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

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FIELD

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

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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.

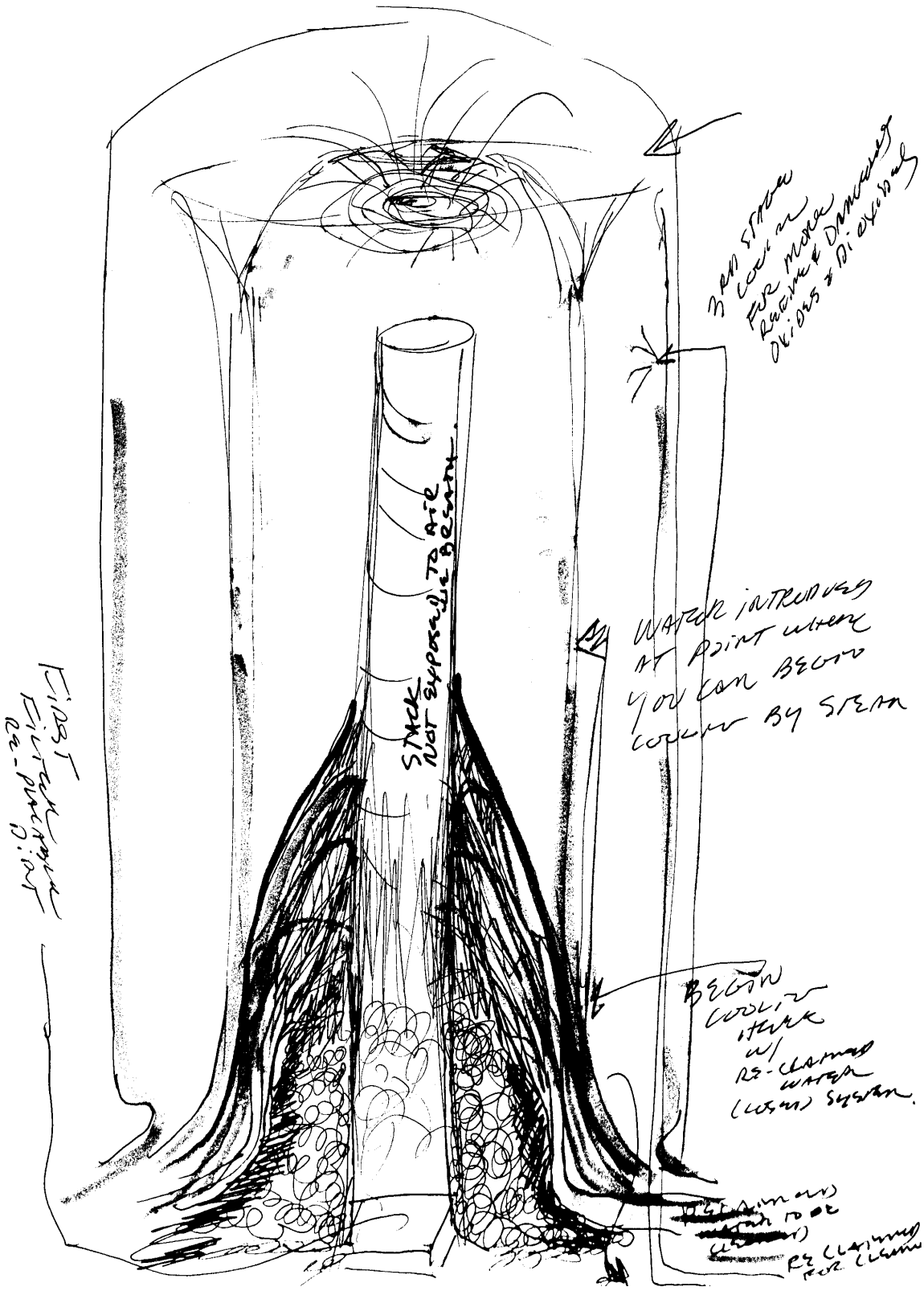
Just a philosophical note: The Dept. Of Energy will be subservient to NASSA, unless that is the National Design, by limiting the concept of energy to all roads lead to ELECTRICITY.

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 ATE BOTTOM
WATER INTRUDES AT POINT WHERE YOU CAN BEGIN COOLING BY STEAM
BEGIN COOLING STEAM 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

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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

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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
U.S. DEPT. OF ENERGY (FETC)
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

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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.

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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

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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