should be noted that the proposed plant will burn a fuel mixture (Bituminous coal and petroleum coke) different than any of the existing or planned plants using this technology. The EIS does not address the question of the effect, if any, of this fuel mixture on the design and operating characteristics of the plant. Will this introduce new practices that are untested? Does the mixture of these two fuels have to be carefully controlled and monitored to be sure that the limestone mixture in the bed interacts correctly with the fuel? A similar question can be asked concerning the use of the ammonia injected into the exhaust gas to assure that excess emission of ammonia to the atmosphere does not occur. Is there past experience to justify any conclusions on these matters or is it based on bench scale experiments? If the latter, my experience with technologies of this type is that as they are scaled up to large commercial units they encounter a steep learning curve usually requiring a lot of "tinkering" to obtain desired operations. In the worse case, some redesign may be required. If needed, is JEA prepared for a breaking-in period that may result in downtime? 3-2

3. The EIS suggests that the bottom ash and fly ash that will be produced can be converted to useful products. I recommend that a careful analysis be made of the <u>real</u> potential of finding customers for the ash products. If they don't exist, or will be difficult to find, then JEA must develop a satisfactory plan for disposal of the ash products. 3-3

4. The schematic, Fig. 2.1.9, shows chemical waste products discharging to a settling basin(s). It indicates that there would be an emergency overflow to the St. Johns River. What type of emergency would result in such a discharge and what would be the effect on the River? 3-4

Also, as for all power plants, the cooling water will be discharged into the River at an elevated temperature. The impact of this discharge is discussed on page 4-28 and is stated to be "approximately the same size as when all three units operated at full capacity from 1978 until 1980". I suggest that this impact be carefully examined; what may have been acceptable 20 years ago may not be today in view of more recent developments along the River and environmental concerns for the health of the River. 3-5

Letter No. 3

Don Beattie, Geologist, Audubon Chapter and the Florida Wildlife Federation

Comment 3–1:

"Although the EIS indicates that a number of such power plants are operating or under construction (Table 1.3.1), all smaller than the proposed JEA plant, it does not provide any numbers based on operating experience to back up the claims that this plant will achieve the removal of SO2, NOx, and particulates as advertised. I believe that due diligence requires JEA and other local, state and federal agencies to request and review the operating experience of these other plants and satisfy themselves that this technology will offer an improvement over other technologies that are available, probably at a lower cost and less risk than a CFB plant."

Response:

Foster Wheeler Corporation, which would perform the design, engineering, procurement, and construction of the CFB combustor for the proposed project, is one of the world's largest manufacturers of CFB equipment. Foster Wheeler's guarantees for the CFB technology are based on commercial-scale data. See response to Comment 3-2 for a general discussion of CFB commercial-scale operating experience.

With regard to SO_2 emissions, there has been considerable operating experience with CFB technology at the 85–90% level of SO_2 capture that is proposed for the project. The capture of the additional sulfur in the polishing scrubber to achieve an overall SO_2 removal rate of 98% is expected to be readily attainable because scrubbers are commonly used alone for 90% SO_2 capture. The combined use of a CFB combustor with a polishing scrubber increases the overall ability of the system to meet SO_2 emission limitations. For NO_x emissions, Foster Wheeler is confident that the guaranteed level can be met because test data show that NO_x emissions are much less than 100 ppm using ammonia injection. For particulate emissions, Wheelabrator Air Pollution Control has provided test data from a coal-fired power plant that utilizes a pulse-jet fabric filter similar to the design for the proposed project (if a fabric filter is used rather than an electrostatic precipitator). The test data substantiated the proposed design: stack emissions using EPA method 201A were below the detection level, and the actual emissions were less than allowed for the proposed project.

With regard to cost, in a comparison using low-quality fuels, CFB technology currently costs less than a conventional pulverized-coal unit with a scrubber. For high-quality fuels, CFB technology costs about the same as a conventional system.

Comment 3–2:
"It should be noted that the proposed plant will burn a fuel mixture (Bituminous coal and petroleum coke) different than any of the existing or planned plants using this technology. The EIS does not address the question of the effect, if any, of this fuel mixture on the design and operating characteristics of the plant. Will this introduce new practices that are untested? Does the mixture of these two fuels have to be carefully controlled and monitored to be sure that the limestone mixture in the bed interacts correctly with the fuel? A similar question can be asked concerning the use of the ammonia injected into the exhaust gas to assure that excess emission of ammonia to the atmosphere does not occur. Is there past experience to justify any conclusions on these matters or is it based on bench scale experiments? If the latter, my experience with technologies of this type is that as they are scaled up to large commercial units they encounter a steep learning curve usually requiring a lot of "tinkering" to obtain desired operations. In the worse case, some redesign may be required. If needed, is JEA prepared for a breaking-in period that may result in downtime?"

Response:
Operation of the proposed project would draw upon Foster Wheeler's considerable experience with co-firing fuels, particularly coal and petroleum coke (e.g., a 30-MW CFB unit for the Ft. Howard Paper Company in Rincon, Georgia, that came on-line in 1988, a 20-MW CFB unit for the city of Manitowoc, Wisconsin, that began operation in 1991). No problems are anticipated with sulfur capture and it is not expected that the co-firing of fuels would introduce any major issues related to the distribution or mixing of fuels and limestone.

Additionally, it is not anticipated that the co-firing of fuels would increase the difficulty of using ammonia injection to limit NO_x emissions. As discussed in Section 2.1.3 of the EIS, the proposed project would use a selective non-catalytic reduction system to further reduce NO_x emissions. Aqueous ammonia, the reagent for this system, would be injected into the CFB combustor exhaust gas to convert NO_x emissions to nitrogen gas and water via a chemical reduction reaction. Atmospheric emissions of ammonia can occur if the amount supplied to reduce NO_x in the flue gas is not used up (ammonia slip). However, excess ammonia in the stack gas can typically be reduced to a level in the parts per million by optimizing the amount of ammonia that is injected. For the proposed project, stack emissions of ammonia slip would not exceed 40 ppm. Also, see response to Comment 3-1.

Over 100 CFB combustion boilers have been installed and are operating throughout the world, primarily in Europe, Asia, and North America. The following discussion highlights the steady scale-up in the size of the units that has occurred with time. The first commercial-scale CFB boiler, which was 5 MW in size, began operation in Finland in 1979 using wood waste and peat

as fuel. During the early 1980s, CFB boilers increased in size and gained acceptance for power generation, particularly in cogeneration applications in which industries used both electricity and steam. For example, a 20-MW unit began cogeneration in Finland in 1981 using peat and coal as fuel. These smaller boilers proved the readiness of CFB technology for coal-fired boiler applications. The scale-up continued in the 1980s to accommodate the interest of utilities in larger boilers. In 1987, a 110-MW coal-fired CFB unit began generating electricity in Colorado to demonstrate the technology at the smaller end of the utility scale. The unit demonstrated that the technology would burn coal efficiently, would accept variations in coal quality without lowering the boiler capacity, and would effectively control SO_2 and NO_x emissions. The next major scale-up occurred using a 165-MW coal-fired CFB unit in Nova Scotia in 1993. Then a 250-MW coal-fired CFB unit began operation in France in 1996, and two 235-MW lignite-fired CFB units came on-line in Poland in 1998. The proposed 297.5-MW project would take the next step in size by evaluating the viability of CFB combustion technology within the range that is most desired by utilities (250 to 400 MW). During the 2-year demonstration period, it is expected that the proposed project may encounter downtime as part of evaluating and improving its performance.

Comment 3–3:
"The EIS suggests that the bottom ash and fly ash that will be produced can be converted to useful products. I recommend that a careful analysis be made of the real potential of finding customers for the ash products. If they don't exist, or will be difficult to find, then JEA must develop a satisfactory plan for disposal of the ash products."

Response:
See response to Comment 11-6. Section 5 of the EIS discusses disposal options in the event that additional disposal space were required because of the 40-acre storage site (cells I and II combined) being filled to capacity.

Comment 3–4:
"The schematic, Fig. 2.1.9, shows chemical waste products discharging to a settling basin(s). It indicates that there would be an emergency overflow to the St. Johns River. What type of emergency would result in such a discharge and what would be the effect on the River?"

Response:
The water from the chemical waste treatment system currently discharges to settling basins and then most of it passes into evaporation/percolation ponds (Figure 2.1.9 of the EIS). The

emergency overflow to the St. Johns River consists of a concrete spillway from the ponds. During periods of excessive rainfall, the spillway allows for overflow to prevent the size of the ponds from exceeding safe levels such that the earthen berms could be subject to failure. Although rarely used (e.g., not in the last 4 years), the overflow has been authorized in JEA permits since 1985 during construction of the chemical waste treatment system. During the infrequent discharges, relatively clean water is released because its composition is primarily rainwater. Consequently, the effect of these discharges on the St. Johns River is not detectable, especially because the runoff of excessive rainfall increases the volume of the river so that enhanced dilution of the discharges occurs.

After repowering both Units 1 and 2, the chemical waste treatment system and settling basins would be handling more water, but most of the water would be re-used and would not enter the evaporation/percolation ponds. Specifically, the average flow of water to the ponds would decrease from the current 286 gpm (Figure 2.1.9) to 48 gpm (Figure 2.1.8). Consequently, the probability of discharge from the spillway would be reduced compared to the existing probability.

For the NPDES permit, however, JEA was required to develop a scenario for overflow from the evaporation/percolation ponds. The scenario involved runoff from the proposed ash storage area to the chemical waste treatment system during a 24-hour storm event that would occur, on average, only once in 25 years. This scenario assumed that the re-use system could not handle all of the flow from the chemical waste treatment system and the excess would be discharged to the evaporation/percolation ponds, which would raise their level. Assuming rainy conditions persist, ground saturation would prevent the ponds from operating normally and an overflow from the spillway would occur if the rainfall were sufficiently heavy. In this unlikely event, the discharge water would be relatively clean because its composition primarily would be rainwater. Consequently, the effect of the discharge on the St. Johns River would not be detectable, particularly considering the reasons given earlier in this response regarding the increased volume of the river.

Comment 3–5:
"Also, as for all power plants, the cooling water will be discharged into the River at an elevated temperature. The impact of this discharge is discussed on page 4-28 and is stated to be 'approximately the same size as when all three units operated at full capacity from 1978 until 1980.' I suggest that this impact be carefully examined; what may have been acceptable 20 years ago may not be today in view of more recent developments along the River and environmental concerns for the health of the River."

Response:

JEA was originally authorized by the EPA in January 1977 to discharge the once-through cooling water from the three units at Northside Generating Station into the back channel of the St. Johns River. The facility was subsequently re-evaluated and the EPA reissued NPDES permits in November 1983, June 1989, and September 1994. All of these permit renewals authorized the discharge of once-through cooling water from the three units, even though Unit 2 has been out of service since 1983. The NPDES permit was then delegated to the state of Florida in June 1995.

In April 1997, JEA submitted a permit renewal application to the FDEP requesting renewal of the authorization for discharge of once-through cooling water from the three units. Both FDEP and EPA personnel review permit applications prior to final issuance, assuring full evaluations are conducted by both state and federal agencies. The new NPDES permit was issued on February 15, 2000. The permit expires on February 17, 2005.

During each permit renewal, the thermal discharge from the facility has been re-examined. As stated in the EIS (Section 3.3.4), the size of the thermal plume would not increase during three-unit operation because the simultaneous operation of all three units would increase the discharge velocity, which would promote mixing and heat dissipation. The facility would continue to operate under the thermal discharge limitations specified in the NPDES permit.

The EIS addresses potential biological and ecological effects of the thermal discharge from the proposed project (Section 4.1.6.2). No measurable effect on the biota of the area would be expected from the temperature and total area of the thermal plume regulated by the limits specified in the NPDES permit (Section 3.3.4).

Letter No. 4

Reproduced from copy submitted

Donivan Porterfield
PO Box 1417
Los Alamos, NM 87544

September 12, 1999

Ms. Lisa K. Hollingsworth
National Environmental Policy Act (NEPA) Document Manager
U.S. Department of Energy, Federal Energy Technology Center
3610 Collins Ferry Road
Morgantown, WV 26507-0880

Re: DOE NEPA EIS-0289

Dear Ms. Hollingsworth:

The comments below are in regard to EIS-0289, "Draft Environmental Impact Statement for the JEA Circulating Fluidized Bed Combustor Project". Before making comments specific to this draft EIS I would like to make three general comments.

1. The Adobe PDF File

In reading the Adobe PDF file for this EIS I encountered difficulty due to the fact that some text was lost in the conversion to the Adobe PDF format. This loss of text was due to the "Univers,Bold" font not being included in the Adobe PDF file. This loss primarily impacted document headings and page numbers. While I can understand this error in creation of the PDF file it is a little disappointing that it has not been caught or corrected as yet. I would hope in future that the Adobe PDF files be checked for this potential problem before being released to the public. 4-1

In the generation of Adobe PDF files it is possible to configure Adobe generating software to include the needed fonts in the resulting PDF file. While this can increase the Adobe PDF file size it insures the complete readability of the content. I would suggest that this practice be generally adopted in the generation of Adobe PDF files for public access.

2. Document Download

While on a general theme I would also like to make a suggestion on how DOE makes these Adobe PDF files available over the internet. Having the document broken into several Adobe PDF files (20 in the case of this draft EIS) makes for easy on-line access to the content when using a continuous internet connection. However, for those of us limited to dial-up connections it makes the process of downloading the entire document somewhat tedious. In addition to making the PDF files individually available I would like to suggest also providing the alternate of downloading a single 'self-extracting zip' file representing the entire set of Adobe PDF files. 4-2

3. Availability of References

In reviewing this draft EIS I was hindered in lack of access to referenced documents. In the case of radionuclides two references are provided: Weston 1995 and DOE 1995. In the case of the first reference I would expect some difficulty in obtaining a copy of the report from a consulting firm to a private client. In the case of the second reference I was not able to readily find this reference on the DOE NEPA web page or through the DOE Information Bridge resource. I believe that where a DOE report is used to insure the availability of that report through the public section of the DOE Information Bridge. With respect to non-DOE judgment should be utilized in using sources that may not be readily accessible to the public. 4-3

4. Radionuclide emissions (non-radon)

I'm somewhat disaponited with the coverage of radionuclide emissions in section 4 of the draft EIS. I would like to suggest the following changes be realized in the final EIS:

a. Provide a table of estimated isotope specific radionuclide emissions for this specific plant with reference to basis for these estimates. 4-4

b. Based on the mentioned modeling provide an estimate of both the maximum and median isotope specific activity (pCi/square meter) per year deposited at the 352 receptor locations within 6 miles of the CFB combustor stack. 4-5

c. Provide a table of estimated isotope specific radionuclide activity in the resulting ash by-product. 4-6

5. Radionuclide emissions (radon)

Beyond the resulting dose and lifetime risk quantity stated I believe the final EIS should also provide a measure of the resulting radon concentration in units of pCi/L for direct comparison to the EPA action limit of 4 pCi/L. This both in the maximum and medium for analyzed receptor sites. 4-7

6. Ash by-product, radon emissions

The potential for adverse impact from ash by-product radon emissions does not appear to be addressed in the draft EIS. I would suggest that this additional pathway for radon exposure be addressed. 4-8

7. Ash by-product, TCLP analysis

As part of the mentioned TCLP analysis of Northside Generating Station's CFB ash I would suggest the presence of radionuclides be determined in both the generic sense, gross alpha/beta, and isotope specific. 4-9

8. Carbon dioxide emissions

I believe it is mis-representative to minimize the carbon dioxide emissions of this plant be comparison to the amount emitted globally. I think a better perspective would be gained in comparison of the carbon dioxide emissions on a per capita basis to the population served. For example from the data provided in the EIS it appears that approximately 5 tons of carbon dioxide is emitted globally per person. Based on the anticipated carbon dioxide emissions of this plant it would represent approximately 400,000 persons. Is it anticipated that produced power would serve at least 400,000 persons? 4-10

I would also seem appropriate to address what if any mitigation could be undertaken to counter this amount of produced carbon dioxide. For example, by DOE and/or JEA acquiring additional credits of wetlands from the mentioned offiste mitigation bank or additional acres of the also mentioned undisturbed, uplands, maritime oak hammock. The amount acquired corresponding the area required to utilize the additional carbon dioxide emissions. 4-11

Sincerely yours,

Mr. Donivan Porterfield

Letter No. 4

Donivan Porterfield, P. O. Box 1417, Los Alamos, New Mexico 87544

Comment 4–1:

"In reading the Adobe PDF file for this EIS I encountered difficulty due to the fact that some text was lost in the conversion to the Adobe PDF format. This loss of text was due to the 'Univers,Bold' font not being included in the Adobe PDF file. This loss primarily impacted document headings and page numbers. While I can understand this error in creation of the PDF file it is a little disappointing that it has not been caught or corrected as yet. I would hope in future that the Adobe PDF files be checked for this potential problem before being released to the public.

In the generation of Adobe PDF files it is possible to configure Adobe generating software to include the needed fonts in the resulting PDF file. While this can increase the Adobe PDF file size it insures the complete readability of the content. I would suggest that this practice be generally adopted in the generation of Adobe PDF files for public access."

Response:

DOE regrets any inconvenience that online users may have experienced as a result of the problem described in the above comment that made the document more difficult to navigate and read. To make the draft EIS available to the public quickly, DOE decided to proceed with electronic publication of the document on its NEPA Website with the Univers special font used on headings because (1) it was extremely difficult to convert the Univers font into a Web-compatible format, and (2) the Univers font did not impede users from reading the substantive content of the document. For the final JEA EIS, this problem has been avoided by changing the font to a Web-compatible format.

Comment 4–2:

"While on a general theme I would also like to make a suggestion on how DOE makes these Adobe PDF files available over the internet. Having the document broken into several Adobe PDF files (20 in the case of this draft EIS) makes for easy on-line access to the content when using a continuous internet connection. However, for those of us limited to dial-up connections it makes the process of downloading the entire document somewhat tedious. In addition to making the PDF files individually available I would like to suggest also providing the alternate of downloading a single 'self-extracting zip' file representing the entire set of Adobe PDF files."

Response:
Because DOE NEPA documents frequently are very large, DOE has found that the needs of most users are best served when these documents are Web-published in smaller, more manageable files. The file lengths are selected to correspond with natural breaks (e.g., sections) in the documents. This approach of using multiple files prevents users from inadvertently exceeding the storage capacities of their computers. Depending on the users' preferred Portable Document Format viewer (e.g., Adobe Acrobat) and system configuration, the amount of time required to download a single large Portable Document Format file could prompt users to conclude that a selected document is not available. Nevertheless, DOE will consider the above suggestion of providing a single self-extracting zip file so that an entire EIS could be downloaded in one step. As another alternative for users who want a single electronic file, DOE often can provide documents in CD-ROM format upon request.

Comment 4–3:
"In reviewing this draft EIS I was hindered in lack of access to referenced documents. In the case of radionuclides two references are provided: Weston 1995 and DOE 1995. In the case of the first reference I would expect some difficulty in obtaining a copy of the report from a consulting firm to a private client. In the case of the second reference I was not able to readily find this reference on the DOE NEPA web page or through the DOE Information Bridge resource. I believe that where a DOE report is used to insure the availability of that report through the public section of the DOE Information Bridge [sic]. With respect to non-DOE [sic] judgment should be utilized in using sources that may not be readily accessible to the public."

Response:
DOE ensures that its EIS reference materials are reasonably available to the public by placing them in the public reading rooms listed in the EIS cover sheet, providing copies upon request, or assuring that the materials are generally available. In the EIS cover sheet and in the Notice of Availability for each EIS, DOE provides a contact person to whom requests for such information can be made. For the JEA EIS, the 1995 Weston report could have been and still can be obtained by submitting a request to the contact person, the JEA NEPA Document Manager. Regarding the second reference, DOE issued the *Final Environmental Impact Statement for the Proposed York County Energy Partners Cogeneration Facility* in May 1995, distributed it widely to interested parties, and placed it in the public reading rooms established for the project. An electronic version of this EIS is not available because it was published before DOE began to make NEPA documents available routinely on its NEPA Website. This EIS could have been and still can be obtained from the JEA NEPA Document Manager upon request.

Comment 4–4:
"Provide a table of estimated isotope specific radionuclide emissions for this specific plant with reference to basis for these estimates."

Response:
Fossil fuels and limestone contain naturally occurring radionuclides and their decay products. The quantities of radionuclides emitted during combustion are dependent upon the characteristics of the fuels and limestone, as well as their processing prior to combustion. Isotope-specific radionuclide emissions for the proposed project have not been estimated because the estimates would be very uncertain and because the isotope-specific lifetime cancer risks derived from these estimates would be even less than the extremely low risk estimated for total radionuclide emissions. The total radionuclide emissions for the facility were calculated based on emission factors proposed by the Florida Electric Power Coordinating Group that were submitted to the FDEP in April 1995, when the latter agreed to consider industry proposals for industry-specific emission factors in the absence of EPA-approved factors. The total radionuclide emissions for the repowered Northside Generating Station were estimated at 6.378 mCi/year using coal and petroleum coke (based on the proposed particulate limit of 0.011 lb/MBtu) and 0.006 mCi/year using No. 2 fuel oil.

As discussed in Section 4.1.2.2 of the EIS, detailed dose pathway analyses were performed (for a proposed facility very similar to the proposed project) for radionuclides in coal and limestone using two different approaches: measurement of radioactive species at an operating plant (Weston 1995)* and calculations based on coal analysis coupled with emission factors (DOE 1995). The estimated radionuclide emission rates for the similar facility were approximately 10 times greater than the estimated radionuclide emission rates given above for the proposed Northside facility. Assuming that typical risks associated with the proposed project would correspondingly be 10 times less than for the similar facility, the lifetime cancer risk (excluding radon gas) from the proposed project for the maximum exposed person was estimated to be in the range of 2 in 100 million (2×10^{-8}) to 2 in 10 million (2×10^{-7}). For radon, the dose was estimated in Section 4.1.2.2 of the EIS to be approximately 3×10^{-4} Frem per year, which is a lifetime risk of 1 in 100 billion (1×10^{-11}) (ICRP 1991).

*All references cited in this appendix are listed in Section 10.

Comment 4–5:
"Based on the mentioned modeling provide an estimate of both the maximum and median isotope specific activity (pCi/square meter) per year deposited at the 352 receptor locations within 6 miles of the CFB combustor stack."

Response:
Because isotope-specific radionuclide emissions for the proposed project have not been estimated, estimates of the isotope-specific concentrations in the ambient air and deposition at the receptor locations cannot be obtained from modeling. Consequently, the maximum and median isotope-specific deposition cannot be given. However, as discussed in the response to Comment 4-4, the isotope-specific lifetime cancer risks would be even less than the extremely low risk estimated for total radionuclide emissions.

Comment 4–6:
"Provide a table of estimated isotope specific radionuclide activity in the resulting ash by-product."

Response:
Limited data exist on radionuclide concentrations in coal combustion ash and isotope-specific radionuclide activity in the ash. One study that analyzed CFB by-products found gross alpha levels ranged from 0 to 17 pCi/g, gross beta levels ranged from 1.6 to 55 pCi/g, radium-226 levels ranged from 0.9 to 6.2 pCi/g, and uranium-235 levels ranged from 0 to 4 pCi/g (EPRI 1995a). Gross alpha and gross beta activities were below or within the range found in conventional pulverized-coal fly ash from bituminous and subbituminous coals. Radium-226 was within or slightly higher than the conventional range. For uranium-235, no range from conventional pulverized-coal fly ash was given for comparison.

Two other studies evaluated coal fly ash for radioactivity (EPRI 1992). The first study found that 6 of 12 fly ashes from western subbituminous and lignite coal had radium-226 activity levels above 5 pCi/g; the highest level measured was 10 pCi/g. In the second study, 69 samples of eastern and western fly ash were evaluated. Seven had values greater than 5 pCi/g; the highest level measured was 7 pCi/g. The mean specific activity for the fly ash was 3.7 pCi/g for eastern coal, 2.6 pCi/g for western coal, and 3.9 pCi/g for eastern and western lignites.

The Nelson Industrial Steam Company in Westlake, Louisiana, has analyzed hydrated CFB ash material from its permitted landfill to seek approval of the ash's use as embankment and/or base material for highway construction. Analysis of the material revealed that radium-226 ranged

from 3.1 to 4.3 pCi/g, less than the 5 pCi/g level in which the material can be used without unreasonable risk, as specified in Louisiana radiation protection regulations.

Comment 4–7:
"Beyond the resulting dose and lifetime risk quantity stated I believe the final EIS should also provide a measure of the resulting radon concentration in units of pCi/L for direct comparison to the EPA action limit of 4 pCi/L. This both in the maximum and medium [sic] for analyzed receptor sites."

Response:
Using an upper limit for radon emissions of approximately 175 mCi/year (DOE 1995) and an estimated dilution at the location of maximum exposure of about 6×10^{19} s/m^3 (the ratio of the maximum annual ground-level concentration in the ambient air calculated by the ISCST3 air dispersion model to the air emission rate), the maximum radon concentration would be approximately 3.3×10^{18} pCi/L. This value is about a hundred-millionth of the EPA action limit of 4 pCi/L. The median radon concentration for the ISCST3 receptors was estimated from the model results to be approximately 5.5×10^{19} pCi/L, which is about one-sixth of the maximum concentration. Therefore, this value is slightly greater than a billionth of the EPA action limit of 4 pCi/L.

Comment 4–8:
"The potential for adverse impact from ash by-product radon emissions does not appear to be addressed in the draft EIS. I would suggest that this additional pathway for radon exposure be addressed."

Response:
Because radon, which is a noble gas, is trapped within the matrix of the coal and petroleum coke, most of it would be released during the pulverizing operations. Small amounts would remain trapped in the fuel until combustion, when nearly all of the radon would be released into the exhaust gas stream rather than being collected in the ash.

Results from a study that analyzed 18 samples of fly ash from western and eastern coals indicated that all radon values obtained were below the federal EPA clean-up standard of 5 pCi/g (EPRI 1995b). This standard was established to limit the risk from inhalation of radon decay products and to limit gamma radiation exposure to members of the public in or near areas contaminated with uranium mill tailings.

Another study assessed the potential radiation exposure resulting from activities at coal-fired power plants in which workers are exposed to combustion ash (e.g., ash silo operation, ash handling, and baghouse maintenance) (EPRI 1995b). The study also evaluated the exposure encountered by workers during planned facility outages, as well as non-occupational exposure resulting from road construction using ash for roadbed or asphalt filler, sandblasting using ash as grit, the manufacture of building materials using ash, the presence of residents near ash disposal areas, and residents living in homes constructed from ash by-products. The study calculated the radium concentration necessary to produce an individual exposure level of 25 mrem per year. Radium, which is the parent of radon in the radioactive decay chain, is easier to measure because its half-life is 1,600 years while radon's half-life is less than 4 days. The level of 25 mrem was the draft exposure standard proposed by the Conference of Radiation Control Program Directors for naturally occurring radioactive material released to the environment. In all cases, to reach 25 mrem, the concentration of radium in coal combustion ash would need to be orders of magnitude greater than the highest radium concentration actually found. Therefore, even if the ash would contain a concentration equal to 5 pCi/g of radium, the dose received by those most exposed to the ash would be well below the health-based level of 25 mrem annual dose-equivalent to the whole body. The study focused on the annual dose-equivalent limit, rather than the concentration limit, because the model regulations are designed to protect public health, which is directly affected by the annual dose-equivalent limit.

Comment 4–9:
"As part of the mentioned TCLP analysis of Northside Generating Station's CFB ash I would suggest the presence of radionuclides be determined in both the generic sense, gross alpha/beta, and isotope specific."

Response:
As discussed in the response to Comment 4-6, radioactive characteristics of CFB combustion ash from the proposed project are expected to be similar to conventional pulverized-coal fly ash. Depending on the proportion of petroleum coke consumed, there could be lower concentrations of radionuclides in the ash because less uranium and thorium are present in the parent oil of petroleum coke than are present in coal. There currently is no regulatory requirement to evaluate the presence of radionuclides in CFB ash in a generic or isotope-specific sense. Gross alpha, radium-226, and radium-228 would be monitored for the ash storage area at the nearby surface water sampling location in accordance with the Class I landfill permit issued by the FDEP.

Comment 4–10:
"I believe it is mis-representative to minimize the carbon dioxide emissions of this plant be [sic] comparison to the amount emitted globally. I think a better perspective would be gained in comparison of the carbon dioxide emissions on a per capita basis to the population served. For example from the data provided in the EIS it appears that approximately 5 tons of carbon dioxide is emitted globally per person. Based on the anticipated carbon dioxide emissions of this plant it would represent approximately 400,000 persons. Is it anticipated that produced power would serve at least 400,000 persons?"

Response:
The analysis in Section 4.1.2.2 of the EIS indicates that the proposed CO_2 emissions are very large in terms of amounts released to the atmosphere (when compared with emissions of other gases), while the percentages are very small in comparison with U.S. and global CO_2 emissions. A comparison of CO_2 emissions on a per capita basis to the population served (Northside Generating Station would serve approximately 157,000 customers after both units are repowered) would be misleading because CO_2 emissions in the United States are about five times the global average on a per capita basis and because generation of electricity accounts for only about a third of CO_2 emissions from combustion of fossil fuels. However, based on the above comments, an additional evaluation is warranted that compares CO_2 emissions to the amount of electricity generated.

As a consequence of the proposed project, CO_2 emissions and power production would increase. The ratio of CO_2 emissions per MWh of electricity generated by the repowered units is estimated to be 0.98 tons per MWh (Table 2.1.1). Assuming that the ratio of CO_2 emissions per MWh of electricity generated from the existing Unit 3 is the same as the ratio for the existing Unit 1 (calculated from Table 2.1.1), the current amount of CO_2 emitted per MWh of electricity generated at Northside Generating Station is estimated to be 0.73 tons per MWh. Assuming that there would be no change in the existing capacity factors until the units are repowered and then the capacity factor for the repowered units would be 90%, it is estimated that the amount of CO_2 emitted per MWh of electricity generated would increase at Northside Generating Station to a ratio of 0.85 tons per MWh during the transition period after the Unit 2 repowering. The expected ratio would further increase after the Unit 1 repowering to 0.91 tons per MWh. The combined result of the proposed project and the related action would thus be an approximate 25% increase in the amount of CO_2 emitted per MWh generated at Northside Generating Station. This increase would be a result of using coal and petroleum coke in the repowered units whereas natural gas and fuel oil are currently used in the existing units.

This additional evaluation has been included in Section 4.1.2.2 of the EIS.

Comment 4–11:

"I [sic] would also seem appropriate to address what if any mitigation could be undertaken to counter this amount of produced carbon dioxide. For example, by DOE and/or JEA acquiring additional credits of wetlands from the mentioned offsite mitigation bank or additional acres of the also mentioned undisturbed, uplands, maritime oak hammock. The amount acquired corresponding [sic] the area required to utilize the additional carbon dioxide emissions."

Response:

Although mitigating the additional CO_2 emissions by acquiring additional land deserves consideration, a huge amount of land would be required to offset (to compensate entirely for) the additional CO_2 emissions. Based on Table 4.1.7 of the EIS and a rough estimate of the amount of carbon capable of being sequestered (removed from the atmosphere) in wetlands, it is estimated that 70,000 acres of wetlands would be required to offset the CO_2 emissions of the proposed project and 117,500 acres would be required to offset the CO_2 emissions of the proposed project in conjunction with the related action (taking credit for the elimination of emissions from the existing Unit 1). In other programs, DOE is studying the potential of mitigation measures, such as enhanced carbon sequestration in the oceans and enhanced carbon sequestration on land, to offset global CO_2 emissions but much more research and development are needed to determine the feasibility of these alternatives.

Mr. Thomas H. Beal
5238 River Park Villa Dr.
Saint Augustine, FL 32092-1402

FAX 904-284-1092 (DEDICATED LINE)
9-20-99

MS. LISA HOLLINGSWORTH FAX 304-285-4403
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360 COLLINS FERRY ROAD
P.O. BOX 880
MORGANTOWN, W.V. 26507-0880

Letter No. 5

Reproduced from copy submitted

RE: JEA EIS

1. PLEASE NOTIFY ME OF THE DATE, TIME & LOCATION OF THE CANCELLED 9-16-99 PUBLIC HEARING AT FCCJ IN JACKSONVILLE - DUE TO HURRICANE FLOYD.

2. PLEASE AUGMENT YOUR AUGUST 1999 DRAFT EIS BY RESPONDING TO THE ATTACHED FOUR CONCERNS PREPARED BY MR. DONALD A. BEATTIE OF 308 MILL POND COURT, FRUIT COVE, FL 32259 WITH WHICH I STRONGLY CONCUR. 5-1

3. PLEASE COMPARE THE FOUR COAL BURNING EXPERIENCES WITH START UP DATES OF 1990, 1994, 1996 & 1998 ON TABLE 1.3.1. (COPY ATTACHED) TO MR. BEATTIE'S CONCERNS. 5-2

THE 2ND PARAGRAPH OF EIS PAGE 2-4 SUGGESTS THAT THE THREE JEA UNITS HAVE BEEN UNABLE TO ACHIEVE MORE THAN 40% OF THEIR CAPACITY SINCE THEIR START UP IN 1966, 1972 AND 1977. WHY GAMBLE WITH FLUIDIZED BED TECHNOLOGY WHEN NATURAL GAS IS HERE? 5-3

TOM BEAL

PAGE 1 OF 4 PAGES

PAGE 2 OF 4 PAGES

1. Although the EIS indicates that a number of such power plants are operating or under construction (Table 1.3.1), all smaller than the proposed JEA plant, it does not provide any numbers based on operating experience to back up the claims that this plant will achieve the removal of SO2, NOx, and particulates as advertised. I believe that due diligence requires JEA and other local, state and federal agencies to request and review the operating experience of these other plants and satisfy themselves that this technology will offer an improvement over other technologies that are available, probably at a lower cost and less risk than a CFB plant.

2. It should be noted that the proposed plant will burn a fuel mixture (Bituminous coal and petroleum coke) different than any of the existing or planned plants using this technology. The EIS does not address the question of the effect, if any, of this fuel mixture on the design and operating characteristics of the plant. Will this introduce new practices that are untested? Does the mixture of these two fuels have to be carefully controlled and monitored to be sure that the limestone mixture in the bed interacts correctly with the fuel? A similar question can be asked concerning the use of the ammonia injected into the exhaust gas to assure that excess emission of ammonia to the atmosphere does not occur. Is there past experience to justify any conclusions on these matters or is it based on bench scale experiments? If the latter, my experience with technologies of this type is that as they are scaled up to large commercial units they encounter a steep learning curve usually requiring a lot of "tinkering" to obtain desired operations. In the worse case, some redesign may be required. If needed, is JEA prepared for a breaking-in period that may result in downtime?

3. The EIS suggests that the bottom ash and fly ash that will be produced can be converted to useful products. I recommend that a careful analysis be made of the real potential of finding customers for the ash products. If they don't exist, or will be difficult to find, then JEA must develop a satisfactory plan for disposal of the ash products.

4. The schematic, Fig. 2.1.9, shows chemical waste products discharging to a settling basin(s). It indicates that there would be an emergency overflow to the St. Johns River. What type of emergency would result in such a discharge and what would be the effect on the River? Also, as for all power plants, the cooling water will be discharged into the River at an elevated temperature. The impact of this discharge is discussed on page 4-28 and is stated to be "approximately the same size as when all three units operated at full capacity from 1978 until 1980". I suggest that this impact be carefully examined; what may have been acceptable 20 years ago may not be today in view of more recent developments along the River and environmental concerns for the health of the River.

PAGE 3 OF 4 PAGES

Table 1.3.1. Chronological list of existing and planned circulating fluidized bed combustors within and outside the United States with an electrical generating capacity of at least 150 MW

Location	Unit size (MW)	Number of units	Total capacity (MW)	Fuel	Start-up date
		United States			
Robertson Co., Texas	150	2	300	Lignite	1990
Taunton, Massachusetts	150	1	150	Coal	1998
Cumberland, Maryland	210	1	210	Bituminous coal	1999
Jacksonville, Florida	297.5	2	595	Bituminous coal, petroleum coke	2002
		Outside of the United States			
Orebro, Sweden	165	1	165	Coal	1990
Point Aconi, Canada	165	1	165	Coal	1994
Grenoble, France	250	1	250	Coal	1996
Turow, Poland	235	2	470	Brown coal, lignite	1998
Tonghae, Korea	220	1	220	Anthracite	1998
Tonghae, Korea	220	1	220	Anthracite	1999
Guyama, Puerto Rico	250	2	500	Bituminous coal	2000

Source: Charles and Rezaiyan 1997.

is to support the demonstration of innovative, coal-based technology, not for power production or meeting demands for electricity. The cost-shared contribution by DOE for the demonstration would help reduce the risk to the JEA team in developing CFB technology to the level of maturity needed for decisions on commercialization.

1.4.1 DOE's Need

Since the early 1970s, DOE and its predecessor organizations have pursued a broadly based coal R&D program for ensuring available and affordable energy supplies while improving environmental quality. This R&D program includes long-term activities that support the development of innovative, unproven concepts for a wide variety of coal technologies through the proof-of-concept stage. However, the availability of a technology at the proof-of-concept stage is not sufficient to ensure its

PAGE 4 OF 4 PAGES

JEA EIS

infrastructure would occupy about 75 acres of the property. The CFB combustor would be located immediately to the west of the existing Unit 3 on a section of the property that currently consists primarily of a covered parking lot for employees (Figure 2.1.3). Piping and related infrastructure would be constructed to link the new CFB combustor with the existing Unit 2 steam turbine.

Northside Generating Station has operated since November 1966 when the 297.5-MW Unit 1 came on-line. The 297.5-MW Unit 2 and the 564-MW Unit 3 started operation in March 1972 and June 1977, respectively. Unit 2 has been out of service since 1983 because of major boiler problems associated with the volume of its furnace being inadequate to accommodate the heat generated. The Unit 2 steam turbine is currently idle and the Unit 2 furnace and stack have recently been dismantled and removed. Units 1 and 3 currently operate at a capacity factor of between 30 and 40% because they are more costly to operate than other units in the JEA system. Northside Generating Station employs 265 people, including a pool of 105 operations workers and a pool of 126 maintenance workers who are stationed at Northside but are assigned daily tasks at other JEA facilities in addition to Northside. The remaining 34 workers at Northside are managers, engineers, and administrators for the JEA system of power plants.

All three units were designed with the capability of using both oil and natural gas for fuel. However, all units began operation with infrastructure capable of using No. 6 fuel oil only; Units 1 and 3 were modified later so that they can burn both natural gas and oil [No. 6 fuel oil or No. 2 fuel oil (diesel)]. Each unit has multiple burners that are capable of burning either natural gas or oil alone at any given time; fuel blending flexibility for each unit is attained by varying the number of burners using each fuel. Blending is dictated by economic and air emission considerations. Units 1 and 3 have no air pollution control with the exception of low-NO_x burners on Unit 3. Once-through cooling water is withdrawn from and discharged into the St. Johns River. In addition to Units 1 and 3, 4 diesel-fired 52.5-MW combustion turbines that operate to meet peak demand are located at Northside Generating Station.

In the mid-1970s, the U.S. Army Corps of Engineers (COE) designed and constructed a 40-acre dredge spoil area on Northside Generating Station property (Figure 3.4.2). The COE has used this area to dispose of sediment dredged from the bottom of the back channel of the St. Johns River (Figure 2.1.2). Periodic dredging to maintain channel depth has been conducted at the existing Northside Generating Station fuel oil unloading dock.

The adjacent St. Johns River Power Park (Figure 2.1.2), a power plant which has operated since 1986, is a joint venture between JEA and Florida Power & Light. JEA and Florida Power & Light each receive approximately 50% of the electricity generated. The twin 660-MW units are fueled with coal and petroleum coke, with coal comprising at least 80% of the fuel blend. The units were designed to use coal with a 4% sulfur content, but they currently are using 1% sulfur coal. Wet limestone scrubbers are used for SO_2 control, and electrostatic precipitators are used for particulate control. Currently, all of the gypsum (generated by the scrubbers) and bottom ash (produced by the combustors) is sold, as is some of the fly ash (captured by the electrostatic precipitators). The Power

Letter No. 5

Thomas H. Beal, 5238 River Park Villa Drive, St. Augustine, Florida 32092

Comment 5–1:

"Please augment your August 1999 Draft EIS by responding to the attached four concerns prepared by Mr. Donald A. Beattie of 808 Mill Pond Court, Fruit Cove, FL 32259 with which I strongly concur."

Response:

Mr. Beattie's concerns are communicated in Letter No. 3. See responses to Comments 3-1, 3-2, 3-3, 3-4, and 3-5.

Comment 5–2:

"Please compare the four coal burning experiences with start up dates of 1990, 1994, 1996 & 1998 on Table 1.3.1 (copy attached) to Mr. Beattie's concerns."

Response:

See response to Comment 3-2 for a general discussion of CFB commercial-scale operating experience, including the coal-fired units in Canada and France that are listed in Table 1.3.1 of the EIS.

Comment 5–3:

"The 2nd paragraph of EIS page 2-4 suggests that the three JEA units have been unable to achieve more that 40% of their capacity since their start up in 1966, 1972 and 1977. Why gamble with fluidized bed technology when natural gas is here?"

Response:

Units 1 and 3 at Northside Generating Station currently operate at a capacity factor of only 30 to 40% because they are more costly to operate than other units in the JEA system. As discussed in Section 1.4.2, JEA performed a detailed analysis of 12 alternatives involving construction and operation of electrical generating facilities and 6 alternatives involving power purchased from other utilities. The alternatives were ranked according to cost, and environmental and land use issues were also considered to ensure that the least-cost plans were socially and environmentally responsible. Based on these considerations, the most favorable plan to meet the future demand

for electricity was the repowering of Units 1 and 2 at Northside Generating Station. JEA has adopted this plan as their preferred approach to meet demand.

The proposed CFB combustor project was selected by DOE for demonstration in the Clean Coal Technology (CCT) Program as one of the projects that would best further the goals of the program. The primary goal of the CCT Program is to make available to the U.S. energy marketplace a number of advanced, more efficient, economically advantageous, and environmentally responsible technologies for coal utilization. Consequently, technologies using natural gas would not achieve this goal.

Two of the three reasonably foreseeable scenarios evaluated in the EIS under the no-action alternative (in which DOE would not provide cost-shared funding for the proposed CFB combustor project) involve using natural gas without repowering the existing Unit 2. In the first scenario, JEA would construct and operate a new gas-fired combined cycle facility at Northside Generating Station or at one of their other existing power plants and would continue operating the existing natural gas- and oil-fired Northside units. In the second scenario, JEA would purchase electricity from other utilities to meet JEA's projected demand and would continue operating the existing natural gas- and oil-fired Northside units. Table 2.3.1 presents a comparison of potential impacts between the proposed project and the scenarios under the no-action alternative.

DIVISIONS OF FLORIDA DEPARTMENT OF STATE
Office of the Secretary
Office of International Relations
Division of Elections
Division of Corporations
Division of Cultural Affairs
Division of Historical Resources
Division of Library and Information Services
Division of Licensing
Division of Administrative Services

MEMBER OF THE FLORIDA CABINET
State Board of Education
Trustees of the Internal Improvement Trust Fund
Administration Commission
Florida Land and Water Adjudicatory Commission
Siting Board
Division of Bond Finance
Department of Revenue
Department of Law Enforcement
Department of Highway Safety and Motor Vehicles
Department of Veterans' Affairs

FLORIDA DEPARTMENT OF STATE
Katherine Harris
Secretary of State

DIVISION OF HISTORICAL RESOURCES

Ms. Lisa K. Hollingsworth
U.S. Department of Energy
Federal Energy Technology Center
P.O. Box 880
Morgantown, West Virginia 26507-0880

September 30, 1999

Letter No. 6

Reproduced from copy submitted

RE: DHR Project File No. 996239
Cultural Resource Assessment Request
Draft Environmental Impact Statement (DEIS) for the
JEA Circulating Fluidized Bed Combustor Project
Jacksonville, Duval County, Florida

Dear Ms. Hollingsworth:

In accordance with the procedures contained in 36 C.F.R., Part 800 ("Protection of Historic Properties"), we have reviewed the referenced projects for possible impact to historic properties listed, or eligible for listing, in the *National Register of Historic Places*. The authority for this procedure is the National Historic Preservation Act of 1966 (Public Law 89-665), as amended.

We have reviewed the referenced draft environmental impact statement. We specifically reviewed sections 3.7 and 4.1.8, both dealing with Cultural Resources. We note that the project will have a cultural resource survey performed. The resultant survey report shall conform to the specifications set forth in Chapter 1A-46, Florida Administrative Code, and will need to be forwarded to this agency in order to complete the process of reviewing the impact of this proposed project on historic properties. Therefore, conditioned upon the JEA undertaking a cultural resource survey, and appropriately avoiding, minimizing, or mitigating project impacts to any identified significant archaeological or historic sites, the proposed project will have no effect on historic properties listed, or eligible for listing, in the National Register, or otherwise of historical or architectural value

6-1

If you have any questions concerning our comments, please contact Scott Edwards, Historic Preservation Planner, at 850-487-2333 or 800-847-7278. Your interest in protecting Florida's historic properties is appreciated.

Sincerely,

Laura A. Kammerer

for Janet Synder Matthews
State Historic Preservation Officer

JSM/Ese

R.A. Gray Building • 500 South Bronough Street • Tallahassee, Florida 32399-0250 • http://www.flheritage.com

❒ Director's Office (850) 488-1480 • FAX: 488-3355
❒ Archaeological Research (850) 487-2299 • FAX: 414-2207
☑ Historic Preservation (850) 487-2333 • FAX: 922-0496
❒ Historical Museums (850) 488-1484 • FAX: 921-2503
❒ Historic Pensacola Preservation Board (850) 595-5985 • FAX: 595-5989
❒ Palm Beach Regional Office (561) 279-1475 • FAX: 279-1476
❒ St. Augustine Regional Office (904) 825-5045 • FAX: 825-5044
❒ Tampa Regional Office (813) 272-3843 • FAX: 272-2340

Letter No. 6

Janet Snyder Matthews, State Historic Preservation Officer, Florida Department of State, Division of Historic Resources, 500 South Bronough Street, Tallahassee, Florida 32399-0250

Comment 6–1:

"We note that the project will have a cultural resource survey performed. The resultant survey report shall conform to the specifications set forth in Chapter 1A-46, Florida Administrative Code, and will need to be forwarded to this agency in order to complete the process of reviewing the impact of this proposed project on historic properties."

Response:

A cultural resources assessment survey of the proposed project site and a follow-up Phase II investigation were performed. Reports documenting their findings (Florida Archeological Services 1999a,b) that conformed to the specifications set forth in Chapter 1A-46, Florida Administrative Code, were sent to the State Historic Preservation Officer. In response, letters from the State Historic Preservation Officer dated July 28, 1999, and August 3, 1999 (Appendix B), describe the reports as complete and sufficient. The letters state that the proposed project would have no effect on culturally valuable sites if the potentially significant sites identified in the reports are avoided by any development activities. Because all potentially significant sites found on the JEA property are located outside the areas that would be disturbed by the proposed project, no adverse effect on culturally significant sites would be anticipated as a result of the proposed project. Sections 3.7 and 4.1.8 of the EIS have been revised to include the findings of these studies.

UNITED STATES DEPARTMENT OF COMMERCE
Office of the Under Secretary for
Oceans and Atmosphere
Washington, D.C. 20230

October 5, 1999

Ms. Lisa K. Hollingsworth
NEPA Document Manager
U.S. Department of Energy
Federal Energy Technology Center
3620 Collins Ferry Road
Morgantown, WV 26507-0880

Dear Ms. Hollingsworth:

Enclosed are comments on the Draft Environmental Impact Statement for JEA Circulating Fluidized Bed Combustor Project Jacksonville, Florida. We hope our comments can assist you. Thank you for giving us an opportunity to review this document.

Sincerely,

Susan Fruchter

Susan B. Fruchter
Acting NEPA Coordinator

Enclosure

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
Southeast Regional Office
9721 Executive Center Drive N.
St. Petersburg, Florida 33702
(727) 570-5317, FAX 570-5300

September 30, 1999 F/SER4:AM:rr

Letter No. 7

Reproduced from copy submitted

Ms. Lisa K. Hollingsworth
National Environmental Policy Act Document Manager
U.S. Department of Energy, Federal Energy Technology Center
3610 Collins Ferry Road
Morgantown, West Virginia 26507-0880

Dear Ms. Hollingsworth:

The National Marine Fisheries Service (NMFS) has reviewed the Draft Environmental Impact Statement (DEIS) for the JEA (formerly the Jacksonville Electric Authority) Circulating Fluidized Bed Combustor Project, in Jacksonville, Florida. The proposed project involves the Department of Energy providing cost-shared funding for the demonstration of circulating fluidized bed combustion technology at JEA's existing Northside Generating Station in Jacksonville, Florida.

Information contained in the DEIS indicates that the project area includes estuarine emergent wetlands. However, the NMFS cannot determine from the information contained in the DEIS regarding project construction and related mitigation whether there will be a net overall adverse affect to wetlands that support fishery resources of concern to the NMFS. Accordingly, we believe this is an opportune time to advise you of consultation requirements resulting from new legislation. In 1996, to further the conservation of marine fishery resources, Congress amended the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act). The amendment requires establishment of guidelines for the identification of Essential Fish Habitat (EFH) and the inclusion of EFH descriptions in fishery management plans. The Magnuson-Stevens Act also requires all Federal agencies to consult with the NMFS on measures to protect EFH when an agency proposes to authorize, fund, or undertake an activity which would adversely affect designated habitats. 7-1

The estuarine emergent wetlands in the project area have been identified as EFH. Accordingly, consultation is required pursuant to interagency coordination procedures specified by the NMFS in the 1997 Interim Final Rules to implement the EFH provisions of the Magnuson-Stevens Act (50 CFR Sections 600.805 - 600.930) if the Federal action agency determines that their activity may adversely affect EFH. The DEIS would be an appropriate place to document the results of this determination and any subsequent consultation, if required.

The amendments to the South Atlantic and Mid-Atlantic Fishery Management Plans, which identify EFH within the project area, have been approved by the Secretary of Commerce. With those approvals, the Department of Energy, and many other Federal agencies, became subject to the consultation requirements of the Magnuson-Stevens Act. To familiarize you and your staff with your consultation responsibilities, we are enclosing a document, prepared by the Southeast Region of the NMFS, entitled: *Essential Fish Habitat: New Marine Fish Habitat Conservation Mandate for Federal Agencies*. It provides background information, outlines consultation procedures, identifies EFH and managed fisheries, and references other data sources.

If you wish to discuss the attached document or have questions on consultation requirements or procedures, please call Mr. Rickey Ruebsamen of my staff at 727/570-5317.

Sincerely,

Andreas Mager, Jr.
Assistant Regional Administrator
Habitat Conservation Division

Enclosure

Essential Fish Habitat:

New Marine Fish Habitat Conservation Mandate for Federal Agencies

National Marine Fisheries Service
Habitat Conservation Division
Southeast Regional Office
9721 Executive Center Drive North
St. Petersburg, FL 33702
727/570-5317

February 1999
(revised 7/99)

Executive Summary

The 1996 amendments to the Magnuson-Stevens Fishery Conservation and Management Act (MSFCMA) set forth a new mandate for the National Marine Fisheries Service (NMFS), regional fishery management councils (FMC), and other Federal agencies to identify and protect important marine and anadromous fish habitat. The EFH provisions of the MSFCMA support one of the Nation's overall marine resource management goals - maintaining sustainable fisheries. Essential to achieving this goal is the maintenance of suitable marine fishery habitat quality and quantity. The FMCs, with assistance from NMFS, have delineated "essential fish habitat" (EFH) for managed species. As new FMPs are developed, EFH for newly managed species will be defined as well. Federal action agencies which fund, permit, or carry out activities that may adversely impact EFH are required to consult with NMFS regarding the potential effects of their actions on EFH, and respond in writing to NMFS or FMC recommendations. In addition, NMFS and the FMCs may comment on and make recommendations to any state agency on their activities which may effect EFH.

On December 19, 1997, interim final rules were published in the Federal Register (Vol. 62, No. 244) which specify procedures for implementation of the EFH provisions of the MSFCMA. These rules address, in detail, the coordination, consultation, and recommendation requirements of the MSFCMA. Measures recommended by NMFS or an FMC to protect EFH are advisory, not proscriptive.

Within the area encompassed by the NMFS Southeast Region, EFH has been identified for hundreds of marine species covered by 20 fishery management plans (FMPs), under the auspices of the Gulf of Mexico, South Atlantic, or Caribbean FMC or the NMFS. Generic FMP amendments delineating EFH for species managed by the three FMCs were completed in early 1999.

Wherever possible, NMFS intends to use existing interagency coordination processes to fulfill EFH consultations for Federal agency actions that may adversely affect EFH. Provided certain specifications are met, EFH consultations will be incorporated into interagency procedures established under the National Environmental Policy Act, Endangered Species Act, Clean Water Act, Fish and Wildlife Coordination Act, or other applicable statutes. If existing processes cannot adequately address EFH consultation requirements, appropriate new procedures should be developed in cooperation with the NMFS. Programmatic consultations may be implemented or General Concurrences may be developed when program or project impacts are individually and cumulatively minimal in nature. Moreover, NMFS will work closely with Federal agencies on programs requiring either expanded or abbreviated individual project consultations. An effective, interagency EFH consultation process is vital to ensuring that Federal actions are consistent with the MSFCMA resource management goals.

Essential Fish Habitat:

New Marine Fish Habitat Conservation Mandate for Federal Agencies

Introduction

This document has been prepared by the Southeast Regional Office of the National Marine Fisheries Service (NMFS) to provide an overview of the Essential Fish Habitat (EFH) provisions of the Magnuson-Stevens Fishery Conservation and Management Act (MSFCMA) and implementing rules. This primer provides a brief legislative and regulatory background, introduces the concept of EFH, and describes consultation requirements. Consistent with elements of the NMFS's National Habitat Plan, Strategic Plan, and Habitat Conservation Policy, this document is intended to: provide a mechanism for information exchange; foster interagency discussion and problem-solving; and enhance communication and coordination among the NMFS, regional fishery management councils (FMC), and affected state and Federal agencies. Ultimately, improved interagency coordination and consultation will enhance the ability of the agencies to sustain healthy and productive marine fishery habitats.

Legislative and Regulatory Background

The 1996 amendments to the MSFCMA (excerpted at Appendix 1) set forth a new mandate to identify and protect important marine and anadromous fisheries habitat. The FMCs, with assistance from NMFS, are required to delineate EFH in fishery management plans (FMP) or FMP amendments for all Federally managed fisheries. Federal action agencies which fund, permit, or carry out activities that may adversely impact EFH are required to consult with NMFS regarding potential adverse effects of their actions on EFH, and respond in writing to NMFS and FMC recommendations. In addition, NMFS is directed to comment on any state agency activities that would impact EFH.

The purpose of addressing habitat in this act is to further one of the Nation's important marine resource management goals - maintaining sustainable fisheries. Achieving this goal requires the long-term maintenance of suitable marine fishery habitat quality and quantity. Measures recommended to protect EFH by NMFS or a FMC are advisory, not proscriptive. An effective EFH consultation process is vital to ensuring that Federal actions are consistent with the MSFCMA resource management goals.

Guidance and procedures for implementation of the 1996 amendments of the MSFCMA were provided through interim final rules established by the NMFS in 1997 (50 CFR Sections 600.805 - 600.930). These rules specify that FMP amendments be prepared to describe and identify EFH and identify appropriate actions to conserve and enhance those habitats. In addition, the rules establish procedures to promote the protection of EFH through interagency coordination and consultation on proposed Federal and state actions.

EFH Designation

The MSFCMA requires that EFH be identified for all fisheries which are Federally managed. This includes species managed by the FMCs under Federal FMPs, as well as those managed by the NMFS under FMPs developed by the Secretary of Commerce. Applicable FMP authorities, along with some of the species covered by those FMPs, are listed in Appendices 2 - 5 for the major ecoregions of the NMFS Southeast Region. Species listed are those for which data were adequate to define and map EFH. The listed species under each FMC's authorities collectively occur throughout the areas managed by the respective FMCs, therefore, inclusion of species for which life history data are limited would not encompass a greater geographic area. Note that Appendix 3 lists species managed by the South Atlantic FMC, as well as some species managed by the Mid Atlantic FMC for which EFH has been identified to extend into the South Atlantic area.

EFH is defined in the MSFCMA as "...those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity." The rules promulgated by the NMFS in 1997 further clarify EFH with the following definitions: **waters** - aquatic areas and their associated physical, chemical, and biological properties that are used by fish and may include aquatic areas historically used by fish where appropriate; **substrate** - sediment, hard bottom, structures underlying the waters, and associated biological communities; **necessary** - the habitat required to support a sustainable fishery and the managed species' contribution to a healthy ecosystem; and **spawning, breeding, feeding, or growth to maturity** - stages representing a species' full life cycle. EFH may be a subset of all areas occupied by a species. Acknowledging that the amount of information available for EFH determinations will vary for each species, the rules direct the FMCs to use the best information available, and to be increasingly specific and narrow in their delineations as more refined information becomes available.

The areas designated as EFH by the Gulf of Mexico, South Atlantic, and Caribbean FMCs are generalized in Appendix 6. Additional sources of information, useful for preparing EFH assessments, and to further one's understanding of EFH designations and Federally managed fishery resources are available through the NMFS and FMCs. Appendix 8 provides citations for published Fishery Management Plan amendments and identifies web sites containing information on the MSFCMA, the NMFS interim final rules for the implementation of EFH designation and consultation provisions, and data on specific managed fisheries and associated habitats. NMFS and FMC points of contact are identified in Appendix 9.

The rules also direct FMCs to consider a second, more limited habitat designation for each species in addition to EFH. Habitat Areas of Particular Concern (HAPCs) are described in the rules as subsets of EFH which are rare, particularly susceptible to human-induced degradation, especially ecologically important, or located in an environmentally stressed area. In general, HAPC include high value intertidal and estuarine habitats, offshore areas of high habitat value or vertical relief, and habitats used for migration, spawning, and rearing of fish and shellfish. Areas identified by each of the three southeastern Fishery Management Councils as HAPC are presented in Appendix 7. For a complete description of designated HAPCs the reader should reference the appropriate FMP amendment. HAPCs are not afforded any additional regulatory protection under the MSFCMA; however, Federal actions with potential adverse impacts to HAPCs will be more carefully scrutinized during the consultation process and will be subject to more stringent EFH conservation recommendations.

Designating the boundaries of EFH has taken careful and deliberate consideration by the FMCs. The effort to identify and delineate EFH in the various fishery management plans was a rigorous process that involved numerous state and Federal agencies and the public at large. The Gulf of Mexico, South Atlantic, and Caribbean FMCs have produced a generic management plan amendment to designate EFH for all fisheries managed by each FMC. For general planning purposes, Figures 1 - 3 depict boundaries as a consolidation of all identified EFH within the Southeast Region of the NMFS. Reference should be made to each of the FMP amendments for a species-specific descriptions of EFH.

Besides delineating EFH, the FMP amendments produced by each of the three councils identify and describe potential threats to EFH, which includes threats from development, fishing, or any other sources. Also identified are recommend EFH conservation and enhancement measures. FMCs are required to implement management measures to minimize, to the extent practicable, any adverse impacts to EFH caused by fishing gears. Guidelines used in the development of EFH amendment sections for each of these issues are included in the EFH rules.

EFH Consultations

In the regulatory context, the most important provisions of the MSFCMA for conserving fish habitat are those which require Federal agencies to consult with NMFS when any activity proposed to be permitted, funded, or undertaken by a Federal agency may have adverse impacts on designated EFH. The consultation requirements in the MSFCMA direct Federal agencies to consult with NMFS when any of their activities may have an adverse effect on EFH. The EFH rules define an **adverse effect** as "any impact which reduces quality and/or quantity of EFH...[and] may include direct (e.g., contamination or physical disruption), indirect (e.g., loss of prey, reduction in species' fecundity), site-specific or habitat wide impacts, including individual, cumulative, or synergistic consequences of actions."

The consultation provisions have raised some concern among Federal action agencies regarding potential increases in workload and the regulatory burden on the public. NMFS has addressed these concerns in the EFH rules by emphasizing the use of existing environmental review processes and time frames. Provided the specifications outlined in the rules are met, EFH consultations will be incorporated into interagency procedures previously established under the National Environmental Policy Act, Endangered Species Act, Clean Water Act, Fish and Wildlife Coordination Act, or other applicable statutes.

To incorporate EFH consultations into coordination, consultation and/or environmental review procedures required by other statutes, three criteria must be met:

(1) The existing process must provide NMFS with timely notification of the action;

(2) Notification of the action must include an "EFH Assessment" of the impacts of the proposed action as outlined in the EFH rules;

(3) NMFS must have completed a written finding that the existing process satisfies the requirements of the MSFCMA.

An "EFH Assessment" is a review of the proposed project and its potential impacts to EFH. As set forth in the rules, EFH Assessments must include: (1) a description of the proposed action; (2) an analysis of the effects, including cumulative effects, of the action on EFH, the managed species, and associated species by life history stage; (3) the Federal agency's views regarding the effects of the action on EFH; and (4) proposed mitigation, if applicable. If appropriate, the assessment should also include the results of an on-site inspection, the views of recognized experts on the habitat or species affects, a literature review, an analysis of alternatives to the proposed action, and any other relevant information.

Once NMFS learns of a Federal or state activity that may have an adverse effect on EFH, NMFS is required to develop EFH conservation recommendations for the activity. These recommendations may include measures to avoid, minimize, mitigate, or otherwise offset adverse effects on EFH and are to be provided to the action agency in a timely manner. The MSFCMA also authorizes FMCs to comment on Federal and state projects, and directs FMCs to comment on any project which may substantially impact EFH. Federal agencies are required to respond to EFH conservation recommendations of the NMFS and FMCs in writing and within 30 days.

Consultations may be conducted through programmatic, general concurrence, or project specific mechanisms. Evaluation at a programmatic level may be appropriate when sufficient information is available to develop EFH conservation recommendations and address all reasonably foreseeable adverse impacts under a particular program area. General Concurrences can be utilized for categories of similar activities having minimal individual and cumulative impacts. Programmatic and General Concurrence consultations minimize the need for individual project consultation in most cases because NMFS has determined that the actions will likely result in no more than minimal adverse effects, and conservation measures would be implemented. For example, NMFS might grant a General Concurrence for the construction of docks or piers which, with incorporation of design or siting constraints, would minimally affect Federally managed fishery resources or their habitats.

Consultations at a project-specific level are required when critical decisions are made at the project implementation stage, or when sufficiently detailed information for development of EFH conservation recommendations does not exist at the programmatic level. Project specific consultations must follow either the abbreviated or expanded procedures. Abbreviated consultations allow NMFS to quickly determine whether, and to what degree, a Federal action may adversely impact EFH, and should be used when impacts to EFH are expected to be minor. For example, the abbreviated consultation procedure would be used when the adverse effect of an action or proposed action could be alleviated through minor design or operational modifications, or the inclusion of measures to offset unavoidable adverse impacts.

Expanded consultations allow NMFS and a Federal action agency the maximum opportunity to work together in the review of an activity's impact on EFH and the development of EFH conservation recommendations. Expanded

consultation procedures must be used for Federal actions that would result in substantial adverse effects to EFH. Federal action agencies are encouraged to contact NMFS at the earliest opportunity to discuss whether the adverse effect of a proposed action makes expanded consultation appropriate. Expanded consultation procedures provide additional time for the development of conservation recommendations, and may be appropriate for actions such as the construction of large marinas or port facilities.

The MSFCMA mandates that a Federal action agency must respond in writing to EFH conservation recommendations from NMFS and FMCs within 30 days of receiving those recommendations. The rules require that such a response be provided at least 10 days prior to final approval of the action, if a decision by the Federal agency is required in fewer than 30 days. The response must include a description of measures proposed by the agency for avoiding, mitigating, or offsetting the impact of the activity on EFH. In the case of a response that is inconsistent with NMFS conservation recommendations, the agency must explain its reasons for not following the recommendations, including the scientific rationale for any disagreements with NMFS over the anticipated effects of the proposed action and the measures needed to offset such effects. When an agency decision is inconsistent with NMFS conservation recommendations, the NMFS Assistant Administrator may request a meeting with the head of the agency to further discuss the project.

Conclusion

The EFH mandates of the MSFCMA represent a new effort to integrate fishery management and habitat management by stressing the dependency of healthy, productive fisheries on the maintenance of viable and diverse estuarine and marine ecosystems. The EFH consultation process will ensure that Federal agencies explicitly consider the effects of their actions on important habitats, with the goal of supporting the sustainable management of marine fisheries. The NMFS is committed to working with Federal and state agencies to implement these mandates effectively and efficiently, with the ultimate goal of sustaining of the Nation's fishery resources.

Comments, questions, and suggested revisions may be directed to Rickey Ruebsamen (EFH Coordinator), 9721 Executive Center Drive, N. St. Petersburg, FL 33702; phone: 727/570-5317; email: ric.ruebsamen@noaa.gov.

Appendix 1. Selected Text from the Magnuson-Stevens Fishery Conservation and Management Act
(As Amended Through October 11, 1996)

16 U.S.C. 1854 note, 1855
M-S Act §§ 304 note, § 305

SEC. 305. OTHER REQUIREMENTS AND AUTHORITY 16 U.S.C. 1855
104-297

(b) FISH HABITAT.
(1) (A) The Secretary shall, within 6 months of the date of enactment of the Sustainable Fisheries Act, establish by regulation guidelines to assist the Councils in the description and identification of essential fish habitat in fishery management plans (including adverse impacts on such habitat) and in the consideration of actions to ensure the conservation and enhancement of such habitat. The Secretary shall set forth a schedule for the amendment of fishery management plans to include the identification of essential fish habitat and for the review and updating of such identifications based on new scientific evidence or other relevant information.
(B) The Secretary, in consultation with participants in the fishery, shall provide each Council with recommendations and information regarding each fishery under that Council's authority to assist it in the identification of essential fish habitat, the adverse impacts on that habitat, and the actions that should be considered to ensure the conservation and enhancement of that habitat.
(C) The Secretary shall review programs administered by the Department of Commerce and ensure that any relevant programs further the conservation and enhancement of essential fish habitat.
(D) The Secretary shall coordinate with and provide information to other Federal agencies to further the conservation and enhancement of essential fish habitat.
(2) Each Federal agency shall consult with the Secretary with respect to any action authorized, funded, or undertaken, or proposed to be authorized, funded, or undertaken, by such agency that may adversely affect any essential fish habitat identified under this Act.
(3) Each Council--
(A) may comment on and make recommendations to the Secretary and any Federal or State agency concerning any activity authorized, funded, or undertaken, or proposed to be authorized, funded, or undertaken, by any Federal or State agency that, in the view of the Council, may affect the habitat, including essential fish habitat, of a fishery resource under its authority; and
(B) shall comment on and make recommendations to the Secretary and any Federal or State agency concerning any such activity that, in the view of the Council, is likely to substantially affect the habitat, including essential fish habitat, of an anadromous fishery resource under its authority.
(4) (A) If the Secretary receives information from a Council or Federal or State agency or determines from other sources that an action authorized, funded, or undertaken, or proposed to be authorized, funded, or undertaken, by any State or Federal agency would adversely affect any essential fish habitat identified under this Act, the Secretary shall recommend to such agency measures that can be taken by such agency to conserve such habitat.
(B) Within 30 days after receiving a recommendation under subparagraph (A), a Federal agency shall provide a detailed response in writing to any Council commenting under paragraph (3) and the Secretary regarding the matter. The response shall include a description of measures proposed by the agency for avoiding, mitigating, or offsetting the impact of the activity on such habitat. In the case of a response that is inconsistent with the recommendations of the Secretary, the Federal agency shall explain its reasons for not following the recommendations.

Appendix 2. Fishery Management Plans and Managed Species for the Gulf of Mexico.

GULF OF MEXICO FISHERY MANAGEMENT COUNCIL

Shrimp Fishery Management Plan
- brown shrimp - *Penaeus aztecus*
- pink shrimp - *P. duorarum*
- royal red shrimp - *Pleoticus robustus*
- white shrimp - *Penaeus setiferus*

Red Drum Fishery Management Plan
- red drum - *Sciaenops ocellatus*

Reef Fish Fishery Management Plan
- black grouper- *Mycteroperca bonaci*
- gag grouper - *M.. microlepis*
- gray snapper - *Lutjanus griseus*
- gray triggerfish - *Balistes capriscus*
- greater amberjack - *Seriola dumerili*
- lane snapper - *L. synagris*
- lesser amberjack - *S. fasciata*
- red grouper - *Epinephelus morio*
- red snapper - *L. campechanus*
- scamp grouper - *M. phenax*
- tilefish - *Lopholatilus chamaeleonticeps*
- yellowtail snapper - *Ocyurus chrysurus*
- vermilion snapper - *Rhomboplites aurorubens*

Stone Crab Fishery Management Plan
- stone crab - *Menippe spp.*

Spiny Lobster Fishery Management Plan
- spiny lobster - *Panulirus argus*

Coral and Coral Reef Fishery Management Plan
- varied coral species and coral reef communities comprised of several hundred species

Coastal Migratory Pelagic Fishery Management Plan
- bluefish - *Pomatomus saltatrix*
- dolphin - *Coryphaena hippurus*
- cobia - *Rachycentron canadum*
- king mackerel - *Scomberomorus cavalla*
- little tunny - *Euthynnus alleteratus*
- Spanish mackerel - *S. maculatus*

Appendix 3. Fishery Management Plans and Managed Species for the South Atlantic Region.

SOUTH ATLANTIC FISHERY MANAGEMENT COUNCIL

Shrimp Fishery Management Plan
- brown shrimp - *Penaeus aztecus*
- pink shrimp - *P. duorarum*
- rock shrimp - *Sicyonia brevirostris*
- royal red shrimp - *Pleoticus robustus*
- white shrimp - *Penaeus setiferus*

Red Drum Fishery Management Plan
- red drum - *Sciaenops ocellatus*

Snapper Grouper Fishery Management Plan
- blackfin snapper - *Lutjanus buccanella*
- blueline tilefish - *Caulolatilus microps*
- gray snapper - *L. griseus*
- greater amberjack - *Seriola dumerili*
- jewfish -*Epinephelus itajara*
- mutton snapper - *L. analis*
- red porgy - *Pagrus pagrus*
- red snapper - *L. campechanus*
- scamp - *Mycteroperca phenax*
- silk snapper - *L. vivanus*
- snowy grouper - *E. niveatus*
- speckled hind - *E. drummondhayi*
- vermilion snapper - *Rhomboplites aurorubens*
- yellowedge grouper - *E. flavolimbatus*
- warsaw grouper - *E. nigritus*
- white grunt - *Haemulon plumieri*
- wreckfish - *Polyprion americanus*

Coastal Migratory Pelagics Fishery Management Plan
- dolphin - *Coryphaena hippurus*
- cobia - *Rachycentron canadum*
- king mackerel - *Scomberomorus cavalla*
- Spanish mackerel - *S. maculatus*

Golden Crab Fishery Management Plan
- golden crab - *Chaceon fenneri*

Spiny Lobster Fishery Management Plan
- spiny Lobster - *Panulirus argus*

Coral and Coral Reef Fishery Management Plan
- varied coral species and coral reef communities comprised of several hundred species

Calico Scallop Fishery Management Plan
- calico scallop - *Argopecten gibbus*

Sargassum Habitat Fishery Management Plan
- *Sargassum* (and associated fauna) where it occurs in the EEZ and state waters

MID-ATLANTIC FISHERY MANAGEMENT COUNCIL

Summer Flounder, Scup, and Black Sea Bass Fishery Management Plan
- Black sea bass - *Centropristus striata*
- Scup - *Stenotomus chrysops*
- Summer flounder - *Paralichthys dentatus*

Bluefish Fishery Management Plan
- Bluefish - *Pomatomus saltatrix*

Atlantic Surfclam and Ocean Quahog Fishery Management Plan
- Ocean quahog - *Artica islandica*
- Surfclam - *Spisula solidissima*

Atlantic Mackerel, Squid, and Butterfish Fishery Management Plan
- Atlantic butterfish - *Peprilus triacanthus*
- Atlantic mackerel - *Scomber scombrus*
- Long finned squidf - *Loligo peales*
- Short finned squid - *Illex illecebrosus*

Dogfish Fishery Management Plan
- Spiny dogfish - *Squalus acanthias*

Appendix 4. Fishery Management Plans and Managed Species for the Caribbean Region.

CARIBBEAN FISHERY MANAGEMENT COUNCIL

Reef Fish Fishery Management Plan

- banded butterflyfish - *Chaetodon striatus*
- coney - *Epinephelus fulvus*
- gray snapper - *Lutjanus griseus*
- queen triggerfish - *Balistes vetula*
- mutton snapper - *L. analis*
- nassau grouper - *E. striatus*
- red hind - *E. guttatus*
- redtail parrotfish - *Sparisoma chrysopterum*
- schoolmaster - *L. apodus*
- silk snapper- *L. vivanus*
- squirrelfish - *Holocentrus ascensionis*
- sand tile fish - *Malacanthus plumieri*
- trunkfish - *Lactophrys quadricornis*
- yellowtail snapper - *Ocyurus chrysurus*
- white grunt - *Haemulon plumieri*

Spiny Lobster Fishery Management Plan

- spiny lobster - *Panulirus argus*

Queen Conch Fishery Management Plan

- queen conch - *Strombus gigas*

Coral Fishery Management Plan

- varied coral species and coral reef communities comprised of several hundred species

Appendix 5. Species Managed under the Federally-Implemented Fishery Management Plans.

NATIONAL MARINE FISHERIES SERVICE

Billfish

blue marlin - *Makaira nigricans*
longbill spearfish - *Tetrapturus pfluegeri*
sailfish - *Istiophorus platypterus*
white marlin - *T. albidus*

Swordfish

swordfish - *Xiphias gladius*

Tuna

albacore - *Thunnus alalunga*
Atlantic bigeye - *T. obesus*
Atlantic yellowfin - *T. albacares*
skipjack - *Katsuwonus pelamis*
western Atlantic bluefin - *T. thynnus*

Sharks

Atlantic angel shark - *Squatina dumerili*
Atlantic sharpnose shark - *Rhizoprionodon terraenovae*
basking shark - *Cetorhinus maximus*
bigeye sand tiger - *Odontaspis noronhai*
bigeye sixgill shark - *Hexanchus vitulus*
bigeye thresher shark - *Alopias superciliosus*
bignose shark - *Carcharhinus altimus*
blacknose shark - *C. acronotus*
blacktip shark - *C. limbatus*
blue shark - *Prionace glauca*
bonnethead - *Sphyrna tiburo*
bull shark - *C. leucas*
Caribbean reef shark - *C. perezi*
Caribbean sharpnose shark - *R. porosus*
common thresher shark - *A. vulpinus*
dusky shark - *C. obscurus*
finetooth shark - *C. isodon*
Galapagos shark - *C. galapagensis*
great hammerhead - *S. mokarran*
lemon shark - *Negaprion brevirostris*
longfin mako shark - *Isurus paucus*
narrowtooth shark - *C. brachyurus*
night shark - *C. signatus*
nurse shark - *Ginglymostoma cirratum*
oceanic whitetip shark - *C. longimanus*
porbeagle shark - *Lamna nasus*
sandbar shark - *C. plumbeus*
sand tiger shark - *O. taurus*
scalloped hammerhead - *S. lewini*
sharpnose sevengill shark - *Heptranchias perlo*
shortfin mako shark - *I. oxyrinchus*
silky shark - *C. falciformis*
sixgill shark - *H. griseus*
smalltail shark - *C. porosus*
smooth hammerhead - *S. zygaena*
spinner shark - *C. brevipinna*
Tiger shark - *Galeocerdo cuvieri*
whale shark - *Rhinocodon typus*
white shark - *Carcharodon carcharias*

Appendix 6. Essential Fish Habitat Identified in Fishery Management Plan Amendments of the Gulf of Mexico, South Atlantic and Caribbean Fishery Management Councils. (EFH for species managed under the NMFS Billfish and Highly Migratory Species plans falls within the marine areas designated by three councils)

Gulf of Mexico FMC

Estuarine areas
- Estuarine emergent wetlands
- Mangrove wetlands
- Seagrass
- Algal flats
- Mud, sand, shell, and rock substrates
- Estuarine water column

Marine areas
- Water column
- Vegetated bottoms
- Non-vegetated bottoms
- Live bottoms
- Coral reefs
- Artificial reefs
- Geologic features
- Continental Shelf features
- West Florida Shelf
- Mississippi/Alabama Shelf
- Louisiana/Texas Shelf
- South Texas Shelf

South Atlantic FMC

Estuarine areas
- Estuarine emergent wetlands
- Estuarine scrub/shrub mangroves
- Seagrass
- Oyster reefs & shell banks
- Intertidal flats
- Palustrine emergent & forested wetlands
- Aquatic beds
- Estuarine water column

Marine areas
- Live/Hard bottoms
- Coral & coral reefs
- Artificial/manmade reefs
- Sargassum
- Water column

Caribbean FMC

Estuarine areas
- Salt marshes
- Mangrove wetlands
- Intertidal flats/salt ponds
- Soft bottom lagoons
- Mud flats
- Sandy beaches
- Rocky shores

Marine areas
- Water column
- Seagrass
- Non-vegetated bottoms
- Coral reefs
- Algal plains
- Geologic features
- Live bottoms

Appendix 7. Geographically Defined Habitat Areas of Particular Concern Identified in Fishery Management Plan Amendments of the Gulf of Mexico, South Atlantic and Caribbean Fishery Management Councils.

Gulf of Mexico FMC

Florida
- Apalachicola National Estuarine Research Reserve
- Dry Tortugas (Fort Jefferson National Monument)
- Florida Keys National Marine Sanctuary
- Florida Middle Grounds
- Rookery Bay National Estuarine Research Reserve

Alabama
- Weeks Bay National Estuarine Research Reserve

Texas/Louisiana
- Flower Garden Banks National Marine Sanctuary

Mississippi
- Grand Bay

South Atlantic FMC

Area-wide
- Council-designated artificial reef special management zones
- Hermatypic coral habitat and reefs
- Hard bottoms
- Hoyt Hills
- *Sargassum* habitat
- State-designated areas of importance to managed species
- Submerged aquatic vegetation

North Carolina
- Big Rock
- Bogue Sound
- Capes Hatteras, Fear and Lookout (sandy shoals)
- New River
- The Ten Fathom Ledge
- The Point

South Carolina
- Broad River
- Charleston Bump
- Hurl Rocks

SAFMC (cont)

Georgia
- Gray's Reef National Marine Sanctuary

Florida
- Blake Plateau (manganese outcroppings)
- Biscayne Bay
- Biscayne National Park
- Card Sound
- Florida Bay
- Florida Keys National Marine Sanctuary
- Jupiter Inlet Point
- Mangrove habitat
- Marathon Hump
- Oculina Bank
- *Phragmatopoma* (worm) reefs
- The Wall (Florida Keys)

Caribbean FMC

Area-wide
- Estuaries
- Nearshore reefs and other hard bottoms

U.S. Virgin Islands
- Hind Bank

Appendix 8. Sources of EFH and Related Resource Information.

Fishery Management Plan Amendments

Caribbean Fishery Management Council. 1998. Essential Fish Habitat (EFH) generic amendment to the Fishery Management Plans (FMPs) of the U.S. Caribbean including a draft environmental assessment. Caribbean Fishery Management Council. San Juan, Puerto Rico. 2 vols.

Gulf of Mexico Fishery Management Council. 1998. Public hearing draft generic amendment for addressing Essential Fish Habitat requirements in the following fishery management plans of the Gulf of Mexico: Shrimp Fishery of the Gulf of Mexico, United States Waters; Red Drum Fishery of the Gulf of Mexico; Reef Fish Fishery of the Gulf of Mexico; Coastal Migratory Pelagic Resources (Mackerels) in the Gulf of Mexico and South Atlantic; Stone Crab Fishery of the Gulf of Mexico; Spiny Lobster in the Gulf of Mexico and South Atlantic; Coral and Coral Reefs of the Gulf of Mexico (includes environmental assessment). Gulf of Mexico Fishery Management Council. Tampa, FL.

Mid-Atlantic Fishery Management Council. 1998. Amendment 1 to the bluefish fishery management plan. Mid-Atlantic Fishery Management Council. Dover, DE. 2 vols.

Mid-Atlantic Fishery Management Council. 1998. Amendment 8 to the Atlantic mackerel, squid, and butterfish fishery management plan. Mid-Atlantic Fishery Management Council. Dover, DE.

Mid-Atlantic Fishery Management Council. 1998. Amendment 12 to the Atlantic surfclam and ocean quahog fishery management plan. Mid-Atlantic Fishery Management Council. Dover, DE.

Mid-Atlantic Fishery Management Council. 1998. Amendment 12 to the summer flounder, scup, and black sea bass fishery management plan. Mid-Atlantic Fishery Management Council. Dover, DE.

National Marine Fisheries Service. 1998. Billfish essential fish habitat (EFH) pre-draft materials for the billfish fishery management plan amendment. National Marine Fisheries Service. Silver Spring, MD.

National Marine Fisheries Service. 1998. Highly migratory species essential fish habitat (EFH) pre-draft materials for the highly migratory species fishery management plan amendment. National Marine Fisheries Service. Silver Spring, MD.

South Atlantic Fishery Management Council. 1998. Final habitat plan for the South Atlantic region: Essential Fish Habitat requirements for Fishery Management Plans of the South Atlantic fishery Management Council: The Shrimp Fishery Management Plan, The Red Drum Fishery Management Plan, The Snapper Grouper Fishery Management Plan, The Coastal Migratory Pelagics Fishery Management Plan, The Golden Crab Fishery Management Plan, The Spiny Lobster Fishery Management Plan, The Coral, Coral Reefs, and Live/Hard Bottom Habitat Fishery Management Plan, and The Calico Scallop Fishery Management Plan. South Atlantic Fishery Management Council. Charleston, SC.

EFH Related Web Sites

South Atlantic EFH	http://www.safmc.noaa.gov
Gulf of Mexico FMC	http://www.gulfcouncil.org
Gulf of Mexico EFH	http://galveston.ssp.nmfs.gov/efh/
Caribbean EFH Resources	http://christensenmac.nos.noaa.gov/briefing.html
EFH Rules	http://www.nmfs.gov/habitat/efh
NMFS Southeast Region	http://caldera.sero.nmfs.gov
Highly migratory pelagic and billfish resource EFH	http://www.nmfs.gov/sfa/hms/Final.html

Appendix 9. Points of Contact for Essential Fish Habitat Activities within the Southeast Region of the National Marine Fisheries Service.

National Marine Fisheries Service
Southeast Region

Andreas Mager, Jr. (Southeast Region)
National Marine Fisheries Service
9721 Executive Center Drive, N.
St. Petersburg, FL 33702
727/570-5317andy.mager@noaa.gov

Rickey Ruebsamen (EFH Coordinator)
National Marine Fisheries Service
9721 Executive Center Drive, N.
St. Petersburg, FL 33702
727/570-5317 ric.ruebsamen@noaa.gov

Local Offices

Russell Swafford (Texas)
National Marine Fisheries Service
4700 Avenue U
Galveston, TX 77551
409/766-3699 rusty.swafford@noaa.gov

Richard Hartman (Louisiana)
National Marine Fisheries Service
c/o Louisiana State University
Baton Rouge, LA 70803
225/389-0508 richard.hartman@noaa.gov

Mark Thompson (Florida, Alabama, Mississippi, Puerto Rico, U.S. Virgin Islands)
National Marine Fisheries Service
3500 Delwood Beach Rd.
Panama City, FL 32408-7499
850/234-5061 mark.thompson@noaa.gov

David Rackley (South Carolina, Georgia)
National Marine Fisheries Service
Charleston Laboratory
219 Fort Johnson Road
Charleston, SC 29412-9110
(843) 762-8574 david.rackley@noaa.gov

Larry Hardy (North Carolina)
National Marine Fisheries Service
101 Pivers Island Road
Beaufort, NC 28516-9722
252/728-5090 larry.hardy@noaa.gov

Gulf of Mexico Fishery Management Council

Executive Director
Gulf of Mexico Fishery Management Council
The Commons at Rivergate
3018 U.S. Highway 301 N., Suite 1000
Tampa, FL 33619-2266
813/228-2815 gulf.council@noaa.gov

EFH Point of Contact
Jeff Rester
(Gulf States Marine Fisheries Commission)
228/875-5912 jrester@gsmfc.org

South Atlantic Fishery Management Council

Executive Director
South Atlantic Fishery Management Council
1 Southpark Circle
Southpark Building, Suite 306
Charleston, SC 29407-4699
843/571-4366 safmc@noaa.gov

EFH Point of Contact
Roger Pugliese
843/571-4366 roger.pugliese@noaa.gov

Caribbean Fishery Management Council

Executive Director
Caribbean Fishery Management Council
268 Avenue Rivera Avenue, Suite 1108
San Juan, Puerto Rico 00918-2577
787/ 766-5926 caribefish@uprl.upr.clu.edu

EFH Point of Contact
Graciela Garcia-Moliner
787/ 766-5926 caribefish@uprl.upr.clu.edu

Mid-Atlantic Fishery Management Council

Executive Director
Mid-Atlantic Fishery Management Council
Room 2115, Federal Building
Dover, Delaware 19901

EFH Point of Contact
Thomas B. Hoff
302/674-2331 x15 tom.hoff@noaa..gov

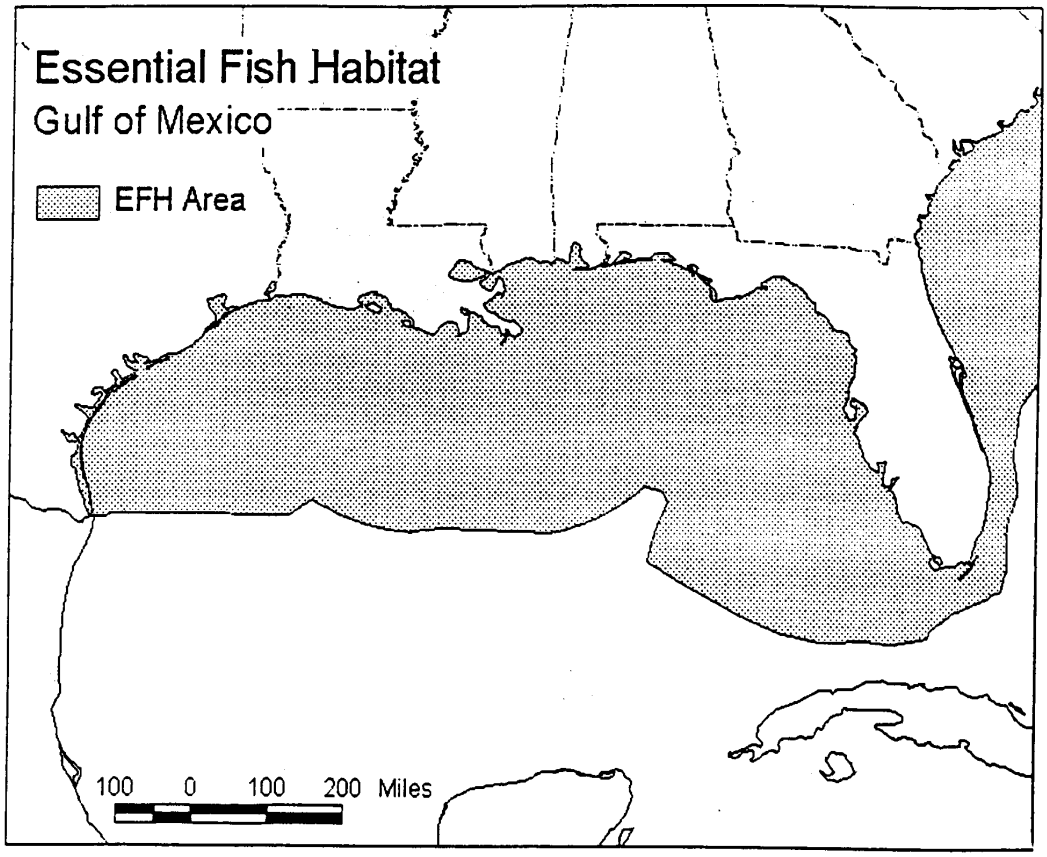

Figure 1. Map depicting the extent of Essential Fish Habitat in the Gulf of Mexico.

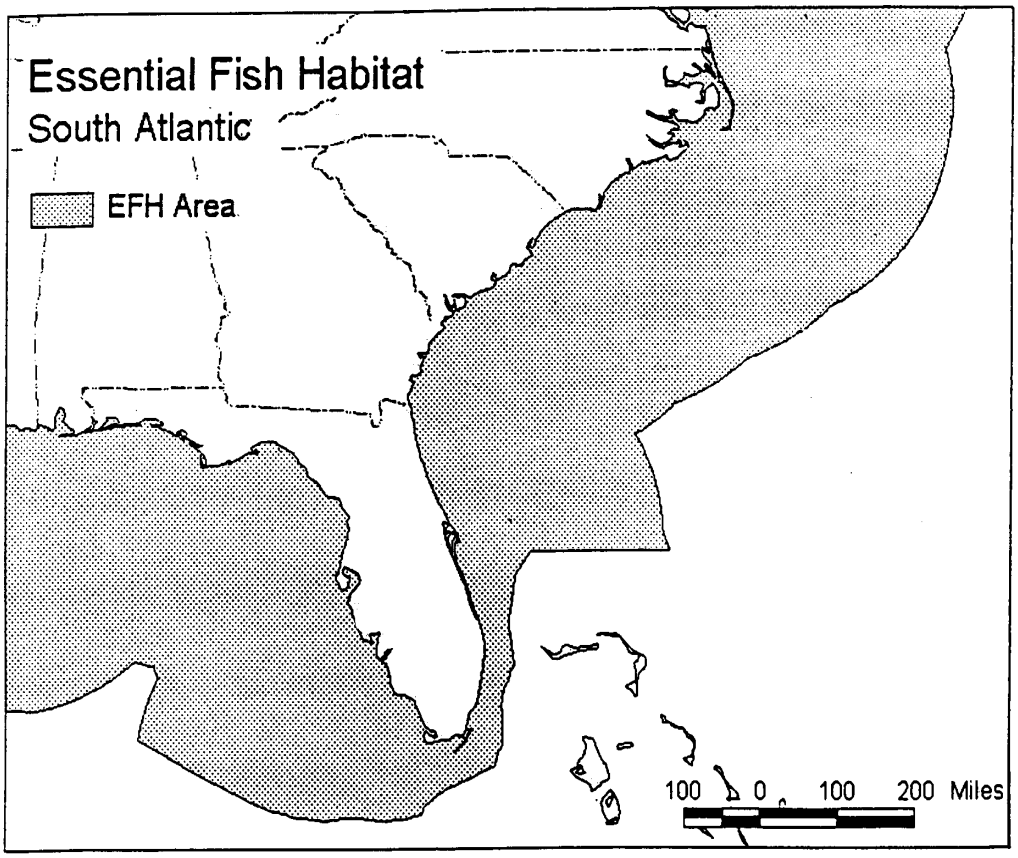

Figure 2. Map depicting Essential Fish Habitat in the south Atlantic region.

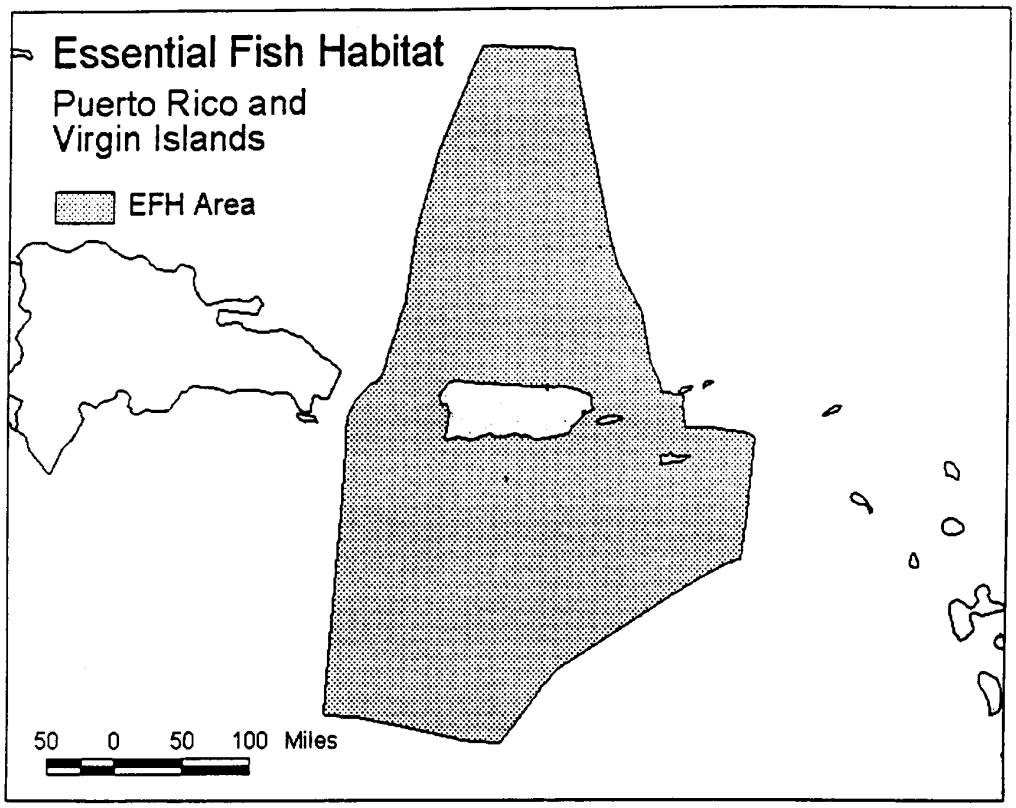

Figure 3. Map depicting Essential Fish Habitat in Puerto Rico and the U.S. Virgin Islands.

Letter No. 7

Andreas Mager, Jr., Assistant Regional Administrator, Habitat Conservation Division, United States Department of Commerce, National Oceanic and Atmospheric Administration, National Marine Fisheries Service, Southeast Regional Office, 9721 Executive Center Drive N., St. Petersburg, Florida 33702

Comment 7–1:

"Information contained in the DEIS indicates that the project area includes estuarine emergent wetlands. However, the NMFS cannot determine from the information contained in the DEIS regarding project construction and related mitigation whether there will be a net overall adverse affect [sic] to wetlands that support fishery resources of concern to the NMFS. Accordingly, we believe this is an opportune time to advise you of consultation requirements resulting from new legislation. In 1996, to further the conservation of marine fishery resources, Congress amended the Magnuson–Stevens Fishery Conservation and Management Act (Magnuson–Stevens Act). The amendment requires establishment of guidelines for the identification of Essential Fish Habitat (EFH) and the inclusion of EFH descriptions in fishery management plans. The Magnuson–Stevens Act also requires all Federal agencies to consult with the NMFS on measures to protect EFH when an agency proposes to authorize, fund, or undertake an activity which would adversely affect designated habitats.

The estuarine emergent wetlands in the project area have been identified as EFH. Accordingly, consultation is required pursuant to interagency coordination procedures specified by the NMFS in the 1997 Interim Final Rules to implement the EFH provisions of the Magnuson–Stevens Act (50 CFR Sections 600.805 - 600.930) if the Federal action agency determines that their activity may adversely affect EFH. The DEIS would be an appropriate place to document the results of this determination and any subsequent consultation, if required."

Response:

DOE has consulted with the National Marine Fisheries Service on measures to protect Essential Fish Habitat. As part of the consultation, DOE prepared an Essential Fish Habitat Assessment dated January 24, 2000 (Appendix F), in which DOE determined that there would be no substantial adverse effect on Essential Fish Habitat in the project area as a consequence of the proposed project. After reviewing the Essential Fish Habitat Assessment, the National Marine Fisheries Service requested additional clarifying information regarding the wetlands in a letter dated February 23, 2000 (Appendix F). After receiving the additional information from DOE, the National Marine Fisheries Service sent a letter to DOE dated March 27, 2000 (Appendix F), in

which they stated that they concur with DOE's determination that the project would not adversely affect Essential Fish Habitat and that they have no further objection to the project.

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

Letter No. 8

Reproduced from copy submitted

October 8, 1999

ER-99/760

Ms. Lisa K. Hollingsworth,
NEPA Document Manager
U. S. Department of Energy
Federal Energy Technology Center
3610 Collins Ferry Road
P. O. Box 880
Morgantown, WV 26507-0880

Dear Ms. Hollingsworth:

The Department of the Interior has reviewed the draft EIS for the JEA Circulating Fluidized Bed Combustor Project, Duval County, FL, as requested.

The NGS is located adjacent to Timucuan Ecological and Historic Preserve, a unit of the National Park Service.

The proposed unit would significantly reduce the emissions of sulfur dioxide, oxides of nitrogen and particulate matter. For these reductions, we highly commend the JEA. However, a review of the DEIS indicates a significant emission of heavy metals including mercury, vanadium and nickel. On page 3-12, the consideration of heavy metal impacts is treated in just a few paragraphs. These paragraphs indicate that heavy metal concentrations are or have exceeded water quality standards. The statement that metal levels exceeded state standards, but no longer do, is unclear. Did standards for heavy metals change or was a different sampling method used? This brief consideration of heavy metal concentrations is inadequate to fully consider the potential impacts to the marshes, flora and fauna of the Timucuan Preserve. 8-1

Timucuan Preserve was established by Congress *"to protect the natural ecology of such lands and waters"* within the boundaries of the Preserve. Emission of heavy metals will settle within a few miles of the stacks and will directly impact the Preserve. Since coal is a primary fuel, emission of mercury is a major concern. The ash from the combustion process will contain vanadium and nickel as well as other heavy metals.

The emissions of heavy metals and their impact on the resources of Timucuan Preserve are not adequately addressed in the DEIS. Recent research has shown the presence of heavy metals already present in the sediments from locations with 10 kilometers to the east of the NGS (USGS-BRD in preparation). We feel the final EIS must more fully address the impacts of heavy metals on the flora 8-2

and fauna. The final EIS must also analyze the impacts of the addition of up to one-quarter ton of mercury per year, as well as other heavy metals, into an area already showing signs of heavy metal concentrations in excess of state water quality standards.

While we agree that with appropriate precautions the proposed project is not likely to adversely affect the Florida manatee (*Trichechus manatus latirostris*), some of the factual statements in the draft EIS regarding manatees are inaccurate or incorrect. We recommend that the final EIS be revised to reflect the following information. The headings below correspond to the headings in the draft EIS. 8-3

3.6.3 Threatened and Endangered Species

P. 3-41. The first sentence on this page references the "U. S. Marine Mammal Protection Act of 1992." The correct citation is the U.S. Marine Mammal Protection Act of 1972, as amended.

4.1.6.3 Threatened and Endangered Species

Pp. 4-45, 46. This section of the draft EIS states that manatees probably would not frequent the dock area because no submerged vegetation is available in the vicinity. Such statements are erroneous. Manatees are attracted to the southern shore of Blount Island (and the vicinity of the project site) by emergent cordgrasses (*Spartina sp.*) (see Baugh, *et al.* 1989), and also use the shoreline area as a travel corridor. 8-4

When discussing the project's potential to "take" manatees, the draft EIS cites Brody (1993), who stated that "the major threats to manatees in the St. Johns River appear to be wounds inflicted by boat propellers, which are rarely fatal, and collisions with boats, which are more frequently fatal." While watercraft collisions are a major threat to manatees in this area, boat propellers are more than rarely fatal. The State of Florida, through its examination of manatee carcasses, has found that the number of manatees killed by watercraft are evenly divided between the number of animals killed by impacts versus propellers, and a small number of animals are killed by a combination of the two factors (Ackerman, *et al.*, 1995). Furthermore, while it is true that locally adopted speed restrictions will help reduce the probability of watercraft collisions with fast-moving boats, a small number of manatees are killed by large commercial vessels in the Jacksonville port area. These vessels rarely operate at high speeds and presumably kill these animals by "drawing" them into their props or by crushing them between the hull and river bottom. Local speed restrictions will minimally affect vessel operations and their effects on manatees in the dock area. 8-5

In the discussion concerning the project's heated discharge, concerns about the manatees using the discharge and being subjected to "cold shock" in the event of a shut down are unfounded. Unless the proposed project alters the existing discharge in such a way as to attract manatees, data suggests that the current discharge does not attract manatees and, as such, shut downs should have no effect on manatees. 8-6

Given appropriate safeguards, the Fish and Wildlife (Service) believes that impacts to manatees from the proposed project will be negligible. In particular, precautions should be taken during any waterborne construction activities; vessel operators using the site should be educated about manatees and steps that should be taken to avoid collisions; and no changes should be made to the existing outfall that would attract manatees to the site. 8-7

Thank you for the opportunity to review and comment on the draft EIS. If there are questions regarding fish and wildlife resources, please contact Bruce Bell at 404/679-7089.

Sincerely,

James H. Lee
Regional Environmental Officer

Letter No. 8

James H. Lee, Regional Environmental Officer, 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

Comment 8–1:

"On page 3-12, the consideration of heavy metal impacts is treated in just a few paragraphs. These paragraphs indicate that heavy metal concentrations are or have exceeded water quality standards. The statement that metal levels exceeded state standards, but no longer do, is unclear. Did standards for heavy metals change or was a different sampling method used? This brief consideration of heavy metal concentrations is inadequate to fully consider the potential impacts to the marshes, flora and fauna of the Timucuan Preserve."

Response:

The state water quality standards have not changed, with the exception of the standard for silver. Sampling and analysis of heavy metals by the FDEP and JEA for the purpose of evaluating ambient water quality have been conducted in accordance with FDEP-approved methods and Standard Operating Procedures for laboratories with approved Comprehensive Quality Assurance Plans. The results indicate improvements in the actual water quality rather than a change in standards or the use of a different sampling or analytical technique.

Section 3.3.2.1 of the EIS provides results of tests that demonstrated that contaminants in effluent discharges from the St. Johns River Power Park/Northside Generating Station facilities are not toxic to aquatic biota. Studies conducted on oysters held in cages for several months near the Northside dock area showed no appreciable uptake and bioaccumulation of metals. Section 4.1.6.2 discusses the finding that the concentration levels of pollutants mobilized from sediments during dredging operations for expansion of the Northside dock (Option 2) would not be great enough to cause concern relative to their biotoxicity on resident biota. A report by Seal, Calder, and Sloane (1994) indicated that heavy metal concentrations in the sediments of the back channel of the St. Johns River near the mouth of San Carlos Creek were at or near background levels. Also see response to Comment 8-2.

Comment 8–2:

"Timucuan Preserve was established by Congress 'to protect the natural ecology of such lands and waters' within the boundaries of the Preserve. Emission of heavy metals will settle within a few miles of the stacks and will directly impact the Preserve. Since coal is a primary fuel,

emission of mercury is a major concern. The ash from the combustion process will contain vanadium and nickel as well as other heavy metals.

The emissions of heavy metals and their impact on the resources of Timucuan Preserve are not adequately addressed in the DEIS. Recent research has shown the presence of heavy metals already present in the sediments from locations with [sic] 10 kilometers to the east of the NGS (USGS-BRD in preparation). We feel the final EIS must more fully address the impacts of heavy metals on the flora and fauna. The final EIS must also analyze the impacts of the addition of up to one-quarter ton of mercury per year, as well as other heavy metals, into an area already showing signs of heavy metal concentrations in excess of state water quality standards."

Response:

Although the report cited in the comment is not yet available, several agencies previously have surveyed heavy metal concentrations in the sediments of the St. Johns River near Blount Island and the Timucuan Ecological and Historic Preserve. Seal, Calder, and Sloane (1994) have collated and summarized this information, including heavy metal data from two sites along the southern and western boundaries of the preserve. As shown in Table G.1, levels of

Table G.1. Levels of heavy metals (mg/kg) measured in the sediments at two sites (SJR 34 and SJR 35) near the Timucuan Ecological and Historic Preserve compared to their no observable effects levels.

Pollutant	SJR 34	SJR 35	NOEL[a]
Lead	8.8	7.7	21
Mercury	BD[b]	BD[b]	0.1
Chromium	12.5	4.3	33
Copper	5.2	2.05	28
Cadmium	0.195	0.057	1
Arsenic	4.7	BD[b]	8

[a]No observable effects level.

[b]Below detection limits of analytical instrument.

lead, mercury, chromium, copper, cadmium, and arsenic measured at these two sites were well below their no observable effects levels (Keller and Schell 1993; MacDonald 1993). Mercury was not detected at either site. Although the detection limits of analytical instruments used to measure mercury can vary between laboratories, the detection limits are typically well below the no observable effects level of 0.1 mg/kg for mercury (T.L. Seal, FDEP, personal communication

to S.M. Adams, ORNL, December 1, 1999). The heavy metal data reported from these two sites are considered to be at natural or background levels for areas characterized by sediments with relatively low clay and aluminum content (Schropp and Windom 1988; FDEP 1994). Therefore, if the levels of heavy metals measured in the sediments along the preserve boundaries represent those concentrations within the preserve, then the observed levels of these metals should pose no ecotoxicological risk to organisms of the preserve because all of the metal concentrations are well below their no observable effects levels.

With regard to the proposed project, the repowered Unit 2 would emit approximately 0.10 tons per year of mercury from burning entirely coal or 0.02 tons per year from burning entirely petroleum coke (Table 4.1.5 of the EIS). The repowered Unit 1 would also emit these quantities. A blend of these two fuels during operation of the units would result in mercury emissions between this range. The permitted limit for mercury emissions from each unit would be 0.03 lb/hour for a 6-hour average. In the unlikely event that measured emissions were higher than expected, the combustion process would be fine-tuned to ensure that the permitted limit would not be exceeded. The emissions of other heavy metals are given in Table D.1.

Much uncertainty exists regarding the spatial distribution of mercury deposition downwind of emissions sources. Likewise, source identification and attribution based on measurements of mercury deposition (i.e., working in the reverse direction to identify sources of measured deposition) have proven difficult. Moreover, not all emissions are produced by human activity, and lack of reliable data about the speciation of mercury in source emissions further contributes to assessment difficulties (Hanisch 1998). Controversy exists regarding the magnitude of the local impact from sources such as power plants. Few data are available about mercury concentrations in the vicinity of emissions point sources (Hanisch 1998). Global and regional models suggest that about 50% of manmade mercury emissions are transported globally, while the remaining 50% deposit on a local or regional scale (EPRI 1994; Bullock, Brehme, and Mapp 1998). Another study has indicated that mercury is more of a global or regional problem than one of local concern because computer modeling has shown that most mercury emissions from power plants are transported over 60 miles away (Constantinou, Wu, and Seigneur 1995). However, some field measurements of oxidized, inorganic mercury appear to contradict this finding. This species normally represents only about 3% of total gaseous mercury, but is expected to account for a major portion of mercury dry deposition. On the basis of measurements near the ground in close vicinity to power plants, a study concluded that cutting a local emissions source of oxidized, inorganic mercury could result in some local reduction of deposition (Lindberg and Stratton 1998). Similar uncertainty exists for other heavy metals.

While demonstration of the proposed project is not expected to evaluate specifically the impact of the project on the resources of the Timucuan Ecological and Historic Preserve, data obtained during the demonstration would characterize and quantify emissions of heavy metals. Heavy metals that would be measured in the flue gas from the firing of coal and petroleum coke during the demonstration include mercury, lead, antimony, arsenic, barium, beryllium, cadmium, chromium, cobalt, manganese, nickel, selenium, and vanadium. In addition to allowing prospective customers to assess the potential of CFB technology for commercial application, the data would be available for use in studies conducted by other agencies and organizations.

Section 4.1.2.2 of the EIS text has been modified to incorporate the above information.

Comment 8–3:
"While we agree that with appropriate precautions the proposed project is not likely to adversely affect the Florida manatee (*Trichechus manatus latirostris*), some of the factual statements in the draft EIS regarding manatees are inaccurate or incorrect. We recommend that the final EIS be revised to reflect the following information. The headings below correspond to the headings in the draft EIS.

3.6.3 Threatened and Endangered Species

P. 3-41. The first sentence on this page references the 'U.S. Marine Mammal Protection Act of 1992.' The correct citation is the U.S. Marine Mammal Protection Act of 1972, as amended."

Response:
Section 3.6.3 of the EIS text has been modified to indicate the correct citation.

Comment 8–4:
"Pp. 4-45, 46. This section of the draft EIS states that manatees probably would not frequent the dock area because no submerged vegetation is available in the vicinity. Such statements are erroneous. Manatees are attracted to the southern shore of Blount Island (and the vicinity of the project site) by emergent cordgrasses *(Spartina sp.)* (see Baugh, *et al.* 1989), and also use the shoreline area as a travel corridor."

Response:
Section 4.1.6.3 of the EIS text has been revised to incorporate the information in the comment.

Comment 8–5:

"When discussing the project's potential to 'take' manatees, the draft EIS cites Brody (1993), who stated that 'the major threats to manatees in the St. Johns River appear to be wounds inflicted by boat propellers, which are rarely fatal, and collisions with boats, which are more frequently fatal.' While watercraft collisions are a major threat to manatees in this area, boat propellers are more than rarely fatal. The State of Florida, through its examination of manatee carcasses, has found that the number of manatees killed by watercraft are evenly divided between the number of animals killed by impacts versus propellers, and a small number of animals are killed by a combination of the two factors (Ackerman, *et al*., 1995). Furthermore, while it is true that locally adopted speed restrictions will help reduce the probability of watercraft collisions with fast-moving boats, a small number of manatees are killed by large commercial vessels in the Jacksonville port area. These vessels rarely operate at high speeds and presumably kill these animals by 'drawing' them into their props or by crushing them between the hull and river bottom. Local speed restrictions will minimally affect vessel operations and their effects on manatees in the dock area."

Response:

Section 4.1.6.3 of the EIS text has been revised to incorporate the information in the comment.

Comment 8–6:

"In the discussion concerning the project's heated discharge, concerns about the manatees using the discharge and being subjected to 'cold shock' in the event of a shut down are unfounded. Unless the proposed project alters the existing discharge in such a way as to attract manatees, data suggests that the current discharge does not attract manatees and, as such, shut downs should have no effect on manatees."

Response:

Section 4.1.6.3 of the EIS text has been revised to incorporate the information in the comment.

Comment 8–7:

"Given appropriate safeguards, the Fish and Wildlife (Service) believes that impacts to manatees from the proposed project will be negligible. In particular, precautions should be taken during any water borne construction activities; vessel operators using the site should be educated about manatees and steps that should be taken to avoid collisions; and no changes should be made to the existing outfall that would attract manatees to the site."

Response:
In accordance with the conditions contained in the Submerged Lands & Environmental Resource Permit (SLERP) issued by the FDEP and the Section 404 Permit for Dredged or Fill Material issued by the COE, the following manatee precautions would be taken during all waterborne construction activities, including dredging and construction of the new dock (Option 2) and materials handling system:

- During all in-water construction activities, at least one experienced observer would be designated to watch for manatees. The observer would wear polarized sunglasses to aid in observation. The observer would advise personnel to stop work immediately if manatees were sighted within 50 ft of any in-water construction activity.

- In-water construction work and movement of vessels associated with the project (e.g., work barges) would not occur between sunset and sunrise, when it would be more difficult to spot manatees. The vessels would always operate at "idle speed/no wake" while in the construction area and while in waters where the vessel bottoms would be less than 4 ft from the bottom of the water body. All vessels would travel in deep water whenever possible.

- The construction contractor would instruct all personnel of the potential presence of manatees and the need to avoid collisions with manatees. Construction personnel would be advised of the civil and criminal penalties for harming, harassing, or killing manatees as outlined in the U.S. Marine Mammal Protection Act of 1972, as amended, the Endangered Species Act of 1973, and the Florida Manatee Sanctuary Act. Construction personnel would implement appropriate precautions to protect manatees.

- Prior to commencement of construction, the contractor would display at least two temporary signs concerning manatees.

- Siltation barriers would be properly secured so that manatees would not become entangled, and the barriers would be inspected at least once daily to avoid manatee entrapment. Barriers would not block manatee entry to or exit from essential habitat.

- The contractor would maintain a log during the contract period that documents any sightings, collisions, or injuries to manatees. Any collisions with and/or injuries to manatees would be reported immediately to the Florida Marine Patrol and the FDEP Office of Protected Species Management.

In addition, prior to using the new dock, a fender/bumper system would be installed at or above the mean high water level to minimize the risk of crushing manatees during vessel docking and mooring. Permanent signs would be installed to alert boaters using docking facilities of the potential presence of manatees, and two “Caution: Manatees” signs would be installed at the pier. No changes that would attract manatees would be made to the existing outfall.

The information in this response has been included in Section 4.1.6.3 of the EIS.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 4
ATLANTA FEDERAL CENTER
61 FORSYTH STREET
ATLANTA, GEORGIA 30303-8960

October 13, 1999

4EAD-OEA

Letter No. 9

Reproduced from copy submitted

Ms. Lisa K. Hollingsworth
NEPA Document Manager
U.S. Department of Energy
Federal Energy Technology Center
3610 Collins Ferry Road
P.O. Box 880
Morgantown, WV 26507-0880

RE: EPA Review and Comments on
Draft Environmental Impact Statement (DEIS)
JEA Circulating Fluidized Bed Combustor Project
CEQ No. 990300

Dear Ms. Hollingsworth:

Pursuant to Section 102(2)(C) of the National Environmental Policy Act (NEPA) and Section 309 of the Clean Air Act, the U.S. Environmental Protection Agency (EPA) has reviewed the subject Draft Environmental Impact Statement (DEIS). The document provides information to educate the public regarding general and project-specific environmental impacts and analysis procedures. We appreciate your consistency with the public review and disclosure aspects of the NEPA process. We also note that the Department of Energy held a public meeting concerning this project on September 16, 1999.

DOE's proposed action is to provide cost-shared funding to implement circulating fluidized bed (CFB) combustion technology under the Clean Coal Technology (CCT) Program. This demonstration project would take place in Duval County, Florida, and would involve constructing and operating an electric, coal and petroleum coke-fired circulating fluidized bed combustor and boiler to repower an existing steam turbine at JEA's Northside Generating Station in Jacksonville.

Based on our review, we rate the DEIS "EC-2", that is, we have environmental concerns about the project, and more information is needed to fully assess the impacts. In particular, the issues of noise impact mitigation, air quality, and health-based criteria warrant further discussion in the Final EIS. Our detailed comments are attached.

Thank you for the opportunity to comment on this project. If you have any questions or require technical assistance you may contact Ramona McConney of my staff at (404)562-9615.

Sincerely,

Heinz J. Mueller, Chief
Office of Environmental Assessment

Attachment

Comments on
Draft Environmental Impact Statement (DEIS), May 1999
for JEA Circulating Fluidized Bed Combustor Project
CEQ No. 990300

NOISE:

Ambient Noise - We note that two noise surveys were conducted to determine ambient levels near the existing plant, and specifically that the supplemental survey detected plant effects and included monitoring stations proximal to residences near the plant. Page 3-56 indicates that ambient levels ranged approximately 41-46 dBA at night and 55-60 dBA during the day. It is unclear, however, if these ambient measurements are in the Leq, L10, L50 or L90 metrics listed as being used (page 3-54). We assume that the Leq descriptor was used for the background noise surveys; however, the FEIS should clarify. We note that the Jacksonville city noise ordinance limits nighttime noise levels at residences to 60 dBA. 9-1

If the Leq metric was used, it is an average level over a given period of time. It should be noted that certain project-related single-event noise levels that are much greater than average levels also occur under ambient conditions such as steam blowout noises and some of the train whistles due to the operation of the existing plant. 9-2

Construction Noise - We appreciate that examples of noisy construction equipment were listed in the DEIS (such as pile drivers) and predictions of their noise attenuations over distance (pages 4-58 and 4-59). The FEIS should clarify if the documented noise attenuation levels were determined by calculation (based on distance from source), by model, or by another method. 9-3

The expected length of the time of construction should be included in the FEIS in order to gain a perspective of the magnitude of the construction noise. 9-4

Operational Noise - Residents would be affected by intrusive noise levels resulting from steam blowouts and other operations. The FEIS should document the number of such residents affected within the prescribed 0.5 mile radius (what is the basis for selection of a 0.5-mi radius?). 9-5

Since trains, trucks and barges would be used to haul in coal and limestone, the FEIS should estimate the number of residences affected along such routes within a 5-mile radius of the plant. The noise levels at the nearest residences should also be disclosed. It should also be noted that while barges may have less noise effects than other modes, there could be greater effects for other forms of pollution, such as wetland impacts (unloading dock construction or expansion) and water quality pollution (spills). These impact tradeoffs should be considered and discussed in the FEIS. 9-6 9-7

Noise Mitigation - We note that some mitigative measures are apparently proposed. These are listed on page 4-59 as 1) installing baffle silencers for fans, 2) enclosing coal and limestone crushers, and 3) installing sound insulation in buildings. This mitigation is intended for compliance with the city ordinance. JEA should commit to such mitigation in the FEIS and verify its effectiveness after prospective project construction. 9-8

Page 4-59 states that the mitigation measures would "...ensure that noise would not exceed 85 dB(A) at a distance of 3 ft from equipment." We assume, however, that steam blowouts would exceed such a level (but that steam piping is apparently not included here as "equipment"). However, JEA should consider some "source reduction" or "at-source" noise mitigation of such intrusive noise emissions. Could JEA perhaps devise some enclosure technology to attenuate steam blowout noise? 9-9

If steam blowouts and other intrusive noise events cannot be mitigated at the source or otherwise, we agree that at a minimum, proposed public notification of such events should be provided to nearby residents (page 4-58). The FEIS should indicate what form(s) of notification will be provided (e.g., newspapers, fliers, phone calls, etc.) and the expected frequency of such blowouts should be estimated in the FEIS and be included in the notifications. Finally, a noise complaint line should be established by JEA, with JEA responses to reasonable complaints being provided in a timely fashion. Procedural/mitigative modifications should be considered based on these complaints. 9-10

Page 4-60 indicates that mitigative measures are predicted to attenuate operational noises to 48, 50, 59 and 57 dBA in the four directions of the proposed project. We assume that these levels are daytime average levels; the FEIS should clarify. We also note that these levels are quite similar to or even *less than* the ambient levels noted above for the daytime background (55-60 dBA). As such, the attenuated levels (or ambient levels) are somewhat questionable and should be verified in the FEIS. Also, as indicated above, JEA should verify whatever final predictions are made (for mitigated noise levels incorporated in the FEIS) after prospective project construction and use adaptive management to further minimize noise as needed. 9-11

Air Quality:

We note the mention of traffic congestion (pg. 4-56) during construction of the facility. To what extent is this expected to affect local air quality? 9-12

Electromagnetic Fields:

Page 4-61 states that "[t]he majority of customers receiving electricity from the proposed facility would not experience any change in exposure levels due to electromagnetic fields because the fields would be confined to areas along the transmission lines." The FEIS should verify that the widths of the rights-of-way are in compliance with state of Florida law relative to the line voltage transmitted and the breadth of the associated magnetic fields. Will expansion of the ROWs be required after project construction and operation in order to maintain/achieve compliance? 9-13

Health-based Criteria:

Health-based criteria for carcinogens, commonly referred to as virtually safe dose, may be used as the action level of a carcinogenic chemical constituent. A virtually safe daily dose of a carcinogenic chemical over a lifetime will result in an incidence of cancer equal to a specified risk level. This corresponds to environmental concentrations that, under case specific intake assumptions, yield a specified excess lifetime cancer risk (e.g., 10^{-6} for Class A and B carcinogens). Based on the information provided on page 4-20 under the dioxin and furans sections, it appears as though the cancer risk associated with dioxin, furans and other carcinogenic substances was calculated on a "per year basis." The risk calculations should be reported as the excess carcinogenic risk instead. This should increase the calculated cancer risk documented in this DEIS. 9-14

Furthermore, please provide additional information regarding the underlying health-based criteria and any risk levels associated with Florida's Ambient Air Reference Concentrations (FAARCs). 9-15

Letter No. 9

Heinz J. Mueller, Chief, Office of Environmental Assessment, U.S. Environmental Protection Agency, Region 4, Atlanta Federal Center, 61 Forsyth Street, S.W., Atlanta, Georgia 30303-8960

Comment 9–1:

"Page 3-56 indicates that ambient levels ranged approximately 41-46 dBA at night and 55-60 dBA during the day. It is unclear, however, if these ambient measurements are in the Leq, L10, L50 or L90 metrics listed as being used (page 3-54). We assume that the Leq descriptor was used for the background noise surveys; however, the FEIS should clarify. We note that the Jacksonville city noise ordinance limits nighttime noise levels at residences to 60 dBA."

Response:

The ambient levels are expressed as Leq. Section 3.9.2 of the EIS text has been modified to reflect this metric.

Comment 9–2:

"If the Leq metric was used, it is an average level over a given period of time. It should be noted that certain project-related single-event noise levels that are much greater than average levels also occur under ambient conditions such as steam blowout noises and some of the train whistles due to the operation of the existing plant."

Response:

The information in the comment has been included in Section 3.9.2 of the EIS text.

Comment 9–3:

"Construction Noise - We appreciate that examples of noisy construction equipment were listed in the DEIS (such as pile drivers) and predictions of their noise attenuations over distance (pages 4-58 and 4-59). The FEIS should clarify if the documented noise attenuation levels were determined by calculation (based on distance from source), by model, or by another method."

Response:

The documented noise attenuation levels were determined by calculation (based on distance from source) from initial noise levels of construction equipment at 50 ft (EPA 1971).

Comment 9–4:
"The expected length of the time of construction should be included in the FEIS in order to gain a perspective of the magnitude of the construction noise."

Response:
Section 4.1.10.2 of the EIS, which discusses the potential impacts of construction noise, notes that the peak construction period would occur for about 3 months in late 2000 and early 2001. Section 2.1.4 indicates that JEA has begun initial construction activities at their own risk (without DOE funding). Construction would take approximately two years and, consistent with the original JEA schedule, would be completed in December 2001. Section 2.1.4 also notes that construction crews would probably work five 8-hour days with the option for four 10-hours days, and that construction deliveries would normally be made by truck between 9 a.m. and 3 p.m.

Comment 9–5:
"Operational Noise - Residents would be affected by intrusive noise levels resulting from steam blowouts and other operations. The FEIS should document the number of such residents affected within the prescribed 0.5 mile radius (what is the basis for selection of a 0.5-mi radius?)."

Response:
Because noise attenuates as it propagates from its source, residents within a 0.5-mile radius would be most affected by intrusive noise levels resulting from steam blowouts and other operations. The number of residents affected within the 0.5-mile radius would be less than 100. The general public, including residents affected outside the prescribed 0.5-mile radius, would be targeted in the public awareness program through newspaper and radio announcements.

Comment 9–6:
"Since trains, trucks and barges would be used to haul in coal and limestone, the FEIS should estimate the number of residences affected along such routes within a 5-mile radius of the plant. The noise levels at the nearest residences should also be disclosed."

Response:
The issue of noise impacts resulting from rail traffic was raised at the public scoping meeting. Impacts associated with truck and barge traffic are expected to be measurably less. The distance from the location where the CSX rail line crosses 44th Street (about a mile and a quarter south of the Trout River) to the St. Johns River Power Park is slightly more than 10 miles. Along this route, the planned land use in the vicinity of the rail line is about one-half industrial, one-third

residential, and one-eighth commercial, with a very small amount of land devoted to public facilities. Of the industrial land—the largest single usage—about three-fifths is dedicated to light industry and the remainder to heavy industry. Nearly all of the residential land is zoned for low-density occupation. As mentioned in Section 3.9.1.2 of the EIS, the rail line runs through the residential communities of Panama Park and North Shore and passes along the northern edge of San Mateo.

Section 3.9.1.2 indicates that a total of about 115 one-way trips per week are currently made on the CSX line paralleling U.S. 17 and that there are about 78 one-way trips per week on the spur line that runs from U.S. 17 to the St. Johns River Power Park and Blount Island. Section 4.1.10.1 states that, in the event that all coal for the proposed project would be transported by rail, three additional trains per week (six new one-way trips) would be required. This would increase total movement on the CSX line paralleling U.S. 17 by about 5% and would increase the spur line traffic by about 8%. However, the decibel-level of the noise would remain the same. As discussed in Section 1.6, a speaker at the public scoping meeting noted that the train passages are routinely punctuated by high-decibel train whistles [which the speaker said he had measured at 108 dB(A) at his property line] and loud rattling of the cars themselves [up to 85 dB(A)]. In the more likely event that barges and ships would be the primary means of coal transport, no more than one additional train per week would be required and the relatively small percentage increases in train traffic described above would be substantially reduced.

Comment 9–7:
"It should also be noted that while barges may have less noise effects than other modes, there could be greater effects for other forms of pollution, such as wetland impacts (unloading dock construction or expansion) and water quality pollution (spills). These impact tradeoffs should be considered and discussed in the FEIS."

Response:
The EIS discusses potential impacts associated with waterborne delivery of solid fuel and limestone. Section 4.1.5.3 states that disturbance of salt marsh habitats would be negligible during construction of the system for unloading and handling waterborne deliveries. Wetlands associated with the upper salt marsh communities would not be measurably affected because nearly all of the conveyor system for delivery associated with either unloading option would span these habitats using existing structures and would involve no clearing or earthmoving activities. Although some pilings may need to be installed at the upper fringes of the salt marsh and in San Carlos Creek, any impacts resulting from piling installation would be very localized and

temporary and would not measurably affect the normal structural and functional dynamics of the salt marsh and nearby estuarine ecosystems.

As discussed in Section 4.1.3.2, accidental spills from the proposed facility would be cleaned up in a timely manner in accordance with a spill prevention, control, and countermeasure plan and the best management practices plan for the facility. The rapid cleanup of an accidental overland spill of solid fuel or limestone would minimize runoff into San Carlos Creek or the back channel of the St. Johns River. Two spills have occurred at Northside Generating Station during the unloading of fuel oil shipments. Corrective action was taken to prevent or mitigate further spills. Spills of solid fuel or limestone would be easier to handle and remediate than liquid spills. The transport of fuel or limestone to Northside Generating Station would be the responsibility of the supplier until the vessels dock to unload their cargo. In accordance with the conditions contained in the SLERP issued by the FDEP, JEA would maintain a fuel spill and response plan for fuel unloading activities. In addition, best management practices would be implemented during all fuel unloading operations, including booms for temporary containment around the unloading area and a vacuum/collection system to remove any material inadvertently deposited on the dock. Transfer stations along the conveyor would be equipped with washdown or wet suppression collection and containment systems. The wastewater in these containment systems would be routinely emptied and transported for treatment at the chemical waste treatment facility.

Comment 9–8:

"Noise Mitigation - We note that some mitigative measures are apparently proposed. These are listed on page 4-59 as 1) installing baffle silencers for fans, 2) enclosing coal and limestone crushers, and 3) installing sound insulation in buildings. This mitigation is intended for compliance with the city ordinance. JEA should commit to such mitigation in the FEIS and verify its effectiveness after prospective project construction."

Response:

JEA would implement mitigation measures as required to comply with the city of Jacksonville noise ordinance level of 60 dB(A) at any residence. Should concerns be raised by nearby residents who question JEA's compliance with the Noise Pollution Control ordinance limits, JEA would verify the effectiveness of the mitigation measures.

Comment 9–9:

"Page 4-59 states that the mitigation measures would '...ensure that noise would not exceed 85 dB(A) at a distance of 3 ft from equipment.' We assume, however, that steam blowouts would

exceed such a level (but that steam piping is apparently not included here as 'equipment'). However, JEA should consider some 'source reduction' or 'at-source' noise mitigation of such intrusive noise emissions. Could JEA perhaps devise some enclosure technology to attenuate steam blowout noise?"

Response:
JEA likely would perform continuous, low-pressure, high-velocity steam blowouts. Although this activity would be conducted around the clock, noise levels at the nearest residences should be below levels of concern with this type of blowout that uses low-pressure steam rather than high-pressure steam. However, because JEA's steam blowout plan has not been finalized, JEA has committed to installing mufflers if high-pressure steam blowouts are conducted or, if mufflers are not installed, has committed to measuring the noise levels at the nearest residences to ensure that the levels would conform to the Noise Pollution Control ordinance limits (J. A. Leduc, JEA, personal communication to R. L. Miller, ORNL, February 10, 2000). Section 4.1.10.2 of the EIS has been modified to incorporate this information.

Comment 9–10:
"If steam blowouts and other intrusive noise events cannot be mitigated at the source or otherwise, we agree that at a minimum, proposed public notification of such events should be provided to nearby residents (page 4-58). The FEIS should indicate what form(s) of notification will be provided (e.g., newspapers, fliers, phone calls, etc.) and the expected frequency of such blowouts should be estimated in the FEIS and be included in the notifications. Finally, a noise complaint line should be established by JEA, with JEA responses to reasonable complaints being provided in a timely fashion. Procedural/mitigative modifications should be considered based on these complaints."

Response:
See response to Comment 9-9, which discusses JEA's options for steam blowouts. If necessary, the awareness program for high-pressure steam blowouts would include public notification through newspaper and radio announcements and phone calls to appropriate emergency response, regulatory, and other governmental agencies. If JEA conducts high-pressure steam blowouts, they would be conducted for up to 10 days for each of the repowered units before start-up, and then would occur for up to several days only once every 5 to 10 years during major plant maintenance outages. A typical sequence would be to conduct several steam blowouts per day for several days during the period; the duration of each steam blowout would be about 3 min and the interval between blowouts would be no less than 30 min. Section 4.1.10.2 of the EIS has been

modified to include this information. To register a complaint regarding noise levels, residents should contact JEA Customer Service at (904) 632-5200 or toll free at (800) 683-5542.

Comment 9–11:
"Page 4-60 indicates that mitigative measures are predicted to attenuate operational noises to 48, 50, 59 and 57 dBA in the four directions of the proposed project. We assume that these levels are daytime average levels; the FEIS should clarify. We also note that these levels are quite similar to or even *less than* the ambient levels noted above for the daytime background (55-60 dBA). As such, the attenuated levels (or ambient levels) are somewhat questionable and should be verified in the FEIS. Also, as indicated above, JEA should verify whatever final predictions are made (for mitigated noise levels incorporated in the FEIS) after prospective project construction and use adaptive management to further minimize noise as needed."

Response:
Because the proposed facility would be used during commercial operation as a baseload unit operating 24 hours per day at the 297.5-MW level for 90% of the time during the year, noise levels attributable to operation of the facility would be independent of time of day. The estimated levels are similar to and perhaps less than ambient levels because ambient levels are often dominated by other sources of noise, particularly from vehicles. This information has been added to Section 4.1.10.2 of the EIS. See response to Comment 9-8 for a discussion of noise verification by JEA.

Comment 9–12:
"We note the mention of traffic congestion (pg. 4-56) during construction of the facility. To what extent is this expected to affect local air quality?"

Response:
As discussed in Section 4.1.2.1, exhaust emissions from workers' vehicles during facility construction, including during periods of traffic congestion, would be very small compared to regulatory thresholds typically used to determine whether further air quality impact analysis is necessary. For example, as discussed in Section 4.1.2.2, although a conformity determination is not required because the precursors of O_3 (VOCs and NO_x) are evaluated in the PSD permit application, the exhaust emissions from workers' vehicles would be much less than the levels that trigger a conformity determination (i.e., 100 tons per year for VOCs and NO_x in maintenance areas outside an O_3 transport region). Duval County is a maintenance area for O_3. Similarly, CO and particulate emissions from workers' vehicles would not be expected to contribute to

exceedances in ambient air quality standards because current CO and particulate levels are less than 50% and 70% of the standards, respectively (Table 3.2.1).

Comment 9–13:
"Page 4-61 states that '[t]he majority of customers receiving electricity from the proposed facility would not experience any change in exposure levels due to electromagnetic fields because the fields would be confined to areas along the transmission lines.' The FEIS should verify that the widths of the rights-of-way are in compliance with state of Florida law relative to the line voltage transmitted and the breadth of the associated magnetic fields. Will expansion of the ROWs be required after project construction and operation in order to maintain/achieve compliance?"

Response:
The widths of the existing rights-of-way are in compliance with state of Florida law and were designed in accordance with the applicable standards that applied at the time of construction of the lines. Expansion of the rights-of-way exiting the plant would not be required because the voltage on the lines would not change and any increases in magnetic fields would not exceed maximum values that the lines were originally designed to handle.

Comment 9–14
"Based on the information provided on page 4-20 under the dioxin and furans sections, it appears as though the cancer risk associated with dioxin, furans and other carcinogenic substances was calculated on a 'per year basis.' The risk calculations should be reported as the excess carcinogenic risk instead. This should increase the calculated cancer risk documented in this DEIS."

Response:
Cancer risk is consistently discussed in the EIS on a "per year" basis. Because the facility would be designed for a lifetime of 30 years, the risk from a 30-year period of exposure during the lifetime of the facility can be approximated by multiplying each corresponding annual risk by 30. This statement has been added to Section 4.1.2.2 of the EIS.

Comment 9–15

"Furthermore, please provide additional information regarding the underlying health-based criteria and any risk levels associated with Florida's Ambient Air Reference Concentrations (FAARCs)."

Response:

The FAARCs for each pollutant are derived to minimize health risk to the general population. However, some individuals who are hypersensitive due to a combination of genetic factors, previous exposures, personal habits (e.g., smoking), age, medication, or other factors, may experience effects at concentrations at or below the FAARCs. The health-based criteria for deriving reference concentrations are obtained from professional literature by professional hygienists. For example, for the two elements (beryllium and mercury) considered in detail in the EIS, the 24-hour FAARCs are derived from guideline values developed by the American Conference of Governmental Industrial Hygienists (ACGIH) that are adjusted to apply to the general public, as discussed in Section 4.1.2.2 of the EIS. The following reports provide more detailed information about mercury:

EPA (U.S. Environmental Protection Agency) 1997. *Mercury Study Report to Congress, Volume V, Health Effects of Mercury and Mercury Compounds,* EPA-452/R-97-007.

EPA (U.S. Environmental Protection Agency) 1996. *Study of Hazardous Air Pollutant Emissions from Electric Utility Steam Generating Units--Interim Final Report*, EPA-453/R-96-013a-c (3 volumes).

The following report provides more detailed information about beryllium:

EPA (U.S. Environmental Protection Agency) 1987. *Health Assessment Document for Beryllium,* EPA/600/8-84/026F.

NORTHSIDE CIVIC ASSOCIATION, INC.

Post Office Box 26234
Jacksonville, Florida 32226

FAX
COVER SHEET

DATE: 15 October 99

TO: Lisa K. Hollingsworth

FAX NUMBER: (304) 285 - 4403

FROM: Val Bostwick, President
Northside Civic Association, Inc.

 # OF PAGES TRANSMITTED: 2

SUBJECT: COMMENTS / PUBLIC HEARING
September 30, 1999
JEA Circulating Fluidized Bed Combustor Project

The attached letter raises concerns over the possibility of increased rail traffic. Please review and address the issue raised. Thank you.

Telephone (904) 246 – 1658 Fax (904) 270 - 0021

NORTHSIDE CIVIC ASSOCIATION, INC.
Post Office Box 26234
Jacksonville, Florida 32226

Letter No. 10

Reproduced from copy submitted

October 15, 1999

Ms. Lisa K. Hollingsworth
Federal Energy Technology Center
P.O. Box 880
Morgantown, WV 26505

VIA - FAX

Re: Public Comments/Concerns
Proposed JEA Circulating Fluidized Bed Combustor Project

Dear Ms. Hollingsworth:

In connection with the recent Public Hearing on the Proposed JEA Circulating Fluidized Bed Combustor Project on September 30, 1999, NCA would like to raise the following concern based on a statement made in the "Summary of Expected Environmental Impacts" Transportation Section.

The statement reads "Should economic conditions change, rail traffic could increase by up to 3 additional train deliveries per week, exacerbating some existing community concerns with noise, vibrations, and blocked roads." The last,, 'Blocked Roads', is of great concern because existing rail traffic already cuts off neighborhoods from essential services such as Fire & Rescue when coal deliveries are made to the St. Johns River Power Park and the U.S. Generating/Cedar Bay Facility. 10-1

Any possible increase in rail traffic should be carefully examined. JEA has here-to-now, indicated coal deliveries would be made by water. Because of only having one way in, the estimated increase of three (3) trips would equate to six (6) trains because every trip in requires a trip out.

NCA requests your careful review of this issue. We are available to meet with you and can provide you with documentation as may be necessary.

Sincerely,

Val Bostwick
President

cc: Susan Hughes / JEA

Letter No. 10

Val Bostwick, President, Northside Civic Association, Inc., P. O. Box 26234, Jacksonville, Florida 32226

Comment 10–1:

"The statement reads 'Should economic conditions change, rail traffic could increase by up to 3 additional train deliveries per week, exacerbating some existing community concerns with noise, vibrations, and blocked roads.' The last, 'Blocked Roads', is of great concern because existing rail traffic already cuts off neighborhoods from essential services such as Fire & Rescue when coal deliveries are made to the St. Johns River Power Park and the U.S. Generating/Cedar Bay Facility.

Any possible increase in rail traffic should be carefully examined. JEA has here-to-now, indicated coal deliveries would be made by water. Because of only having one way in, the estimated increase of three (3) trips would equate to six (6) trains because every trip in requires a trip out."

Response:

Current community concern with blocked roads and other effects of rail traffic is described in Section 1.6, and the phenomenon of road blockage is described in Sections 3.9.1.1 and 4.1.10.1. An explanation that three additional train deliveries would mean an increase of six one-way trips is provided in Section 4.1.10.1. These six additional trips would represent an increase of about 5% in total movement on the CSX rail line paralleling U.S. 17 and an increase of 8% on the spur line that runs from U.S. 17 to the St. Johns River Power Park and Blount Island.

ACAA INTERNATIONAL
American Coal Ash Association
6940 South Kings Highway ⋄ Suite 207
Alexandria, Virginia ⋄ 22310-3344 ⋄ USA
Phone: 703-317-2400 ⋄ Fax: 703-317-2409
Internet: http://www.ACAA-USA.org

October 15, 1999

Letter No. 11

Reproduced from copy submitted

Ms. Lisa K. Hollingsworth
NEPA Document Manager
U.S. Department of Energy
Federal Energy Technology Center
3610 Collins Ferry Road
P.O. Box 880
Morgantown, WV 26507-0880

RE: U.S. Department of Energy (DOE) *Draft Environmental Impact Statement (EIS) for the JEA Circulating Fluidized Bed Combustor Project, Jacksonville, Florida* [DOE/EIS-0289, August 1999]

Dear Ms. Hollingsworth:

The American Coal Ash Association (ACAA) appreciates the opportunity to review the above referenced document, *Draft Environmental Impact Statement (EIS) for the JEA Circulating Fluidized Bed Combustor Project, Jacksonville, Florida* [U.S. Department of Energy (DOE), DOE/EIS-0289, August 1999], and is pleased to offer comments.

The EIS indicates that the circulating fluidized bed (CFB) combustion technology to be demonstrated under DOE's Clean Coal Technology Program at Northside Generating Station, a site owned by JEA (former Jacksonville Electric Authority) about nine miles northeast of the downtown area of Jacksonville, Florida. The fuels to be used would be both coal and petroleum coke for generation of 300 megawatts of electricity; and the combustion residues would be some 57,000 tons per year of coal fly ash and 106,000 tons of bottom ash, if coal were used alone for an entire year; and alternatively, if petroleum coke were used alone for an entire year, 109,000 tons of fly ash and 170,000 tons of bottom ash annually.

ACAA's comments focus on managing the combustion residues in ways that are technically sound and environmentally safe, thereby maximizing their potential for use. The positive record for the use of coal combustion products (CCPs), covering more than 30 years, provides positive guidance for developing such uses. Similarly, this record of experience raises cautions against potentially inappropriate uses of such materials.

ACAA's comments are presented in the following paragraphs with reference to numbered sections within the subject EIS document.

2.1.7.3 - Solid Waste - Both coal and petroleum coke are to be used during the course of a year. The document states that combustion residues (fly ash and bottom ash) from each fuel source will be collected in silos and subsequently commingled for potential use.

We ask if there is a distinction to be made between the residues from coal and those from the coke, and for varying fuel combinations in between 100% of either fuel, based on the physical and chemical characteristics of the residues? 11-1

Also, if excess material is disposed, either on-site or off-site, will the combustion residues from each fuel be placed in separate areas to allow for the potentially different management practices that may be needed for each of these materials? Such management practices could significantly enhance the marketability of the combustion residues. 11-2

Furthermore, if unforseen circumstance develop with respect to the performance of the disposal site, such as occurrences of runoff or movement of leachate, can the contribution of each combustion residue be distinguished? 11-3

4.1.7.2 Operation - Combustion Ash Management - As an alternative to the stated plan, the storage cells (I and II) for uncovered ash could be developed concurrently with separate areas for the combustion residues from each of the two fuel sources (and perhaps an area for fuel mixes between the two). The added cost of operating the two sites might be more than offset by revenues from additional marketing opportunities that could be developed. 11-4

By capitalizing on the tendency of these CFB combustion residues to self-harden due to hydration reactions, it may be feasible to manufacture certain products such as roadbase material and synthetic aggregates. These products might be stockpiled in the cells and used at later dates, as needed, with the seasonal fluctuations in demand for highway construction and commercial building markets. 11-5

7. - Regulatory Compliance and Permit Requirements - Opportunities to utilize the CFB combustion residues, in lieu of disposal, should be developed and pursued simultaneously with the review of regulatory compliance and permit requirements. This early action, in harmony with all federal, state and local requirements, will dramatically improve the likelihood of developing successful marketing programs. 11-6

The federal government has promoted CCP reuse through a variety of initiatives. In 1983, EPA promulgated the first federal procurement guideline that required agencies using federal funds to implement a preference program favoring the purchase of cement and concrete containing fly ash. 40 C.F.R. Part 249. The EPA endorses the use of pozzolans, such as coal ash, as the preferred method for stabilizing certain metal bearing wastes. 52 *Federal Register* 29992.

EPA also has published a summary of information pertaining to CCP use in an "environmental fact sheet," *Guideline for Purchasing Cement and Concrete Containing Fly Ash* [EPA/530-SW-91-086, January 1992]; however, the CFB combustion residues from the JEA project would almost certainly not meet the requirements of this specification.

Similarly, cautions should be raised against the use of the CFB materials in any engineering or manufacturing application where volume stability, either expansion or shrinkage, would be a factor in their successful performance. 11-7

Additionally, Executive Order 13101, *Greening the Government Through Waste Prevention, Recycling, and Federal Acquisition*, signed on September 14, 1998, directs federal agencies to develop affirmative procurement programs for environmentally preferable products and requires EPA to issue guidance on the principles agencies should use in making determinations for the preference and purchase of environmentally preferable products. Executive Order 13101 supercedes Executive Order 12873 of October 20, 1993.

EPA originally had proposed a Comprehensive Procurement Guideline (CPG), in response to Executive Order 12873, designating items that can be made with recovered materials, including fly ash. 59 *Federal Register* 18852 (April 20, 1994). The scope of recovered materials encompassed by the CPG has continued to grow in subsequent years. As applications for the CFB

combustion residues from the JEA project are developed, they too could be submitted to U.S. EPA for evaluation and possible inclusion in the CPG.

The proximity of the project site to the Jacksonville metropolitan area, and its access to the port facilities of the St. Johns River, would be very positive factors in the development of a marketing plan for the CFB combustion residues. There could be substantial local demand for the materials, depending on the actual applications for which they are found to be suitable; and, the distances over which cost-effective shipments of the combustion residues, or products made from them, could be significantly increased.

8. - Irreversible or Irretrievable Commitments of Resources - The fuel and sorbent reduced to unrecoverable forms of waste can be minimized by developing an early plan for their management and use in accordance with the comments presented above.

9. - Relationship Between Short-Term Uses of the Environmental and Long-Term Productivity - As stated, the long-term benefit of the proposed project is to demonstrate an environmentally sound and innovative technology for the utilization of coal. The CFB technology is expected to remove up to 98% of SO_2 emissions, reduce NO_x formation by approximately 60% compared with conventional coal-fired technologies, and remove more than 99% of particulate emissions. The similar long-term benefit of the project should be to demonstrate environmentally sound and innovative uses for the combustion residues. 11-8

In recent comments to U.S. EPA, in response to the *Request for Information Concerning Transfrontier Movements of Wastes Destined for Recovery Operations Within the OECD Area* [Federal Register, August 17, 1999], ACAA noted that the overall goal of the Basel Convention is to protect human health and the environment against the adverse effects from the generation and management of hazardous wastes and "other wastes." [1]

[1] American Coal Ash Association, Comments to U.S. EPA *Request for Information Concerning Transfrontier Movements of Wastes Destined for Recovery Operations Within the OECD Area*, September 30, 1999, 48 pages, EPA Docket Number F-1999-TMWA-FFFFF.

As one of the "other wastes", coal combustion residues that are used in lieu of portland cement, not only in concrete but also in other cementing applications, provide significant environmental benefits that frequently are overlooked. In applications where portland cement can be partially replaced, and in some cases totally replaced, by fly ash, the resulting decrease in CO_2 emissions from the avoided manufacture of cement is substantial.

Opportunities for using fly ash to achieve this important environmental benefit were addressed initially by ACAA in a paper published in 1995 [2], and in a subsequent paper and report [3], where the topic was extensively developed.

The cementing applications of fly ash that replace portland cement and avoid CO_2 emissions are not limited to fly ash in concrete. Specifically, with respect to EPA's RTC, the use of fly ash in many mining applications, particularly where flowable fill requiring low strengths are required, can eliminate most of all of the cement that would have been used.

10. - References - ACAA is pleased that one of its publications [4] was found to be useful in the development of the EIS document for the JEA project. The ACAA document is a collection of five papers that were presented at a regional workshop sponsored by ACAA in Minneapolis/St. Paul in July 1997.

---

[2] "Climate Change and New Opportunities for Coal Combustion Byproducts", Published in Proceedings of the 11th International Symposium on Management and Use of Coal Combustion Byproducts, American Coal Ash Association, January 1995, 15 pages.

[3] Increased Fly Ash Use Under the Climate Challenge Program: A Summary of Participation Accords Between the Electric Utilities and the U.S. Department of Energy, American Coal Ash Association, Prepared by: Daniel E. Klein, Twenty-First Strategies, L.L.C., March 1996, 52 pages (including appendices).

[4] Workshop on Management and Use of Coal Combustion Products, American Coal Ash Association, Minneapolis/St. Paul, July 15, 1997 (Collection of five papers presented at the workshop).

The method used in citing the ACAA reference in section 4.1.7.2 Operation - Combustion Ash Management of the EIS document may give the impression that the nationwide survey of CFB ash and its variety of applications was conducted by ACAA; however, that survey was conducted by the Council of Industrial Boiler Owners (CIBO), a cosponsor of the July 1997 workshop. The survey of CFB ash was described in a paper [5] that was presented at the ACAA workshop and that paper subsequently was included in the ACAA publication [4] that was cited in the EIS document. 11-9

Similarly, the EIS document appears to attribute the following statement to ACAA: "Data obtained nationwide with regard to leachability and toxicity of CFB ash indicates that none of more than 450 sample analyses exceeded regulatory thresholds." This information also came from the paper [5] presented at ACAA's July 1997 workshop, which subsequently was published by ACAA [4].

Respectfully submitted,

Samuel S. Tyson, P.E.
Executive Director

[5] Svendsen and Bessette, *The Council of Industrial Boiler Owners Special Project on Non-Utility Fossil Fuel Ash Classification*, 13 pages, Proceedings: Workshop on Management and Use of Coal Combustion Products (CCPs), Minneapolis/St. Paul, American Coal Ash Association, July 15, 1999.

Letter No. 11

Samuel S. Tyson, P.E., Executive Director, American Coal Ash Association, 6940 South Kings Highway, Suite 207, Alexandria, Virginia 22310-3344

Comment 11–1:

"We ask if there is a distinction to be made between the residues from coal and those from the coke, and for varying fuel combinations in between 100% of either fuel, based on the physical and chemical characteristics of the residues?"

Response:

No distinction would be made between residues from coal and those from petroleum coke. Ash from coal and petroleum coke would be commingled in the ash storage area, in accordance with the fill sequence established in the Class I landfill permit currently under review by the state of Florida. Characteristics of the commingled ash would be considered during its marketing.

Comment 11–2:

"Also, if excess material is disposed, either on-site or off-site, will the combustion residues from each fuel be placed in separate areas to allow for the potentially different management practices that may be needed for each of these materials? Such management practices could significantly enhance the marketability of the combustion residues."

Response:

Residues generated from the combustion of coal and petroleum coke would be commingled and stored initially in cell I of the ash storage area. Ash would require EPA-approved certification that it is nonhazardous before it would be accepted for disposal. JEA would consider segregating the ash should it become necessary for its marketing and sale.

Comment 11–3:

"Furthermore, if unforseen circumstance [sic] develop with respect to the performance of the disposal site, such as occurrences of runoff or movement of leachate, can the contribution of each combustion residue be distinguished?"

Response:

The ash storage area is being permitted based on the requirements for Class I landfills in the state of Florida. The runoff and leachate collection system is designed to accommodate the 25-year,

24-hour storm event. Runoff and leachate collected in this system would be discharged to the onsite chemical waste treatment system and commingled with other wastewater streams generated on the site. Therefore, the contribution of each combustion residue would not be distinguishable. However, groundwater and surface water monitoring would be implemented to ensure continued proper operation of the permitted systems.

Comment 11–4:

"4.1.7.2 Operation - Combustion Ash Management - As an alternative to the stated plan, the storage cells (I and II) for uncovered ash could be developed concurrently with separate areas for the combustion residues from each of the two fuel sources (and perhaps an area for fuel mixes between the two). The added cost of operating the two sites might be more than offset by revenues from additional marketing opportunities that could be developed."

Response:

It is JEA's intention to develop cell I alone for ash storage. By implementing an aggressive marketing program for this commingled residue, JEA intends to be able to prevent development of cell II. Cell II would only be developed if additional storage space is required or if marketing dictates that the ash should be stored separately.

Comment 11–5:

"By capitalizing on the tendency of these CFB combustion residues to self-harden due to hydration reactions, it may be feasible to manufacture certain products such as roadbase material and synthetic aggregates. These products might be stockpiled in the cells and used at later dates, as needed, with the seasonal fluctuations in demand for highway construction and commercial building markets."

Response:

Opportunities including those described are being considered by JEA.

Comment 11–6:

"7.- Regulatory Compliance and Permit Requirements - Opportunities to utilize the CFB combustion residues, in lieu of disposal, should be developed and pursued simultaneously with the review of regulatory compliance and permit requirements. This early action, in harmony with all federal, state and local requirements, will dramatically improve the likelihood of developing successful marketing programs."

Response:
Opportunities to utilize the ash, in lieu of disposal, are being developed by JEA concurrently with the state of Florida's review of the Class I landfill permit for the ash storage area. JEA intends to pursue these opportunities upon selection of the contractor to manage the ash storage area and market the ash.

Comment 11–7:
"Similarly, cautions should be raised against the use of the CFB materials in any engineering or manufacturing application where volume stability, either expansion or shrinkage, would be a factor in their successful performance."

Response:
JEA intends to consider these concerns during research conducted by the selected marketing firm to determine suitable applications for the ash.

Comment 11–8:
"The similar long-term benefit of the project should be to demonstrate environmentally sound and innovative uses for the combustion residues."

Response:
DOE agrees that a long-term benefit of the proposed project is to demonstrate environmentally sound and innovative uses for the combustion ash. Section 9 of the EIS states that, unlike with many conventional technologies, the combustion ash from the proposed project is suitable for beneficial uses such as road construction material, agricultural fertilizer, and reclaiming surface mining areas.

Comment 11–9:
"The method used in citing the ACAA reference in section 4.1.7.2 Operation - Combustion Ash Management of the EIS document may give the impression that the nationwide survey of CFB ash and its variety of applications was conducted by ACAA; however, that survey was conducted by the Council of Industrial Boiler Owners (CIBO), a cosponsor of the July 1997 workshop. The survey of CFB ash was described in a paper[5] that was presented at the ACAA workshop and that paper subsequently was included in the ACAA publication[4] that was cited in the EIS document.

Similarly, the EIS document appears to attribute the following statement to ACAA: 'Data obtained nationwide with regard to leachability and toxicity of CFB ash indicates that none of more than 450 sample analyses exceeded regulatory thresholds.' This information also came from the paper[5] presented at ACAA's July 1997 workshop, which subsequently was published by ACAA[4]."

Response:

In both cases, Section 4.1.7.2 of the EIS text has been modified to indicate the correct citation.

Letter No. 12

Reproduced from copy submitted

STATE OF FLORIDA

DEPARTMENT OF COMMUNITY AFFAIRS

"Helping Floridians create safe, vibrant, sustainable communities"

JEB BUSH
Governor

STEVEN M. SEIBERT
Secretary

November 15, 1999

Mr. Lloyd Lorenzi
U.S. Department of Energy
Federal Energy Technology Center
3610 Collins Ferry Road
Morgantown, West Virginia 26507-0880

RE: U.S. Department of Energy - Draft Environmental Impact Statement (EIS) for JEA (formerly Jacksonville Electric Authority) Circulating Fluidized Bed Combustor Project - Jacksonville, Duval County, Florida
SAI: FL9710020730CR

Dear Mr. Lorenzi:

The Florida State Clearinghouse, pursuant to Presidential Executive Order 12372, Gubernatorial Executive Order 95-359, the Coastal Zone Management Act, 16 U.S.C. §§ 1451-1464, as amended, and the National Environmental Policy Act, 42 U.S.C. §§ 4321, 4331-4335, 4341-4347, as amended, has coordinated a review of the above-referenced project.

The Department of Environmental Protection (DEP) indicates that permits will be required prior to the start of construction. Early coordination with DEP may help to eliminate problems in the permitting process. Please refer to the enclosed DEP comments.

The Department of Transportation (DOT) notes that the proposed project may directly impact the State Transportation system. The applicant should submit all site plans and access plans to the DOT's Jacksonville Urban Office in order to secure the proper permits. A re-evaluation of the project will be conducted during the environmental documentation or permitting stage. Please refer to the enclosed DOT comments.

The Department of State (DOS) notes that the proposed project will have a cultural resource survey performed. Provided

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Phone: (850) 488-8466/Suncom 278-8466 FAX: (850) 921-0781/Suncom 291-0781
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FLORIDA KEYS
Area of Critical State Concern Field Office
2796 Overseas Highway, Suite 212
Marathon, Florida 33050-2227

GREEN SWAMP
Area of Critical State Concern Field Office
205 East Main Street, Suite 104
Bartow, Florida 33830-4641

that the applicant completes the survey and appropriately avoids, minimizes, or mitigates impacts to any significant archaeological or historic sites identified in the survey, the above project will have no adverse effect. Please refer to the enclosed DOS comments.

Based on the information contained in the draft environmental impact statement and the applicant's satisfactory compliance with all conditions stipulated by the DOS, as enclosed, the state has determined that the above-referenced project is consistent with the Florida Coastal Management Program. Enclosed are all comments received to date from our reviewing agencies. Comments subsequently received by the State Clearinghouse will be forwarded for your review and consideration.

Thank you for the opportunity to review the environmental impact statement. If you have any questions regarding this letter, please contact Ms. Cherie Trainor, Clearinghouse Coordinator, at (850) 414-5495.

Sincerely,

Ralph Cantral, Executive Director
Florida Coastal Management Program

RC/cc

Enclosures

cc: April Williford, Department of Environmental Protection
P. Ward Swisher, Department of Transportation
Janet Snyder Matthews, Department of State

COUNTY: Duval

DATE: 08/26/1999
COMMENTS DUE-2 WKS: 09/09/1999
CLEARANCE DUE DATE: 10/11/1999
SAI#: FL9710020730CR

Message:

STATE AGENCIES	WATER MANAGEMENT DISTRICTS	OPB POLICY UNITS
X Agriculture Community Affairs Environmental Protection Fish & Wildlife Conserv. Comm State Transportation	St. Johns River WMD	Environmental Policy/C & ED

The attached document requires a Coastal Zone Management Act/Florida Coastal Management Program consistency evalutation and is categorized as one of the following:

— Federal Assistance to State or Local Government (15 CFR 930, Subpart F). Agencies are required to evaluate the consistency of the activity.

X Direct Federal Activity (15 CFR 930, Subpart C). Federal Agencies are required to furnish a consistency determination for the State's concurrence or objection.

— Outer Continental Shelf Exploration, Development or Production Activities (15 CFR 930, Subpart E). Operators are required to provide a consistency certification for state concurrence/objection.

— Federal Licensing or Permitting Activity (15 CFR 930, Subpart D). Such projects will only be evaluated for consistency when there is not an analogous state license or permit.

Project Description:

U.S. Department of Energy - Draft Environmental Impact Statement (EIS) for JEA (formerly Jacksonville Electric Authority) Circulating Fluidized Bed Combustor Project - Jacksonville, Duval County, Florida. Available on the internet: http://tis.eh.doe.gov/nepa

To: **Florida State Clearinghouse**
Department of Community Affairs
2555 Shumard Oak Boulevard
Tallahassee, FL 32399-2100
(850) 922-5438 (SC 292-5438)
(850) 414-0479 (FAX)

EO. 12372/NEPA

☑ No Comment
☐ Comments Attached
☐ Not Applicable

Federal Consistency

☑ No Comment/Consistent
☐ Consistent/Comments Attached
☐ Inconsistent/Comments Attached
☐ Not Applicable

From:
Division of Forestry
Forest Resource Planning
& Support Services Bureau
3125 Conner Blvd., Mail Stop C23
Tallahassee, FL 32399-1650

Division/Bureau: _____

Reviewer: _____

Date: 9-9-99

Department of
Environmental Protection

Jeb Bush
Governor

Marjory Stoneman Douglas Building
3900 Commonwealth Boulevard
Tallahassee, Florida 32399-3000

David B. Struhs
Secretary

October 1, 1999

Cherie Trainor
State Clearinghouse
Department of Community Affairs
2555 Shumard Oak Boulevard
Tallahassee, Florida 32399-2100

RE: DOE/Draft EIS for the JEA Circulating Fluidized Bed Combustor Project in Jacksonville, Duval County
SAI: FL9710020730CR

Dear Ms. Trainor:

The Department of Environmental Protection has reviewed the above-referenced Draft Environmental Impact Statement for the JEA Circulating Fluidized Bed Combustor Project. Based on the information provided, the Department finds the proposed project to be consistent with its statutory authorities in the Florida Coastal Management Program, provided all necessary permits are obtained prior to construction activities. 12-1

We appreciate the opportunity to provide comments on the proposed project. If you have any questions or require additional information, please contact me at (850) 487-2231 or SunCom 277-2231.

Sincerely,

April D. Williford
Office of Intergovernmental Programs

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Office of the Secretary
Office of International Relations
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FLORIDA DEPARTMENT OF STATE
Katherine Harris
Secretary of State

DIVISION OF HISTORICAL RESOURCES

November 3, 1999

Ms. Cherie Trainor
State Clearinghouse
Department of Community Affairs
2555 Shumard Oak Boulevard
Tallahassee, Florida 32399-2100

RE: DHR Project File No. 997940
SAI# FL9710020730CR
Draft Environmental Impact Statement (DEIS) for the
JEA Circulating Fluidized Bed Combustor Project
Jacksonville, Duval County, Florida

Dear Ms. Trainor:

In accordance with the provisions of Florida's Coastal Zone Management Act and Chapter 267, *Florida Statutes*, as well as the procedures contained in 36 C.F.R., Part 800 ("Protection of Historic Properties"), we have reviewed the referenced project for possible impact to historic properties listed, or eligible for listing, in the *National Register of Historic Places*, or otherwise of historic or architectural value.

We have reviewed the referenced draft environmental impact statement. We specifically reviewed sections 3.7 and 4.1.8, both dealing with Cultural Resources. We note that the project will have a cultural resource survey performed. The resultant survey report shall conform to the specifications set forth in Chapter 1A-46, Florida Administrative Code, and will need to be forwarded to this agency in order to complete the process of reviewing the impact of this proposed project on historic properties. Therefore, conditioned upon the JEA undertaking a cultural resource survey, and appropriately avoiding, minimizing, or mitigating project impacts to any identified significant archaeological or historic sites, the proposed project will have no effect on historic properties listed, or eligible for listing, in the National Register, or otherwise of historical or architectural value. 12-2

If you have any questions concerning our comments, please contact Scott Edwards, Historic Preservation Planner, at 850-487-2333 or 800-847-7278. Your interest in protecting Florida's historic properties is appreciated.

Sincerely,

Laura A. Kammerer

for Janet Synder Matthews, Ph.D.
State Historic Preservation Officer

JSM/Ese

xc: Jasmin Raffington, FCMP-DCA

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☐ Archaeological Research (850) 487-2299 • FAX: 414-2207
☑ Historic Preservation (850) 487-2333 • FAX: 922-0496
☐ Historical Museums (850) 488-1484 • FAX: 921-2503
☐ Historic Pensacola Preservation Board (850) 595-5985 • FAX: 595-5989
☐ Palm Beach Regional Office (561) 279-1475 • FAX: 279-1476
☐ St. Augustine Regional Office (904) 825-5045 • FAX: 825-5044
☐ Tampa Regional Office (813) 272-3843 • FAX: 272-2340

Florida Department of Transportation

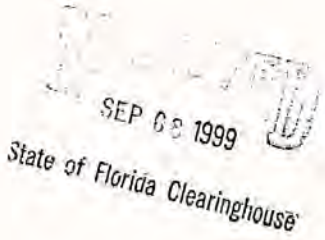
1-800-749-2967

JEB BUSH
GOVERNOR

THOMAS F. BARRY, JR.
SECRETARY

P.O. Box 1089
Lake City, Fl 32056-1089
September 2, 1999

Ms. Cherie Trainor
Florida State Clearinghouse
Department of Community Affairs
2255 Shumard Oak Blvd.
Tallahassee, Fl 32399-2100



Subject: SAI NO. FL9710020730CR
JEA

Dear Ms. Trainor:

Based on the information provided, we find that the subject project may have a direct impact on the State Transportation System. It is requested that the applicant submit all site plans and access plans to Mrs. Carol Wright, Jacksonville Permit Engineer, Jacksonville Urban Office, Post Office Box 6669, Jacksonville, Florida 32236-6669 Telephone (904) 360-5433 in order to secure proper permits. The project has been reviewed under Presidential Executive Order 12372 and the Florida Coastal Zone Management Program for consistency for the following: 12-3

- Florida Transportation Plan, modal systems and work program plans directly related to this project.
- Level of Service Standards
- Access Management Standards
- Right-of-way costs and advanced acquisition
- Intergovernmental coordination
- Chapters 334 and 339, Laws of Florida

A re-evaluation of this project will be conducted during the environmental documentation or permitting stage, as required. Future consistency of this project will be dependent upon the proper consideration of our comments offered in this and subsequent reviews.

www.dot.state.fl.us

If you have any questions regarding this response, please contact me at SC 881-3678.

Sincerely,

P. Ward Swisher
Asst. Transportation Statistics Administrator

cc: Aage Schroder
Sandra Whitmire
Carol Wright
Tom Dyal

99-069.WS

COUNTY: Duval Rec'd 8/30, 9

Message: #1502 ✓ 9/22 Jax No. 0919

DATE: 08/26/1999
COMMENTS DUE-2 WKS: 09/09/1999
CLEARANCE DUE DATE: 10/11/1999
SAI#: FL9710020730CR

STATE AGENCIES	WATER MANAGEMENT DISTRICTS	OPB POLICY UNITS
Agriculture Community Affairs Environmental Protection Fish & Wildlife Conserv. Comm State Transportation	X St. Johns River WMD	Environmental Policy/C & ED

RECEIVED
SEP 27 1999
State of Florida Clearinghouse

The attached document requires a Coastal Zone Management Act/Florida Coastal Management Program consistency evalutation and is categorized as one of the following:

— Federal Assistance to State or Local Government (15 CFR 930, Subpart F). Agencies are required to evaluate the consistency of the activity.

X Direct Federal Activity (15 CFR 930, Subpart C). Federal Agencies are required to furnish a consistency determination for the State's concurrence or objection.

— Outer Continental Shelf Exploration, Development or Production Activities (15 CFR 930, Subpart E). Operators are required to provide a consistency certification for state concurrence/objection.

— Federal Licensing or Permitting Activity (15 CFR 930, Subpart D). Such projects will only be evaluated for consistency when there is not an analogous state license or permit.

Project Description:

U.S. Department of Energy - Draft Environmental Impact Statement (EIS) for JEA (formerly Jacksonville Electric Authority) Circulating Fluidized Bed Combustor Project - Jacksonville, Duval County, Florida. Available on the internet: http://tis.eh.doe.gov/nepa

To: **Florida State Clearinghouse**
Department of Community Affairs
2555 Shumard Oak Boulevard
Tallahassee, FL 32399-2100
(850) 922-5438 (SC 292-5438)
(850) 414-0479 (FAX)

EO. 12372/NEPA

☐ No Comment
☐ Comments Attached
☐ Not Applicable

Federal Consistency

☒ No Comment/Consistent
☐ Consistent/Comments Attached
☐ Inconsistent/Comments Attached
☐ Not Applicable

From:
Division/Bureau: SJRWMD/OPP
Reviewer: MSpontak 9/22/99
Date:

COUNTY: Duval

Message:

DATE: 08/26/1999
COMMENTS DUE-4 WKS: 09/09/1999
CLEARANCE DUE DATE: 10/11/1999
SAI#: FL9710020730CR

STATE AGENCIES	WATER MANAGEMENT DISTRICTS	OPB POLICY UNITS
Agriculture Community Affairs Environmental Protection Fish & Wildlife Conserv. Comm State Transportation	St. Johns River WMD	X Environmental Policy/C & ED

RECEIVED
AUG 30 1999
OCT 2 1999

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☐ Inconsistent/Comments Attached
☐ Not Applicable

From:
Division/Bureau: EOG/SPBCNV
Reviewer: Paula Ann
Date: Oct. 1, 1999

Letter No. 12

Ralph Cantral, Executive Director, Florida Coastal Management Program, State of Florida Department of Community Affairs, 2555 Shumard Oak Boulevard, Tallahassee, Florida 32399-2100

Comment 12–1:

"Based on the information provided, the Department finds the proposed project to be consistent with its statutory authorities in the Florida Coastal Management Program, provided all necessary permits are obtained prior to construction activities."

Response:

All necessary permits for the proposed project would be obtained as required by the permitting agencies.

Comment 12–2:

"We note that the project will have a cultural resource survey performed. The resultant survey report shall conform to the specifications set forth in Chapter 1A-46, Florida Administrative Code, and will need to be forwarded to this agency in order to complete the process of reviewing the impact of this proposed project on historic properties."

Response:

See response to Comment 6-1.

Comment 12–3:

"Based on the information provided, we find that the subject project may have a direct impact on the State Transportation System. It is requested that the applicant submit all site plans and access plans to Mrs. Carol Wright, Jacksonville Permit Engineer, Jacksonville Urban Office, Post Office Box 6669, Jacksonville, Florida 32236-6669 Telephone (904) 360-5433 in order to secure proper permits."

Response:

This comment was based on the assumption that there would be construction associated with the proposed project on Heckscher Drive, which is a state road. JEA has contacted Carol Wright to discuss this concern and both parties agree that, because project-related construction would not occur along Heckscher Drive and because the only access for construction personnel would be located at the New Berlin Road entrance to the facility, JEA is not required to submit site plans

and access plans for the proposed project to the Florida Department of Transportation (C. A. Wright, Florida Department of Transportation, personal communication to J. A. Leduc, JEA, January 7, 2000).