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FEDERAL ENERGY REGULATORY COMMISSION

OFFICE OF ENERGY PROJECTS

- - -

Free Flow Power Mississippi River
Hydrokinetic Lead Projects

SCOPING MEETING

Memphis Cook Convention Center

255 North Main Street

Memphis, Tennessee 38103

Tuesday, May 5, 2009

10:00 a.m.

1 APPEARANCES:

2 For Federal Energy Regulatory Commission

3 Sarahh L. Florentino Environmental Biologist

4 Annie Blanchard Jones - Attorney-Advisor

5 ALLAN E. CREAMER

6

7 SPEAKERS:

8 Roger Allen - 10

9 General Career - 14

10 Ramya Swaminathan - 18

11 Nancy Ream - 27

12 Vincent Ciaramitaro - 28

13 Scott Anderson - 29

14 John Rumancik - 33

15 Gregory Love - 49

16 Leo Vizzert - 50

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1 P R O C E E D I N G S

2 MS. FLORENTINO: Okay. I guess
3 we'll go ahead and get started.

4 Welcome, everyone, good morning,
5 thank you for joining us. This is the 8th of 10
6 public scoping meetings for Free Flow Power's
7 proposed lead hydrokinetic projects on the
8 Mississippi River.

9 This meeting is hosted by the
10 Federal Energy Regulatory Commission, or the
11 F-E-R-C, or is also referred to as The FERC, FERC
12 or the Commission.

13 The Commission is an independent
14 federal agency which regulates non-federal
15 hydrocarb projects, among other responsibilities.

16 It is currently composed of three
17 commissioners and one chairman.

18 My name is Sarahh Florentino and I'm
19 one of the coordinators for the licensing process,
20 FERC's licensing process for the lead Mississippi
21 River, hydrokinetic projects.

22 Again, thank you all for joining us.
23 And we hope to make this a very productive meeting
24 and information sharing.

25 In a nutshell during this meeting we

1 will be providing all the information about the
2 Commission's licensing process, and how you can
3 provide us with information related to the lead
4 projects.

5 We're requesting your comments and
6 information pertinent to the proposed lead projects
7 from interested stakeholders, which are you.

8 I believe everyone is signed in, but
9 if you haven't signed in, please do so now. On the
10 sign-in sheet, please print your name and address,
11 and indicate whether you would like to be added to
12 the Commission's mailing list for the Free Flow
13 Power proposed lead projects.

14 Also at the bottom of the sign-in
15 sheets, there's a space that indicate whether you
16 would like to speak during today's meeting. We've
17 collected all the sign-in sheets and I believe
18 there's only two speakers so far, so we probably
19 won't have a time limit during our comment period.
20 But if you decide during the meeting that you would
21 like to make a statement, that's fine, we'll pass
22 the microphone to you after the first speakers have
23 made their statements.

24 If you have prepared a written
25 statement, you can submit it to our court reporter,

1 Terry Holmes, who's sitting to my left, or you may
2 file it with the Commission, and I will explain how
3 you can do that in a few minutes.

4 So hopefully everyone has picked up
5 a copy of our handout at the back of the room.
6 It'll show you the examples of the handouts here.

7 First, there is Scoping Documents 1
8 or SD-1. This is stamp packs with information
9 about the Commission's process and some information
10 about the proposed lead projects, so please read
11 it.

12 We also have a copy of our second
13 scoping notice with a schedule of all the public
14 meetings we've had, as well as the schedule and
15 meeting places for the site visits. We still have
16 two remaining site visits in St. Louis, Missouri
17 and also two public meetings.

18 Also in the back of the room, a
19 handout, we have is booklets with the Commissions
20 regulations for the integrated licensing process.
21 And you flip it to the other side, it's more lay
22 person's guide to the process.

23 And finally we have our electronic
24 library brochure that goes through step-by-step how
25 you can access files that are already on our

1 e-library system, and how you can file comments
2 electronically with the Commission, or just receive
3 email notifying you of when other stakeholders have
4 filed documents regarding this project.
5 Electronically filing is really the easiest way you
6 can participate in the process.

7 So we're hoping to present our slide
8 officially as possible, so we can leave plenty of
9 time at the end of the meeting for your comments.

10 In that regard, let me show you our
11 agenda for today. First, we will present our
12 staff, at least all of the FERC and contractor team
13 members that we have present here today.

14 Following our introductions, we will
15 discuss the overall proposal and the lead projects
16 contest. We'll discuss the purpose of scoping.
17 Working with the Army Corp of Engineers.

18 Our anticipated schedule for the
19 preparation of the Environmental Impact Statement
20 or the EIS. And then how you can help us gather
21 the information that we need for a thorough
22 analysis of the project.

23 After covering those topics,
24 representatives from Free Flow Power will provide a
25 brief project description of the seven lead

1 projects.

2 Finally, we will provide a
3 preliminary scope for the cumulative effects
4 analysis and the EIS, and procedures for scoping
5 and written comments.

6 So, again, I'm Sarah Florentino, I'm
7 one of the FERC project coordinators for the Free
8 Flow Power proposed lead projects. The other
9 coordinator's name is Stephen Bowler. Also here
10 today we have, Allan Creamer, he is our FERC (IA)--
11 and technical expert on this team. Annie Jones, is
12 a member of our FERC General Counsel. Fred
13 Winchell is our contractor project coordinator.
14 Bernward Hay is our contractor water quality
15 specialist. Tom Kahl is in the back of the room
16 and he is our contractor civil engineer, and Karen
17 Klosowski is also in the back of the room, she's
18 our recreation specialist.

19 There's several other team members,
20 both FERC staff and contractor staff that are not
21 with us today, but we have all of the resources
22 covered, you can be reassured.

23 Okay. Now to cover the overall
24 proposal and the lead project concept. Ultimately
25 Free Flow Power proposes to install 180,000

1 turbine-generators across 55 sites to produce 1,800
2 megawatts of average operating generation with a
3 total installed capacity of 7,200 megawatts.

4 Free Flow Power has proposed that
5 seven of the 55 sites be treated as the "Lead
6 Projects" and that the licensing process be
7 initiated for those sites using the Commission's
8 Integrated Licensing Process or the ILP.

9 The Lead Hydrokinetic Projects
10 include the proposed Greenville Bend, Scotlandville
11 Bend, Kempe Bend, Ashley Point, Hopefield Point,
12 Flora Creek Light, and McKinley Crossing Projects.

13 Descriptions of the proposed Lead
14 Projects are provided in Section 3 of the scoping
15 document, as well as Free Flow Power's
16 pre-application document or CAD as we call it for
17 short.

18 After the seven Lead Projects have
19 completed the study determination phase of the ILP
20 Free Flow Power plans to prepare license
21 applications for the other 48 sites under the
22 Commission's Traditional Licensing Process, which
23 is a little different, and we call that TLP for
24 short.

25 Free Flow Power intends that the

1 study plans established in the ILP be used for the
2 other sites, the TLP sites.

3 We are currently focusing on the
4 seven lead projects. We'll have scoping meetings
5 separately for the other 48 sites at a later date.

6 Okay. So what is the purpose of
7 scoping? The National Environmental Policy Act or
8 NEPA, as we call it for short -- FERC's
9 regulations, and other applicable laws, require
10 evaluation of environmental effects of licensing or
11 relicensing of hydropower projects. FERC staff
12 analyze the effects of proposed projects on
13 aquatic, terrestrial, recreation, cultural, tribal,
14 aesthetic, and developmental resources.

15 The scoping process is apart of NEPA
16 and is used to identify issues and concerns to be
17 addressed in the NEPA documents, which are
18 environmental assessments or in this case,
19 environmental impact statement.

20 During scoping meetings, FERC staff
21 solicit input from federal, state, local -- and to
22 local agencies rather, Indian Tribes,
23 Non-government organizations, and the public.

24 The Scoping Document 1, again, SD-1,
25 for the Lead Projects was issued on March 16, 2009.

1 It provides a preliminary list of issues that the
2 Commission staff plans to analyze in the
3 environmental impact statement for the lead
4 projects.

5 And if you'd like to look at the
6 preliminary list and then find page 17 of the
7 scoping document.

8 Okay. As you may be aware, the Army
9 Corps of Engineers is involved in virtually
10 everything that occurs on the Mississippi River.
11 We anticipate that the Corps will actively
12 participate and the Commission's licensing process
13 of the seven lead projects. But at this time, I
14 would like to take a moment to allow Roger Allen
15 from the Army Corps of Engineers Regulatory Branch
16 to provide a brief statement.

17 ROGER ALLEN

18 ROGER ALLEN: The U.S. Army Corps of
19 Engineers supports the development of renewable
20 energy projects where these projects are feasible,
21 and in the case of the hydrokinetic projects on the
22 Mississippi River where these projects are
23 compatible, the Corps missions and navigation, and
24 flood risk management, environmental stewardship
25 and recreation.

1 The Mississippi Valley Division has
2 provided comments to the Federal Energy Regulatory
3 Commission and Free Flow Power Corporation
4 regarding the hydrokinetic projects being planned
5 for the Mississippi River.

6 The Corps will continue to work with
7 FERC and Free Flow Power through FERC's licensing
8 process and the Corps regulatory process to ensure
9 that these projects are compatible with Corps
10 missions on the Mississippi River. Thank you.

11 MS. FLORENTINO: Thank you, Roger.
12 Okay. Taking a look at our schedule for the
13 Environmental Impact Statement preparation and your
14 handouts, the scoping document notice and the
15 scoping document, or scoping notice rather and the
16 scoping document provides schedules for the public
17 meeting, as well as the Commission's licensing
18 process. So we encourage you, if you haven't picked
19 up those handouts, please do. And we invite you to
20 participate in each of the steps that mainly in the
21 process.

22 I would like to emphasize, we are at
23 the very beginning of the process, so you'll have
24 many other opportunities to contribute your
25 comments and concerns.

1 Also, please note that the
2 Commission has approved the request of the Fish &
3 Wildlife Service of the Environmental Protection
4 Agency to extend the time for stakeholders such as
5 yourself to provide comments on Free Flow Power's
6 pre-application document, comment on the
7 Commission's scoping document, and also to submit
8 your study requests. The previous due date was May
9 15th of this year, but it has been extended by 60
10 days, due July 14th, 2009.

11 This time extension will effect the
12 rest of the schedule. We will issue an updated
13 schedule and our scoping document 2 or SD-2. The
14 updated schedule, well, is much the same as the
15 schedule in the Scoping Document 1, but the steps
16 in the process, the party is responsible for each
17 step and the due dates. So you can help us gather
18 the pertinent information for the Commission's
19 analysis of the proposed lead projects.

20 Please inform us of any significant
21 environmental issues that should be addressed in
22 the Environmental Impact Statement. Please provide
23 us with your study request for any information
24 needed for a thorough analysis of the lead project
25 proposals. We courage everyone who plans to

1 request studies to write clear and detailed study
2 requests, following the Commission's seven study
3 criteria, which are listed in Appendix A of the
4 scoping documents.

5 Please submit any information or
6 data describing past and present conditions of the
7 project areas. In addition, please submit any
8 resource plans and future proposals in the project
9 areas.

10 You may provide us with your
11 comments in several ways. Oral or written comments
12 can be provided today. You may also file comments
13 electronically, which is the best -- the easiest
14 way to participate in the process, or you can mail
15 written comments to the FERC Secretary. Her name
16 is Kimberly D. Bose, and the address is here on the
17 slide. Also it is listed on Page iii and page 24
18 of the Scoping Document.

19 And please note that the comments on
20 the pre-application document on the Commission's
21 Scoping Document and study request are due by July
22 14th.

23 Okay. At this time we would like to
24 allow representatives from Free Flow Power, Ramya,
25 to provide us with a brief description of the lead

1 projects. General Career, as well.

2 GENERAL CAREER

3 GENERAL CAREER: Thank you very
4 much. And first of all, my name is Bob Career. I
5 know some of the people out here, and I know a
6 whole lot about the Mississippi River, so I'm glad
7 to see some of the stakeholders here today.

8 First I want to thank FERC for
9 allowing Free Flow Power to be part of this great
10 process. It is a very open process, and done --
11 we've had a great opportunity I think to tell
12 people, to inform people, you know, from New
13 Orleans, now to Memphis, and Cape Girardeau, St.
14 Louis as you're walking down the river.

15 I want -- this is my first public
16 hearing that I've attended since I've taken over
17 the position as Chairman of Free Flow Power
18 Develop's, LLC. And one year ago -- just thinking,
19 one year ago I was probably on the Mississippi
20 River as commander of the Mississippi Valley
21 Division. There's Army Corps of Engineers and also
22 as President of the Mississippi River Commission,
23 which I served as -- almost four years. And prior
24 to that I also served as the District Engineer for
25 the Vicksburg District, U.S. Army Corp of

1 Engineers, on the river and also in my home town,
2 which I now reside in. And of course prior to
3 that, I've also served as Chief of Staff of the
4 U.S. Army of Engineers Headquarters in Washington,
5 D.C. And then I also served as the military
6 assistant to the Assistant Secretary in the Army,
7 the Civil War, in the Pentagon.

8 So, first of all, let me just tell
9 you, we value collaboration, we value
10 relationships, we value what the Corps of Engineers
11 brings to the stakeholders; that they also are
12 already part of -- I guess is a great insight into
13 the people that we need to talk to, people that
14 understand where we're coming from.

15 The fact that I've had first-hand
16 experience on the river, it's been my career, 32
17 years, as an engineering officer, I have a great
18 appreciation of the river. It's an awesome
19 waterway. It's one that requires a lot of
20 vigilance. It is also a big river, but that's also
21 a perspective, because there are times when, no
22 matter how big it is, you know, when the bottom
23 falls out, what should I say, the sediment, and it
24 builds up, and then we have a challenge there. And
25 not only a challenge to us at Free Flow what we're

1 trying to do, but it's also a challenge to all the
2 stakeholders of navigation in particular.

3 And so I just want to say on a Free
4 Flow perspective, we understand that we don't know
5 what we don't know, but through this process, we
6 plan to learn that.

7 We do know about the technology and
8 about what we're trying to deploy on the river. We
9 do know that in fact it is feasible to do this, but
10 that's our perspective, and this process will give
11 us the opportunity -- convince you, as well.

12 But we're here to listen, that's
13 what this process is about, just listen. So even
14 as things that you think that could be common
15 sense, bring 'em up, because we are taking copious
16 notes and working with FERC to make sure we get
17 answers to your questions that you may have.

18 We understand that it's important,
19 and I've worked with a lot of you over time, some
20 of you will say, "It's my river, you know, 'cause
21 I'm navigation," or "it is my river because I'm a
22 flood control interest," or "it's my river with
23 conventional hydropower," or "it's my river because
24 of upward storage with our lakes." And I agree
25 with you, it's all about the river.

1 And as you know, we've never been
2 able to do anything on the river without working
3 together. We can't do navigation in spite flood
4 control. We can in spite recreation, it all links.
5 And so bringing hydrokinetics and hydropower on the
6 river is, again, it's a purpose that we can work
7 together to make sure that we can all work on this
8 great river.

9 I think it's exciting times,
10 absolutely, I'm excited about it or I wouldn't be
11 part of the team; that we can take this great river
12 of ours and all the great benefits that makes it
13 "the" you know super-highway, because economic --
14 the nation -- we can now have another purpose of
15 it, renewable energy just by using the current that
16 always gonna be there, realizing that there will be
17 times when it will pose a challenge to all of us.
18 But we're in it together, and we and Free Flow
19 respect the folks who are already there before us,
20 but also wanted the, ah, you know,
21 shoulder-to-shoulder working with you.

22 With that, I want to introduce the
23 people who actually do the work, and the staff
24 that's here today, and Ramya will give a briefing
25 and talk to you about the folks who are behind us.

1 But Ramya will introduce herself when she comes up
2 here, but we have a couple more, I just want them
3 to stand up and introduce themselves. Jon.

4 JON GUIDROZ: Jon Guidroz, Director
5 of Project Development with Free Flow Power.

6 GENERAL CAREER: Erin.

7 MS. MILLER: I'm Erin Miller and I'm
8 project with Free Flow Power.

9 GENERAL CAREER: Now, Erin it's
10 great to have you, because she is the one that
11 stays back in the office and handles all the
12 administration. And so, you know, it's time to get
13 the folks who do that kind of stuff out on the
14 ground to get the feel of, you know, feedback, get
15 feel of the people, get a feel of what it's gonna
16 take, to see the river, you know, so that they'll
17 have that same perspective. So without further
18 ado, I'm gonna introduce Ramya and she'll take it
19 from here.

20 RAMYA SWAMINATHAN

21 MS. SWAMINATHAN: I'm Ramya
22 Swaminathan, Project Development for Free Flow
23 Power and --

24 GENERAL CAREER: Ramya, you can slow
25 it down a little just because we're here in the

1 south.

2 MS. SWAMINATHAN: I think I have
3 that specific interaction with General Career two
4 times a day, every day. So in light of that advice
5 I will slow down.

6 I wanted to take a minute to tell
7 you about a project, a proposed project, the
8 technology, and a little bit about the lead sites.
9 I'm going to not spend too long on this page,
10 'cause I think Sarah sort of covered most of it.

11 We have 55 proposed sites up and
12 down the Mississippi River, from New Orleans,
13 ranging all the way up to St. Louis. The project
14 sites range in size between 2 and 16 river miles
15 each, and they are located in seven states, each
16 with different jurisdictions obviously.

17 FERC preliminary permits for these
18 projects were issued in early 2008 and in early
19 2009, January 15 we specifically filed with the
20 Commission our pre-application document and Notice
21 of Intent which kicked off the scoping process for
22 the leads sites.

23 We believe that hydrokinetic
24 generation is a compelling alternative for
25 renewable energy in this region, simply for reasons

1 of natural and geographic endowment. This area of
2 the country is less endowed with other alternatives
3 that have been made head way in renewable fields in
4 other parts of the country like wind and solar.
5 And you'll see that in the graphics on the
6 left-hand side.

7 What you do have in this region as a
8 natural geographic endowment is the Mississippi
9 River, which is absolutely tops in terms of flows
10 and volumes. It's a third largest river basin in
11 the world. The only two that are larger than Congo
12 and the Amazon both of which are more traditions
13 flood plain rivers. And we believe that
14 hydrokinetics offers competing source of both
15 renewable energy and green jobs.

16 I wanted to tell you a little bit
17 about technology. There's obviously a lot more,
18 but we invite you to look at our pre-application
19 document, which is available on our website,
20 www.Free-Flow-Power.com, which is our company's
21 name, Free Flow Power with the dashes in between.
22 This presentation is also on that website, so feel
23 free to look for it there, as well.

24 The proto -- we built a prototype
25 model, which is one-meter in outside diameter.

1 That is depicted in the photographs on the
2 right-hand side of this slide. That was tested in
3 a tank in Massachusetts, and the output generated
4 by that unit is 10 kilowatts of output and flows of
5 about three-meters a second.

6 Based on engineering test results of
7 that tank test, as well as design refinements
8 designed in consultation with a whole panel of
9 experts, engineers and other stakeholders, we are
10 currently in fabrication of the next generation
11 models. Have a generation model which is
12 three-meters in outside diameter, and that produces
13 10 kilowatts of output and flows of two and a
14 quarter meters a second.

15 The middle part of this page gives
16 you an exploded view, which may be of interest to
17 the engineers in the room. I'm gonna skip over
18 some of the verbiage there because it's really the
19 next page.

20 The Key Design Features about the
21 turbine that I wanted to emphasize were that it has
22 a low tip speed ratio to mitigate fish injury from
23 mechanical strike. That -- Because the turbine
24 generates output in an ambient river environment,
25 meaning it's powered by the natural flow of the

1 river rather than -- output. There is really no
2 change in pressure as a result of the turbine, and
3 there are no high velocity regions to cause
4 turbulent sheer stress, which is also often source
5 of injury for aquatic wildlife. No small gaps that
6 would cause grinding injury. The base distance
7 between the fixed and the moving parts of the
8 turbine, one-meter apart from each other. And as I
9 mentioned before, there's a pretty De minimis
10 pressure gradient across the device. Then the
11 pressure gradient itself can be problematic.

12 We tend to deploy these below the
13 navigational channel, off the riverbed, such that
14 it would not be beneath commercial navigation. And
15 there is relatively minimal on shore equipment
16 consisting large of cabling that would connect
17 turbines to each other and then run on shore
18 through groups of turbines. And then an on shore
19 footprint of shore infrastructure consisting of a
20 small substation.

21 There are no chemical lubricants in
22 the device of bearings of the turbine, a
23 hydrodynamic, meaning that they're lubricated by
24 the water itself. A technology actually that was
25 devised right here on the Mississippi River.

1 We are committed to Flexible
2 Deployment. You'll see a number of different
3 configurations of deployment that they did on this
4 page. On the right-hand side of the page are
5 renderings of turbines, you know, pilings that are
6 largely vertical. We believe that those would be
7 more suitable for the deep drop parts of the river,
8 but that largely retains south of that rouge.

9 And what you're looking at in this
10 region and up north is more going to be a
11 horizontal array where you have a different --
12 lower center part of the page, one, two, three
13 pilings and strands, so-to-speak of turbines strung
14 between them. That's much more likely one or two
15 rows as depicted there.

16 The system for O&M, Operations and
17 Maintenance and installation will be swift and
18 modular, using standard marine equipment and
19 procedures. The idea is that the turbine array be
20 lifted from the sea, off the piling, by a crane, on
21 a barge, and it would be serviced and effective
22 unit to the IRE base where fixed serviced from the
23 barge.

24 Going to give you all a sense of the
25 Scale of Deployed Turbines is -- in actually a

1 satellite image of one of our sites down in
2 Louisiana. It is Greenville Bend, which is our
3 site, #8-001 of the P sites.

4 I see a lot of you squinting in the
5 back, but hopefully you're able to see bright green
6 dots in the center of the page. Those are -- each
7 of those represents a piling with six turbines in
8 the arrangement that I showed you before, which is
9 six of them, 3 and 3 stacked vertically. Each of
10 those dots of pilings with six turbines is
11 horizontally 50 feet apart from the next one, and
12 the two rows are 75 feet apart from each other.
13 And that appendix gives you a sense of scale,
14 relative to that site. Those are, you know, that
15 number of turbines.

16 I won't linger along on the next
17 three pages, but I did want to give you a sense of
18 what the lead sites were intended to do with
19 respect to the entire slate of 55 proposed
20 projects.

21 As Sarah mentioned the printings of
22 these sites are listed on the left-hand side. They
23 range from Greenville Bend in the New Orleans area,
24 Scotland-vile Bend in Paton Rouge, Kempe Bend in
25 Rural area Mississippi. Two in the Memphis area,

1 Ashley Point and Hope Field. Hope Field bridge we
2 had site visits for yesterday, and then two ovens
3 that it list area.

4 These seven sites were chosen for
5 diverse characteristics, such that all seven of
6 them combined have characteristics that of all the
7 representative of the entire slate of 55 proposed
8 projects. They come from a range of Terrestrial
9 characteristics to the land use, some are urban and
10 some are commercial, some are rural, a variety of
11 inter-connection of situations, a variety of
12 habitat environment, both aquatic and terrestrial
13 species.

14 Finally, we also wanted to
15 acknowledge that during the process of research and
16 consultation with stakeholders, that we embarked
17 on, and even before the issue was a preliminary
18 permit, we identified a number of resource areas
19 that are vital and of significant interest to
20 stakeholders, we wanted to acknowledge them and say
21 that, you know, we are working in consultation with
22 stakeholders to address everyones' concerns. As of
23 the most ones that have come to our attention are
24 navigation, water quality, Aquatic and Terrestrial
25 Species, and cultural and historic sites.

1 I sort of noticed myself
2 accelerating in speech, in violation of General
3 Career's words at the beginning of this, so I'll
4 stop here and thank you very much for your time.

5 As I mentioned, this presentation is
6 available on our website, and I know that the last
7 three pages are kind of dense and a lot of words,
8 but please do feel free to check 'em out on the
9 website. Thank you.

10 MS. FLORENTINO: Thank you, Ramya.
11 Alrighty. Before we move on, we would like to
12 allow you all an opportunity to ask any preliminary
13 questions you might have about either Free Flow
14 Power's proposal or the Commission's licensing
15 process. Don't be shy, this is your chance to get
16 it all clarified in your mind how you can
17 participate in how the process works.

18 I would ask if you would like to ask
19 a question now, please wait for us to give you the
20 microphone, because we would like to get everything
21 on the record accurately. And you can consider our
22 court reporter to be like you're a student, so if
23 you're taking notes rapidly you'll have to take
24 everything down, including your name, correctly
25 spelled.

1 Does anyone have any questions that
2 we can answer?

3 NANCY REAM

4 MS. REAM: Okay. My name is Nancy
5 Ream, R-e-a-m, like 500 sheets of paper, and I'm
6 the Chair of a local group here in West Tennessee.

7 One of the big concerns that we
8 always have in any kind of project like this is if
9 all the considerations regarding our aquifer, which
10 is where we get all the water that we bring here is
11 going to be breached or not, and if you have
12 geologic type people who are checking that all out
13 for you, how are you going to deal with that
14 aquifer? Can you hear me?

15 MS. FLORENTINO: Yes. I guess -- So
16 that's sort of a concern at the same time as a
17 question, and we're glad that you -- so that's on
18 the record now, and I was assure you that the
19 Commission staff as well as our contract staff will
20 be covering that issue in our environmental
21 document, Environmental Impact Statement. We'll be
22 looking into that issue. I can't give you that
23 answer now, because we haven't done the analysis
24 yet.

25 Any other questions?

1 VINCENT CIARAMITARO

2 MR. CIARAMITARO: I'm Vincent
3 Ciaramitaro. Do you want me to spell it?

4 COURT REPORTER: Yeah, thank you.

5 MR. CIARAMITARO:
6 C-i-a-r-a-m-i-t-a-r-o.

7 COURT REPORTER: Thank you.

8 MR. CIARAMITARO: And I represent
9 several organizations, mostly recreational, but I'm
10 also on several -- I'm an environmental theologian
11 and I represent two different denominations that
12 are involved with the environmental theology, but
13 my question is the satellite, is that functional,
14 is that in existence now that you showed us?

15 MS. SWAMINATHAN: No. The green
16 dots you're saying that I showed you on the
17 satellite picture?

18 MR. CIARAMITARO: Ah-huh.

19 MS. SWAMINATHAN: No, that was
20 intended to give you a sense of scale. That was
21 entirely technologically placed there.

22 MR. CIARAMITARO: Okay. And the
23 other question is just a pragmatic question. I
24 paddle that river almost 2,000 miles a year, and
25 the question that always comes to mind as a

1 kayaker, you all were one time in Mississippi and
2 you come up and your mouth is full of silk. I
3 don't know how you're gonna keep that silk out of
4 the turbines, I mean that's a technical question,
5 but I just don't know how you're gonna do that.

6 MS. SWAMINATHAN: I'm happy to
7 answer the question. It's certainly something that
8 we have taken into account. The turbine was
9 designed for the environment of the Mississippi
10 River, and, you know, we have hydrologists who are
11 looking at models of sedimentation and looking at
12 how the turbine effects siltation and how in
13 reserve the siltation effects the turbine. So,
14 what I can say is that we certainly have that issue
15 under consideration.

16 MS. FLORENTINO: Thank you.

17 SCOTT ANDERSON

18 MR. ANDERSON: Scott Anderson. The
19 United States Coast Guard here in Memphis. Your
20 last slide showed that you had been working with
21 the coast guard already on navigation issues, and I
22 just wanted to find out who you're working with so
23 we can avoid duplication of effort and I work the
24 channel you've already established.

25 MS. SWAMINATHAN: I very much second

1 that idea, so perhaps we can catch up afterwards.
2 We've been in touch with a number of your
3 colleagues, and I just want to make sure that we're
4 all in communication. Thank you.

5 GENERAL CAREER: Yeah, we look
6 forward to talking to you, as well, because we want
7 to make sure that we have a personal connection at
8 each reach of the river.

9 MS. FLORENTINO: Okay. We'll be
10 opening the general -- Did you have a question?

11 JOHN RUMANICK: A whole litany.

12 MS. FLORENTINO: Okay. If you have
13 a series of comments, I'm gonna open the floor at
14 the end, I just have a couple more slides to cover.
15 If you just had a question about the process or
16 generally the proposal, you can do that now.

17 Okay. Just a couple more slides, I
18 promise. Okay. So as I mentioned before, the
19 Commission staff will be analyzing the effects of
20 the proposed projects in our Environmental Impact
21 Statement, and also the preliminary list of
22 potential effects that we've listed out, starting
23 on Page 17 and through -- onto Page 20 of potential
24 effects and the scoping documents. So if you
25 review that and you find that something is missing

1 or inaccurate or something doesn't need to be on
2 the list, please let us know in your comments.

3 And the scoping document on Page 15
4 and 17 we also have identified several resources
5 that may be cumulatively effected by the proposed
6 lead projects, and those resources include: water
7 quality, fisheries or aquatic resources, wet lands,
8 and terrestrial resources, commercial navigation,
9 and recreation.

10 In terms of cumulative effects, we
11 have identified the geographic scope of analysis to
12 be the middle or lower Mississippi River for water
13 quality, fisheries, and terrestrial resources.
14 The scope for navigation extends the limit of
15 significant commercial navigation and the drainage.

16 And then our temporal scope for
17 cumulative effects includes past, present, and
18 foreseeable future actions 30 to 50 years into the
19 future.

20 Okay. So for the rest of the
21 meeting we're going to be opening the floor for
22 your comments, concerns, questions, and we have a
23 couple of procedures I'd like to go over very
24 quickly. I'm sure you all won't have a problem
25 with this, but just in case, please show respect

1 for other participants, speak one at a time, so we
2 can get all of the comments accurately in the
3 record. I don't think we're gonna have any time
4 limits, but let's try and make sure that everybody
5 who wishes to speak, has a chance to speak.

6 We'll be allowing the speakers to
7 speak in order of signed in, which I have already
8 announced. Again, please make sure you state your
9 name and spell it out for our court reporter and
10 try and speak clearly and slowly so we can get all
11 the information down.

12 If you are going to use acronyms, I
13 would encourage you to spell the acronym the first
14 time so that we know what you're talking about, and
15 then you can use the acronym after that.

16 Again, you can leave any written
17 comments that you prepared with the court reporter
18 or mail them to The FERC by July 14th.

19 With that, I'm going to turn it over
20 to Allan Creamer to moderate the comment questions.

21 COMMENT QUESTIONS

22 ALLAN CREAMER: Good morning,
23 everyone, how is everyone doing this morning?

24 AUDIENCE: Great.

25 ALLAN CREAMER: Good, glad to hear

1 it. Have a couple speakers, so I don't believe, as
2 Sarah said, they'll be any time limits. After we
3 get done with these two speakers and we won't -- I
4 believe we have plenty of time, so I'm gonna
5 encourage you and get your, get your comments on
6 the record, and try to get your questions answered,
7 because this is the beginning of a process that --
8 let it go now, it may not, may not get looked at,
9 so -- With that, first speaker is Nancy Ream.

10 MS. REAM: I'll just go ahead and
11 differ my two questions and send in a written
12 statement. I'm okay with that. You pretty much
13 answered from what was available, so I'm gonna send
14 in a written comment.

15 ALLAN CREAMER: Okay. John.

16 JOHN RUMANCIK: Close enough.

17 ALLAN CREAMER: Close enough. I'm
18 sorry. So now we're getting the litany of
19 questions.

20 JOHN RUMANCIK

21 JOHN RUMANCIK: My name is John
22 Rumanick, it's R-u-m-a-n-c-i-k, and you've got my
23 address on the sheet there.

24 MS. FLORENTINO: Would you like to
25 use the podium, you're welcome to use it?

1 JOHN RUMANICK: No, I'll stay here.

2 MS. FLORENTINO: Okay.

3 JOHN RUMANICK: I'm a fishery and
4 wildlife biologist, retired, spent 30 years working
5 on the Mississippi River. And from what your
6 presentation -- that young lady's presentation
7 earlier, indicated that the diameter of the
8 proposed blades here, impellers will be about 9
9 feet, so I figure that's 12 feet in diameter,
10 outside diameter. Plus if you have structure, you
11 have to raise them up off the river bottom. How,
12 how high is that impeller going to be above the
13 structure, going to be above the river bottom,
14 anybody know? Okay. You got to take that in
15 consideration, because right now at the Memphis
16 gauge out here, I think that none of you have ever
17 been on this except General Career and his staff
18 down here -- never been on this -- at river at low,
19 low stages.

20 Right now the river stage at Memphis
21 on a gauge is at 22.1 or 2. In the summer time it
22 can go down to a minus -10, okay, so that doesn't
23 leave much room for tow boat safety. So that --
24 Can anybody tell me about how high, how much free
25 port you're gonna have between the top and the

1 structure in the low, low stage? Okay. That's
2 something that you need to find out.

3 Another thing is that on your slide
4 there, proposed slide at Greenville Bend, there,
5 that was low, below the river stage, I mean low the
6 river it's deeper. Where in this river are you
7 gonna put these things, because on your location on
8 that chart, a lot of them are in straight river
9 runs, which reeks havoc upon siltation, because we
10 are a straight river run, water, water slopes down
11 and siltation -- so Corps of Engineers has dredging
12 problems there. And then you have 6, 8 or more
13 feet high to press the -- sand waves on the bottom
14 of that river, so how high off again, how high off
15 the bottom of that river are you going to have to
16 have that structure for safe navigation, does
17 anybody know that right now? No. Okay.

18 I advised, especially people from
19 the head shed up there, when that river gets down
20 low, go take a walk on some of these sand bars,
21 especially the one outside of here at Memphis when
22 you cross the I-40 Bridge going into Arkansas, the
23 first big bank across the river on the north side,
24 upstream side, close off the shoot, go out there
25 and go on the upstream side of that bank and see

1 that literally the forest of 30, 40, 50 foot long
2 tree, root -- diameter, 12, 15 feet, okay, there's
3 a stack, acres and acres and acres up there. They
4 don't float, a lot of 'em. A lot of 'em bolt on
5 the bottom. So you got a root bar there that's 30
6 feet in diameter bang into them when that river
7 gets -- especially high river stages, and that root
8 bar comes down to several hundred thousands of
9 pounds of force hitting those structures.

10 And then on one of your diagrams you
11 have two pilings with horizontal configuration
12 there, and only -- and I know it's a schematic, but
13 only one or two anchor points. Gonna have
14 problems, folks. So I advise whoever is doing the
15 EIS, writing the EIS, please get out on the river,
16 various stages at low, low stages and see what's
17 out there, 'cause that's a mighty deep river out
18 there. So you have the big problems.

19 What ya'll -- Anybody know what the
20 RPMs might be on those impellers? No. Should have
21 this stuff here, 'cause that has a big impact on
22 your Pallid Sturgeon impacts and out. The Corps of
23 Engineers has been doing several years of studies
24 now -- water ways experience station is what it
25 used to be called. On impacts of dredging with the

1 Pallid Sturgeon being sucked into the dredges --
2 impacts on there. This might have the same impact
3 on it, then with this type of structure it might
4 not be nose associated with it as there is with a
5 suction -- dust pan dredge on the Mississippi
6 River.

7 So that could have major impact on
8 the endangered species, Pallid Sturgeon, okay.

9 And also where are you going to be
10 placing your impellers, are they going to be in the
11 tail wag. Tail wag is for you lay people is the
12 deepest part of the river, as with this current,
13 are you going to be putting it there. Are you
14 going to be putting it up towards the bar
15 somewhere, off the side of the river bank
16 somewhere?

17 You have to know where your Sturgeon
18 are during their migration periods. You get some
19 Sturgeon stopped in there, you're talking about EIS
20 adverse impacts at the nature of big time hurdle,
21 and the -- species act has teeth.

22 You answered this -- my question on
23 shore structures you said cables, river stage --
24 River stage development is in average 45 feet in
25 high low. So your amount of forces on there again,

1 especially at low river stages.

2 Where you have this indicated on --
3 and your -- you got some really narrow channels,
4 and that minus 10 on our river gauge here, you
5 basically have, just a little over 300, 400 feet.
6 Well, Corps of Engineers maintains a 300 feet wide
7 navigation channel. But you see some times have a
8 500 feet wide -- river between boeys, and it just
9 -- your structure is going to be in the navigation
10 channel which they have to be. Coast Guard, be
11 aware okay.

12 Now, do any of you know right now,
13 well, here in this part of the river what type of
14 structures you going to have, is it going to be
15 with the current in a line or is it going to be
16 across the river on that, like the post, can
17 anybody say right now, cause that'll make a big
18 difference, no.

19 JON GUIDROZ: We're gonna answer --

20 MS. SWAMINATHAN: We're gonna answer
21 your questions at once.

22 JOHN RUMANICK: Okay. Anchoring into
23 river bank, you got that -- impellers. Oh, sand --
24 formation. How are your structures going to be
25 anchored in, are they going to repeatedly deep

1 pilings in the river -- I know they want to get
2 pilings. They have to anchor 'em like that,
3 probably. They won't -- that kind of -- hundreds
4 of feet of mud and sand before you can the bedrock
5 underneath, and -- stretching and dropping, I mean
6 -- that's why you have -- cause it's red valley.

7 About sand bar formation, are you
8 going -- how are you going to know that you're not
9 going to have any sand bars forming down stream
10 from the structures, your anchoring structures.
11 You present -- I mean structures out there and
12 you're going to have -- and sand bars forming. It
13 encroaching your navigation channel especially at
14 low river stages.

15 You don't want to have a barge --
16 several barges of chemical or oil or gasoline
17 coming down and -- Anybody have any idea about --
18 done any studies on that yet? All these questions
19 and no answers. Godly.

20 STEVE CROWLEY: We asked them last
21 night, too.

22 JOHN RUMANICK: Okay. That's about
23 all I have here. Got any answers yet? Thank you.

24 GENERAL CAREER: You just told me
25 that you retired from Fish & Wildlife, so what are

1 you doing now? Man of leisure. Talk to me after
2 this meeting. I remember you and I also respect
3 you and appreciate the questions that you've asked,
4 and these are all great questions. Some of them we
5 have answers for. Others -- that this is the
6 beginning of the process, and this process will
7 give us the opportunity to determine on how we can
8 do some of this, but everything you said is totally
9 valid. You know, my experience on the river is the
10 samething. You got to know these things. So
11 that's why we're aligning ourselves and looking for
12 -- with their folks, also people in your
13 organization, to make sure before making decisions
14 -- on the exact location that these things are
15 taken into consideration.

16 Some things you mentioned in
17 particular -- the research and development -- we
18 are in totally, you know, lock elbows with them in
19 doing some of the testing. They are certainly lead
20 and permanently the Pallid Sturgeons and protecting
21 them in the river, so we'll working with them --
22 that, as well as their hydraulic laboratories.

23 You mentioned how are we going
24 figure 'em, we don't know that. This kind of
25 feedback will help us determine. It won't be a one

1 side -- tell you that. Depends on where it's
2 located on how we will constructed those. And
3 that's my comment. Overall general feedback of
4 what we just said.

5 I'll ask my staff to add any
6 specifics, but we'll take your -- your testimony
7 goes on the record, so we'll be looking forward to
8 that, and we'll make sure we have your contact
9 information to keep in touch with you as we go
10 ahead with the program.

11 MS. SWAMINATHAN: Let me -- I took
12 some copious notes, and let me see if I can
13 address, at least, some of the questions that we
14 have answers to.

15 General Career is right, we're at
16 the beginning of a process in which we are flushing
17 out several of these issues. The study process is
18 part of that. Our consultation with your
19 ex-colleagues, the Fish & Wildlife -- Army Corps,
20 all of that is intended to protect these resources,
21 as well.

22 I roughly heard, I would say four
23 categories of questions, one having to do with
24 navigation and the absolute paramount interest in
25 maintaining commercial navigation not impeding it.

1 Your first question dealing with the
2 amount of feed off the bottom, any constraints in
3 terms of depth, I'll take a stab at, first.

4 We believe that we should need to be
5 at least 10 feet off the bottom to escape
6 sedimentation and bottom friction.

7 So depth is sort of a binary issue,
8 meaning that there are going to be areas that have
9 the depth, they're going to be areas that don't
10 have the depth.

11 And I think you had mentioned an
12 outside diameter. When I said 3 meters in outside
13 diameter, I meant 3 meters was the outside diameter
14 of a shroud. So that is not -- so that's -- Yeah,
15 the supporting structure is 3 meters the impeller
16 itself, the blades are 2 and a quarter meters.

17 So, ah -- So essentially what you're
18 looking at for one set of turbines, at least, even
19 if we're talking about horizontal array of 10 feet
20 and then the 9 feet range, so we're looking at
21 that. So, I mean, let me get to all of that in the
22 sense that -- The second category of question you
23 asked about, I'll come back to as I finish the
24 first, because we -- about debris and sedimentation
25 and its effect on our turbines, which is largely a

1 business matter and an issue of design and
2 engineering. And when you design and engineer, you
3 design for what you can, and then you treat -- we
4 treat as a matter of salvage and insurance what we
5 really can't design for. So some of what you're
6 talking about, logs, barges, debris are the kind
7 that we really wouldn't want to engineer a turbine
8 to withstand, because that would be
9 over-engineering -- we will treat as a salvage
10 insurance issue.

11 And -- Sorry, let me just -- Let me
12 keep going, if you don't mind. So back to the
13 depth issue, we understand that we need to be below
14 the navigational channel which in this area has
15 maintained is authorized to 9 feet, 8 to 9 feet,
16 and then a margin of safety below that. So I think
17 our first cut here is to look at depths across
18 different areas. And it relates to a subsequent
19 question you asked about with respect to, where are
20 part of the turbines gonna be sighted with respect
21 to navigational channel -- the swiftest, the
22 fastest, the deepest, and the answer to all of that
23 is, yes.

24 Looking at river profiles and
25 transacts, the deepest parts are the fastest parts

1 of the river and we want to be in those areas for
2 the same reason, the navigation channel is in those
3 areas.

4 So we understand the competing use.
5 We're working with the Corps of Engineers to
6 resolve, to look at the constraints in any stretch
7 of the river or any of our permitted sites, and we
8 intend to site them such that there is no conflict
9 of in terms of competing use.

10 You asked about RPM's, and I said a
11 little bit about the TIP speed ratio. To convert
12 that into RPMs, you're talking about a device that
13 probably has about 45 revolutions a minute. So
14 it's less than one a second. So it's relatively
15 slow, and relative to --

16 There have been a number of studies
17 that have been done on propellers in the
18 Mississippi River in this environment, and
19 propeller effects on aquatic life, generally the
20 Pallit Sturgeon in specific. Propeller is
21 obviously a lot faster than 45 RPMs, so that's one
22 issue.

23 And then the last question that I
24 took notes on was deployment, and you were
25 wondering about how we would deploy them.

1 And as I mentioned this part of the
2 river our focus is really on sort of lateral arrays
3 and that's because the depth issue which is
4 obviously a navigation issue, something the Corps
5 is very concerned about -- those -- concerned about
6 and other stakeholders including pilings are very
7 concerned about. So our message here is we hear
8 you. We're at the beginning of this process --
9 we're need to refine those designs, and we will
10 consult with all stakeholders to make sure that,
11 you know, competing use is receptive.

12 JOHN RUMANICK: On the depth --
13 elevations, if you want to call 'em that. When I
14 be down at the river in the summer time -- those
15 and tail wags sometimes there's, even that low
16 stages you have 30 feet, a lot of times it's only
17 25 feet, so. And then the river was at, let's say,
18 zero -- listed at 20 more feet, and then you have
19 20, 25 below that. You're gonna have you some
20 serious thing about where you want to place these
21 things, okay.

22 Now another question I just thought
23 about is, maintenance. Who will maintain these and
24 who will pay for them? And then if you have
25 salvage cost if something breaks, how are you going

1 to ensure that you're not going to have a
2 navigation problem -- get hung up somewhere -- you
3 know what I'm talking about?

4 MS. SWAMINATHAN: I do.

5 JOHN RUMANICK: Okay. Thank you.

6 MS. SWAMINATHAN: Obviously all
7 these issues are issues that we're dealing with as
8 a business matter and are of great concern to our
9 insurers, as well. So what I can do is assure you
10 that we're thinking about them, we will share with
11 the Corps and other stakeholders plans once we
12 develop them to everyone's satisfaction.

13 ALLAN CREAMER: Are there any other
14 questions or comments that you'd like to make?

15 MS. FLORENTINO: Before we move onto
16 additional questions, if I may interject briefly,
17 could I have everyone turn to Appendix B in the
18 scoping document briefly? I just want to point out
19 a couple of milestones that are coming up in our
20 licensing process, highlight those for you all.
21 Some of the initial questions here really relate to
22 the study plan development thinking, and I just
23 want to make sure we're all on the same page and
24 aware that you have several opportunities to
25 participate in the study plan development.

1 Everybody find the page? It's B-1. So the first
2 page of Appendix B at the end of the scoping
3 document.

4 Five lines down in that table,
5 that's where we are right now, we're doing scoping
6 meetings and project site visits. Following that
7 and for the rest of this year, keeping in mind that
8 the dates will be modified, due to the extension of
9 time for comments, I want you, please, to note that
10 all stakeholders -- in the first column, we've got
11 several opportunities for you all to participate in
12 the study plan development, first being your study
13 request that are due on July 14th. So if you want,
14 you can pencil the new due date in there.

15 The Commission will issue a scoping
16 document two, then Free Flow Power will submit to
17 the Commission their proposed study plan that will
18 be based on everyones' study requests.

19 After that, all stakeholders will
20 have the opportunity to participate in the study
21 plan meeting where we can discuss what you all
22 suggested in your study request and what Free Flow
23 Power has prepared in their study plan.

24 MAN IN FRONT: Where are you gonna
25 have those meetings?

1 MS. FLORENTINO: Those will be
2 announced in the future. We haven't set up those
3 meetings yet. And then you'll have another chance
4 to comment on the proposed plan. Free Flow filed a
5 revised study plan, and then you'll have an
6 additional chance to comment on their revised study
7 plan. And finally, the Commission, the Director,
8 will issue a study plan determination, which will
9 be the final list of studies that Free Flow will
10 need to do for the proposals. Okay. Thank you.

11 ALLAN CREAMER: Thank you, Sarah.
12 Couple of things that I want to note to add on
13 something that Sarah said. The study plan meetings
14 are -- they are Free Flow Power meetings, they are
15 not meetings that, unlike the scoping meetings,
16 which is part of our NEPA process. The setting of
17 meetings will be meetings that Free Flow Power will
18 put together. We will be working closely with them
19 to do that to make sure that we have the
20 appropriate number of meetings and places that we
21 need to have them up and down the river.

22 The second point, I believe it's in
23 Appendix A on your scoping document. Yeah. Study
24 Plan Criteria. Extremely important that when
25 you're developing your study request, that you

1 follow those criteria and address those seven
2 criteria, from the standpoint, and we will be doing
3 the same. Commission staff as a stakeholder, as
4 well, as we develop our study request, we'll be
5 following those seven criterion.

6 When Free Flow Power submits their
7 study plan, that study plan needs to be in a -- in
8 a similar format where they're looking at those
9 seven -- those same criteria. So to help Free Flow
10 Power, we as stakeholders need to make sure that
11 those seven criteria are addressed so they
12 understand the study, the need for the study, the
13 nexus to the project that they're proposing and all
14 that sort of stuff. So it's important to, as
15 you're developing your studies, to make sure that
16 those seven criteria are addressed.

17 With that, I guess it -- are there
18 any other questions or comments? And again, I go
19 to encourage you, now is the time to be speaking
20 up. It's beginning of the process and we want to
21 make sure that all the issues and questions are
22 brought forward.

23 GREGORY LOVE

24 GREGORY LOVE: I just have a
25 question about the green jobs. Gregory Love in

1 Shelby County. Gregory County, Shelby County. I
2 just have a question about the green jobs that you
3 all think will be coming, particularly to Memphis.
4 Will some of the turbines, will be they constructed
5 here, and just what kind of position do you see?

6 JON GUIDROZ: Yeah, that's a great
7 question, 'cause it's definitely one of the
8 benefits of the whole project. Since we don't burn
9 fuel we have a high operations of maintenance
10 costs, and that gets to your question about degree
11 impact. We think it will have about -- between
12 2000 and 3000 maintenance activity jobs out on the
13 river.

14 As far as manufacturing goes, that's
15 yet to be sourced, we're still entertaining a
16 number of locations for that -- We actually just
17 hired -- today we announced chief manufacturing
18 officer, so he'll be working on that.

19 ALLAN CREAMER: Anybody else? Okay.

20 LEO VIZZERT

21 MR. VIZZERT: Leo Vizzert, Marchette
22 Transportation. Question is regarding many -- is
23 it going to be your space or are you looking
24 international?

25 JON GUIDROZ: We're looking at

1 everything right now.

2 LEO VIZZERT: Another question. I'm
3 sorry. The other question is regarding the voltage
4 we're dealing with in the kilowatts being produced,
5 the, ah -- the effect of the magnetized aspect or
6 is those either the electro magnets, electric
7 compounds to, especially tug boat business we're
8 dealing with steal, and I know how it effects
9 electronics and things like that, so studies need
10 to be done regarding the amount of -- because the
11 voltage your dealing with is very high, you know,
12 the 3.5 on the -- I'm not sure if that is DC or AC,
13 but all the way up to 50,000 volt, you're dealing
14 with some serious electromagnetic fields with
15 skinny -- electronic and things like that, and even
16 on the Fish & Wildlife it has a tremendous effect
17 on cancer, a potential cost there. So I just want
18 to highlight that as studies to be considered.

19 JON GUIDROZ: We are looking at
20 electromagnetic fields, that's in the scoping
21 document, and something we recommended from the
22 start. I can put you in touch with our chief
23 technology officer and take a closer look at the
24 voltage in the water. It's significantly lower than
25 the voltage that would go from the shore station to

1 the water. It's actually a very low voltage in the
2 water, and I can put you in touch with him.

3 ALLAN CREAMER: Are there any other
4 questions or comments? Okay. If there are none, I
5 guess I will turn this back over to Sarah.

6 MS. FLORENTINO: Okay. Thank you
7 all for your participation. If a question occurs
8 to you, you're welcome to speak with any of us
9 after the meeting or I could give you my business
10 card and you're welcome to call me. I'll give you
11 my co-coordinator's contact information, as well,
12 if you'd like to talk to us if for reason you don't
13 reach me right away.

14 But, again, thank you so much for
15 your contributions. We do value your input -- into
16 our record and incorporate your thoughts into our
17 environmental analysis. So we appreciate all of
18 your input. Thank you all. And with that, I guess
19 I will officially close the meeting.

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(At 11:30 a.m. the meeting adjourned)

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C E R T I F I C A T E

I, Terence M. Holmes, a duly
qualified and commissioned notary public within and
for the State of Ohio, do hereby certify that at
the time and place stated herein, and in the
presence of the persons named, I recorded in
stenotypy and tape recorded the proceedings of the
within-captioned matter, and that the foregoing
pages constitute a true, correct and complete
transcript of the said proceedings.

IN WITNESS WHEREOF, I have hereunto
set my hand at Cincinnati, Ohio, this 12th day of
May, 2009.

My Commission Expires:
July 28, 2012

Terence M. Holmes
Notary Public - State of Ohio