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BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION

- - - - - x
IN THE MATTER OF: : Project Number
SANTÉE COOPER HYDROELECTRIC PROJECT : P-199-205
- - - - - x

Holiday Inn Express
505 R.C. Dennis Blvd.
Moncks Corner, SC

Thursday, May 19, 2005

The above-entitled matter came on for scoping
meeting, pursuant to notice at 10:05 a.m.

MODERATOR: RON McKITRICK, FERC

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

2 (11:05 a.m.)

3 MR. MCKITRICK: I want to welcome you all to the
4 scooping meeting. This is the third that we will be having
5 and the last. We've been able to, over the last couple of
6 days, have site visits. Santee Cooper's been very good
7 about taking us around and showing us areas to look at and
8 been able to answer a lot of questions as far as its
9 operation and that type of thing. We've had two very
10 successful evening scooping meetings in which the public
11 participated indicating, you know, some of their concerns
12 and some of the things that are working very well for them.
13 This will be the last, and then we have a technical session
14 this afternoon that Pete Foot will talk about.

15 My name is Ron McKitrick. I'm the project
16 coordinator for the Santee Cooper project. I'm with the
17 Federal Energy Regulatory Commission and I work out of
18 Atlanta, Georgia.

19 (Slide.)

20 Briefly, to just kind of -- we're going to spend
21 maybe a few minutes going through some information about us,
22 a little bit about the project so we'll all have about the
23 same information to work with. Our agenda then, we'll talk
24 a little bit about the scooping process and why we do that,
25 what types of information that is most helpful to us that

1 you can give us, either in writing or orally today. John
2 has offered to give us a brief presentation on operations of
3 the project, as well as some of the mitigating measures
4 that's been proposed. Pete Foot will then have an
5 opportunity to kind of go through the scoping document real
6 briefly, identifying some of the issues that we've seen to
7 help perhaps focus the discussion, and also to talk about
8 our cumulative impact assessment, as well as getting to the
9 meat of the meeting, which is really listening to you all
10 and helping us to move forward in preparing an environmental
11 assessment, our NEPA document, and then finally if we get
12 some written comments we'll have some of them on the screen
13 to tell you where and how to do that.

14 (Slide.)

15 I introduced myself, Ron McKittrick, with FERC.
16 I'd like to just have the people that are here in the room
17 identify themselves that are with either the Commission or
18 our environmental services contractor so you can see them
19 and hear a voice. Maybe if we start over here.

20 MR. FOOTE: I'm Peter Foot with Lewis Berger, a
21 FERC contractor, deputy project manager. I'm also a
22 fisheries biologist.

23 MR. ANDERSON: I'm Dave Anderson. I'm a FERC
24 contractor concentrating on recreation issues.

25 MR. KULIK: I'm Brandon Kulik, I'm also a FERC

1 contractor.

2 MR. CREAMER: Allan Creamer, I'm with the FERC,
3 I'm a fisheries biologist.

4 MR. HATHAWAY: I'm Merrill Hathaway with the
5 Office of General Counsel of the Commission.

6 (Slide.)

7 MR. MC KITRICK: So that we give you just a
8 little bit of idea about scooping, a lot of you understand
9 it very well but I just would like to cover this, why we're
10 doing this. It's a way to gather information that will help
11 us prepare an environmental assessment. That's what we call
12 a NEPA document under federal statute, it's the National
13 Environmental Policy Act, the action agency of which may be
14 -- for this case, the relicensing of the Santee Cooper, is
15 the FERC. We must prepare a disclosure document to the
16 public, as well as an informational document to our
17 Commission about the environmental effects of relicensing
18 this project, in particular, Santee Cooper, as well as any
19 kinds of recommendations that we may put forward that would
20 be included as terms and conditions of the license. And
21 again we have been seeking input from the public, the
22 federal and state resource agencies, as well as non-
23 governmental organizations and tribes. The scooping
24 document I think many of you received was issued April 20th.
25 If you did not get a copy or would like another copy, there

1 are ones available in the back.

2 (Slide.)

3 We will be preparing a NEPA document, this
4 environmental assessment. Our schedule at this point
5 indicates that we are going through the scoping document in
6 May and June. We plan to issue a notice looking at all the
7 information we have called the Ready for Environmental
8 Analysis notice in September of this year, and that is an
9 indication that FERC is ready to move forward with this
10 environmental assessment, as well as indicating that the
11 information is available for FERC Staff to do the
12 assessment.

13 We will then prepare the environmental assessment
14 and plan to issue that in April of 2006. That then will be
15 the basis for any license that may be issued hopefully
16 shortly thereafter.

17 (Slide.)

18 Scooping is a process of gathering information.
19 There's been certainly a lot of information put together in
20 putting together this application that's been submitted to
21 us, but we want to make sure that we have a chance to
22 particularly talk to the public and to the resource agencies
23 and make sure that we have what we need and have identified
24 the issues that are important to the people in the community
25 that live here. So we're looking to see -- and if there is

1 a need for any additional studies, particularly we'd be
2 looking for existing information that would be stuck in
3 somebody's drawer or a library someplace that may not have
4 been put forward into the record that would give us a good
5 indication of perhaps what the past -- what it looked like
6 here before the project. This helps us set the stage for
7 the public, as well as the Commission, of what has happened
8 from the past as well as where we stand today. So any
9 additional information that you may have about present
10 conditions is always helpful in helping us do this
11 environmental assessment.

12 If there are plans, comprehensive plans in
13 particular, from -- typically these come from cities,
14 counties or states that look at future development, what you
15 plan to have this area look like five, 20, 50 years from
16 now, so that we can see is this project going to fit into
17 that comprehensive plan. Those are very important to us, so
18 if you have not filed those with us, please do. The
19 gathering of this information then will allow us to forward
20 our environmental assessment and we'll be looking forward to
21 either statements today or written comments that can be
22 filed with us either in writing or electronically within the
23 next 30 days.

24 John has offered to give us kind of a brief
25 overview of the project, its operation, and some of the

1 environmental measures is what John is going to -- focus on
2 that.

3 MR. DULUDE: Good morning. For the record, my
4 name is John Dulude. I'm manage the FERC relicensing
5 process for Santee Cooper.

6 As Ron mentioned, this is the third of three of
7 these presentations, so I don't know if this morning you're
8 going to be privileged to hear the more refined versions or
9 if you're going to be disappointed to hear the worn out
10 version, but you're going to get a version, and hopefully it
11 will be informative.

12 (Slide.)

13 What I've been asked to do is to discuss project
14 features, project operations, and finally some voluntarily -
15 - or, excuse me, some proposed enhancements, many of which
16 we're already performing.

17 First of all, I'll describe the project in terms
18 of the watershed. The watershed is extremely large. It
19 covers about 15,000 square miles, beginning around -- just
20 below Georgetown, extending up through Charlotte, all the
21 way over to Asheville, and then coming down on the western
22 side all the way back down to Charleston.

23 15,000 square miles, as I mentioned. It is
24 broken up in three sub-basins. Those three sub-basins
25 consist of the Catawba watery system, the Broad River

1 system, and the Saluda system. The Saluda and Broad come
2 together to form the Congree River, which then joins with
3 the Catawba watery at the headwaters of our project.

4 That water flow into the system is approximately
5 15,500 CFS average daily flow. And the way this project
6 operates is -- in terms of concept is rather simple.
7 Essentially it was to divert the water of the Santa River
8 into the Cooper River for meeting all the main project
9 purposes.

10 (Slide.)

11 The way that was accomplished was by the
12 construction of a dam on the Santa River to divert water,
13 create an impoundment and then that water is diverted
14 through a diversion canal into a lower impoundment, which
15 then passes through another impoundment structure known as
16 Pinopolis Dam. That flow passes through the hydro at
17 Pinopolis Dam and travels into the Cooper River down in
18 Charleston. The maximum flow that can pass through that
19 hydro project is 28,000 CFS.

20 Integrally a part of that hydro project is a
21 navigational lock. That navigational lock, located at
22 Jeffries, serves really two dual purposes: first, it's a
23 navigation lock, as I mentioned, for recreational traffic
24 primarily. It also serves as a fish passage structure on
25 the lower lake. Typically that structure over the last --

1 the way we measure fish passage at that structure is by an
2 acoustic counter and so we measure biomass and then we
3 normalize it into a specific size of biomass which is
4 equivalent to a herring. And so, over the last five years,
5 the average passage at that project is about 3 million
6 herring units per year.

7 Now that's the hydraulic control for the entire
8 project. Until the water exceeds that capacity of this
9 project and flow then passes through the Santa spillway back
10 into the Santa River. That flow also requires -- we also
11 require, under our FERC license, a 500 CFS continuous flow
12 to maintain the river condition. We presently have released
13 approximately 600 CFS through that two-megawatt generator
14 that we have located on that spillway to take advantage of
15 the hydro. Typically there are two spills per year. Since
16 the life of the project, there have been approximately on
17 average two spills per year. Those spills quantity-wise are
18 approximately 22,000 CFS and then last approximately 16 days
19 each.

20 Now that's the way the project operated for
21 approximately 50 years and then it was determined by the
22 Federal Government that those flows coming in from the Santa
23 River and exiting going down into the Cooper River at
24 Charleston were creating a dredging problem, a sedimentation
25 problem in Charleston Harbor. And so, based on their

1 finding and based on their design and their construction,
2 they installed a rediversion project known as the Cooper
3 River Rediversion Project located just off of St. Stephen.

4 And the way this works is they reduced the flow
5 at Jeffries to a 4500 CFS weekly average. That is the
6 maximum flow we can release on a weekly average. All
7 remaining flows, up to 24,000 approximately, which is the
8 capacity of this plant, pass back through the St. Stephen
9 hydro and back into the Santa River. So you have on average
10 a flow now of approximately 8- to 12,000 CFS daily average
11 going back into the Santa River.

12 Because of this particular arrangement, it was
13 determined by the resource agencies in conjunction with the
14 Corps, that this reduction in flow on the Cooper River and
15 this increase in flow on the Santa River would impact fish
16 passage, and so a fish lift or lock was constructed as
17 integrally a part of that hydro project.

18 That has been -- DNR operates it, in conjunction
19 with the Corps, and that project has been modified several
20 times to optimize its capacity. At the moment -- or the 10
21 year average for passage for American shad is about 350,000
22 American shad and about 600,000 blueback herring. Just this
23 project alone passes more shad and herring than any other
24 project in the United States that targets shad and herring.
25 Combined with this project, as you can imagine, we have very

1 successful passage of blueback herring and shad.

2 Just to mention, that rediversion project is a
3 Corps of Engineers project, it's owned by the Corps of
4 Engineers. They contract with -- Santee Cooper and the
5 Corps have a contract in terms of its operation. And so
6 that project is not within the project boundary and is not
7 within the project relicensing process. It is, however, an
8 integral part of the project and, therefore, has been
9 considered in all the discussions.

10 (Slide.)

11 We operate this project based on a guideline.
12 That guideline consists of a rule curve. The rule curve is
13 measured at the spillway. Typically on a -- this would be
14 our guideline throughout the year. And beginning in January
15 we want to be at about elevation 72.5 and by mid-year we'll
16 be at approximately 75.5, so you have a three-foot
17 differential over a six-month period and then it drops back
18 down. The purpose of the rule curve is to maximize the
19 storage of water and minimize the spill of water to sustain
20 all of the many project uses that this project has.

21 (Slide.)

22 This particular slide shows just a snapshot, a
23 five-year picture of what actual operation compared to the
24 guideline looks like. As you can see, the guideline is this
25 purple line, this rule curve. The blue line represents

1 continuous attempts based on inflows to achieve that
2 guideline figure. However, in the spring, as you can
3 imagine, you have very high flows -- in this case, 80,000
4 over here, 100,000 in '98. And so we manage the project to
5 try to achieve that guideline but staying on it is difficult
6 because, you can imagine, the window of time that you have a
7 forecast is approximately three to seven days.

8 You can see that these first two years are
9 average years, typical spring flows and flows in the fall.
10 Then on the third year here, in '98, we had a very wet year.
11 You can see that by the activity of the flow, you know,
12 sustained high lake levels during the spring. And then what
13 happened in '99 in 2000, all of us that lived here
14 understand and recognize what happened, there was a serious
15 drought, and you can see our attempts to maintain the lake
16 were very difficult because the lack of inflow. And
17 actually, in 2000, we were around elevation -- below
18 elevation 72 around the 4th of July and all of you who were
19 trying to use the lakes understand what that means.

20 (Slide.)

21 The operational constraints and impacts of that
22 rediversion project are a very important element, and I'll
23 just basically share a couple of those issues. First of
24 all, that maximum average weekly flow from Jeffries hydro is
25 4500 CFS. From the operation, what we've determined, it's

1 not just a maximum, it has become a target. And the reason
2 why that is, based on the previous operation pre-
3 rediversion, the flow down the Cooper River was significant
4 and therefore industry downstream was able to take advantage
5 of the fresh water, located in a coastal estuary, which is
6 what the Cooper River used to be, and they've constructed
7 their facilities down there. Whenever we attempt to reduce
8 flows below 4500 weekly average over any period of time, we
9 discovered -- the Corps discovered actually -- that salinity
10 intrusion was occurring in the areas where these intakes are
11 located. CPW, Charleston Public Works, also receives water
12 from this particular section of the river for potable water
13 use, for those of you -- domestic water use, for you and I
14 at our tap.

15 What that means is is that during that very
16 difficult drought that we saw we could not reduce that flow
17 below the 4500 CFS weekly average without causing downstream
18 difficulties. And so the Corps has a series of alarms
19 downstream in the event that those flows -- or conditions
20 downstream caused by tide and otherwise create salt
21 intrusion, we have to release different levels of flow to
22 try to restore the freshwater condition.

23 What that 4500 also does to the project from an
24 operational standpoint is it reduces significantly the
25 flexibility of Jeffries to generate its full capacity. The

1 full generated capacity at Jeffries is approximately 130
2 megawatts. The replacement capacity and energy at St.
3 Stephen is about 84 megawatts. That 4500 CFS weekly average
4 gives us just a few hours each day that we can operate a
5 full capacity and use the full capacity of that project.
6 When those flows are restricted or made continuous in any
7 way, it significantly impacts that overall dependable
8 capacity of that project.

9 As I mentioned, the reduced flows at Jeffries,
10 combined with downstream intakes, limits flow flexibility.
11 So we're kind of -- in a situation during the drought when
12 we have inflows of less than 3000 CFS, we were releasing
13 water at Jeffries of approximately 4500 CFS over a weekly
14 average and we were also having to release that 500 CFS that
15 I mentioned for continuous flow, so the total flow out of
16 our system was 5000 CFS, not including evaporation, which is
17 significant in the summertime, and all we had was 3000 CFS
18 coming in. As you can imagine, it makes it very difficult
19 to sustain the lake when you have those conditions.

20 One of the other requirements of the contract
21 that the Corps provided to us whenever the law was passed to
22 build rediversion was that we are required to maximize the
23 generation of the two-plant system. What that means is
24 whatever was does not flow through Jeffries that normally
25 would have flowed through Jeffries prior to the restriction

1 must go out of St. Stephen next. And then subsequent to
2 that waters in excess of those flows would leave the
3 spillway, as they did previously. So now you have a
4 combination of flows downstream.

5 And that brings up the last point, the flood
6 concerns downstream. Those waters that normally would have
7 gone to the Cooper River and then exceeded those flows and
8 would have been in the form of a spill at the spillway are
9 now -- those spills are now combined with that significant
10 amount of water that's going out of the rediversion project.
11 So you have at least 20- to 24,000 CFS leaving the
12 rediversion project on top of whatever spill that is
13 required to make sure that we don't exceed the maximum
14 elevation of our lake to maintain dam safety.

15 (Slide.)

16 We have some proposed measures. All of these you
17 see on this particular slide are already in place as
18 voluntary enhancements. We would propose making them part
19 of the upcoming license. They include increased lock
20 operation for fish passage at Jeffries lock, a minimum of
21 six per day. We presently provide six locks per day when
22 the lock is available and conditions permit. We also
23 provide additional lockage beyond that whenever we're --
24 incidental locking with recreational traffic. Whatever we
25 can do at that lock in terms of operation to enhance the

1 fish passage has been -- we've coordinated with DNR on and
2 has been obviously pretty successful.

3 Continuous flows at St. Stephen. One of the
4 issues at St. Stephen, of course, was trying to get the fish
5 queued up into the tailrace so that we can then pass them
6 through that fish lift back up into the project. We
7 presently provide at 5600 CFS, which basically represents a
8 minimum flow of one unit, 5600 CFS continuous flow beginning
9 early in February until mid-April usually, sometimes later,
10 depending on water availability. And when I say contingent
11 on water availability, we're talking about drought
12 conditions. And we provide that flow so that the fish can
13 queue up into the canal and they can be passed on through
14 the fish lock at St. Stephen.

15 We also want to implement the attraction flow for
16 the lock entrance channel. We presently provide that in the
17 form of -- in a relatively simple form. It's a siphon that
18 provides at 50 CFS of flow into the lock and it drops a
19 distance of 50 feet or so and it provides an attraction for
20 fish that are queued up below the Jeffries hydro so that
21 they know -- they basically can find the lock chamber or if
22 they're queued up in front of the lock chamber, will enter
23 that chamber so that we can successfully pass them.

24 Finally, we have already provided this but we
25 think it's an important issue and we have formalized a

1 procedure for manatee exclusion in the lock. In the event
2 of a -- a manatee is an endangered species, it's a mammal.
3 If it gets inside the lock and locks into the lake system
4 and we can't locate it or DNR cannot locate it after the
5 fact it may end up overwintering and if temperatures get too
6 low it could actually die of hypothermia like we could from
7 being in cold water. So what we have is a formalized plan
8 in place on how to operate the lock to try to make sure that
9 we use the opportunity for those manatee to pass into our
10 lake system.

11 We also have provided some exclusion devices on
12 the drain and fill ports inside the lock to prevent their
13 impingement when there's significant drainage occurring and
14 possible drowning -- as I mentioned, they are mammals.

15 Some other proposed measures: development and
16 implementation of the short-nosed sturgeon enhancement
17 program. Another endangered species associated with our
18 project, this time it's a fish, it's a short-nosed sturgeon.
19 Short-nosed sturgeon have been known to be in the Cooper
20 River, the Santa River, and in our lake from time to time.

21 What we have done is a number of studies in
22 coordination with DNR. In terms of evaluating short-nosed
23 sturgeon, DNR has also done a number of studies on their own
24 evaluating the condition of that particular species. What
25 it indicates is that there's a lot more questions than there

1 are answers regarding that particular species and how to
2 deal with that species.

3 And so what we're recommending is a formalized
4 evaluation, monitoring and milestone program where we can
5 establish what are the answers to a number of issues
6 associated with that species: their life cycle, the life
7 stage, where they're located at different stages, how they
8 spawn, and what is the most appropriate way to pass them
9 upstream to restore them to their historical spawning
10 grounds and when is the appropriate time to do so given
11 their limited population.

12 We also would recommend a proposed measure for
13 developing additional flow recommendations for the Santa
14 River that will balance these issues: and that is
15 navigation, habitat enhancement, project operations and
16 those contractual obligations that I mentioned to you that
17 are associated with this whole federal requirement for flows
18 through the rediversion project.

19 Finally, we believe that we should implement the
20 other proposed measures there identified in the scoping
21 document that was sent out. I won't go into the details of
22 each one; you're welcome to refer to them. And do those in
23 reference to any other endangered species as well as
24 recreational and cultural resources.

25 (Slide.)

1 And finally we have established a licensing
2 objective early on in this whole process, and that is this:
3 to maintain the balance of the multiple uses of this
4 project. That's what we've done -- that's what we've
5 attempted to do previously, that's what we're doing now, and
6 that's what we see doing in the future.

7 MR. FOOTE: Again, my name is Peter Foote, I'm a
8 FERC contractor. I'm the deputy project manager. I'm just
9 going to quickly run through some of the things that we've
10 highlighted in the scoping document. I'm sure a lot of you
11 have already read through that, so I'll just quickly run
12 through these.

13 (Slide.)

14 We are proposing to do a cumulative effects
15 analysis on water quality and diadromous fish resources,
16 which of course includes both diadromous and tetragenous
17 species.

18 We're proposing that the geographic scope of this
19 analysis go from the head of Lake Marion downstream to the
20 head of tide in the Santee River and on the Cooper River
21 from Lake Moultrie downstream to the head of tide (). This
22 is what was written in the scoping document but we've since
23 realized the head of tide is probably the tailrace for -- or
24 it is the tailrace for Jeffries, so we're open to
25 suggestions as to how far downstream we should take that.

1 Temporal scope, we typically look 30 to 50 years
2 in the future, if possible. That's the range of potential
3 license term for any license that might be issued.

4 (Slide.)

5 The general resource issues: we will, of course,
6 include the typical issues, the whole gamut of issues that
7 we normally address in an EA. We'll also include a
8 developmental analysis, which is an economic analysis, to
9 assess the affects of proposed mitigation and enhancement
10 measures on the economics of the project, what those
11 measures mean to the cost of the project.

12 (Slide.)

13 Some of the specific issues. These are, I'll
14 just run through some of the highlighted -- the major
15 issues. We've been looking at the effects of project
16 operations on water quality, particularly temperature and
17 DO. Of course, we'll be looking at the effects of flow
18 releases on both the Santa and Cooper Rivers and effects on
19 aquatic resources. The big one, of course, the passage of
20 diadromous species at the project facilities and, of course,
21 also at the Corps project and the effects of these
22 operations on efforts to restore diadromous species to the
23 Basin.

24 Looking at the effects of operations on any
25 shoreline erosion, riparian habitat and wetlands. Also

1 looking, of course, of the effects of federally listed
2 species, obviously fisheries and wildlife species.

3 Looking at the effects on recreational resources
4 such as access, navigability, and the adequacy of the
5 existing proposed facilities to meet future recreational
6 demand.

7 Looking at the effects of the proposed action on
8 properties that are already listed or eligible for listing
9 in the National Register of Historic Places. And, as I
10 said, we'd be looking at the effects of proposed measures on
11 project economics.

12 That's quickly the major issues. Other issues
13 are listed in the scoping document.

14 As most of you probably know, at 2:00 this
15 afternoon we'll be having a technical conference in this
16 room to discuss, of course, one of the major issues, the
17 fish passage and entrainment at the project. So we'll
18 hopefully get into a more detailed discussion of this
19 particular issue.

20 At this point, we'd like to hear from you. I
21 don't know if we mentioned it, but, of course, the meeting
22 is being recorded, so anyone that speaks, please state your
23 name and spell it, if necessary. By the way, the comments
24 on the scoping document are due on June 20th.

25

1 MR. FOOTE: I have the list of, I think it was
2 six people that would like to speak. And if you could come
3 back here. We have a couple of mikes here or standing over
4 there. N.T. Vasuki?

5 MR. VASUKI: My name is Vasuki. I'm with Showa
6 Denko Carbon in Ridgeville, and we are customers of Sandy
7 Cooper's for a long time, 22 years. In all our dealing with
8 Sandy Cooper we have found him to be an excellent company
9 who does the right thing by everything they do and that
10 includes the environment. They are committed to
11 environmental issues. But, where we come in is, the power
12 rates are a mixed of the hydro power, the nuclear power,
13 coal and natural gas, and as you've read in the paper the
14 national gas prices are where they are. The inclusion of
15 the hydro power is very important to us. Otherwise, that
16 could change and increase our overall cost of electricity
17 very significantly. For this reason we would like to see
18 trouble free recertification for Sandy Cooper's so that they
19 can continue to use hydropower to help our rate fix.

20 MR. FOOTE: Thank you. Richard Hopkins?

21 MR. HOPKINS: My name is Richard Hopkins. I'm
22 here representing myself, however. In the course of the
23 last month, since being aware of this I have spoken to many
24 individuals, property owners and sportsmen who share my
25 views and opinions.

1 I had the pleasure of growing up in the watershed
2 area of Santee Cooper. I've drifted down the old Santee
3 River from Wilson's Landing and all the way to the
4 Rediversion Project. I've been very involved in that. I
5 grew up camping on the upper and lower lakes with my family.
6 I've passed that on to my children. And, it's just very
7 important to us, the recreation side of this, the support
8 side of this. The Shantee River for the American Chad.
9 Been out there herring fishing. Just able to enjoy that
10 because the population's been kept up by the efforts.

11 This system has two separate fish passage
12 devices, which everybody is aware of, but, Santee Cooper is
13 taking very prominent efforts to keep the existing
14 populations.

15 In 1942 this project was completed. At that time
16 it was a very big impact on the ecosystem that existed at
17 that time. In the last 60-plus years, we've come to
18 equilibrium here. However, I would like to see that we
19 don't take underestimate one important habitat that is
20 developed here. And that is the human habitat. Because
21 there is a very large property owner base, recreation base,
22 people who depend on their very livelihoods with this lake
23 system for their -- supporting their families. The
24 Hydroelectric power is very important. I work for a company
25 that uses a lot of electricity. The ability that I have of

1 picking power that is provided by the Jeffrey's Hydroplant
2 allows us to remain competitive in today's tough markets and
3 we're competing from prices from all over the world.

4 There's a very fine balancing act that must occur
5 in this area. You must be able to balance fish passage,
6 which is very important. Most of the reasons stated are
7 very important.

8 Recreation. Hydroelectric generation and land
9 management in the surrounding areas.

10 In summary, I'd just like to say that I think
11 Santee Cooper does a very good job of balancing all five of
12 these with the input of the local agencies, state agencies
13 that are the experts in these areas. Thank you.

14 MR. FOOTE: Thank you. Gerrit Jobsis.

15 MR. JOBSIS: I'm Gerrit Jobsis. I work with the
16 Coastal Conservation League and I also represent American
17 Rivers. The Conservation League has about 4,500 members in
18 South Carolina, mostly. American River is a natural river
19 conservation organization that has about 35,000 members
20 nationwide. We work jointly on hydropower relicensing in
21 the Carolinas and specifically I've been working on this
22 project since about 2001.

23 I made some comments last night. I'll try not to
24 repeat a lot of those things, but I do want to hit some main
25 points. We agree that the hydropower operations here need

1 to be balanced and meet all multiple uses. We do not think
2 the existing operations meet those multiple uses and are a
3 balance. We have violations of the Clean Water Act. We
4 have been an impairment or a direct impact to endangered
5 species by this project. And so, we do not believe that the
6 current operation should continue, rather it should be
7 enhanced through this new license. As I also mentioned
8 yesterday, we think the ready for embargo analysis scheduled
9 being issued in September is premature. There's a lot of
10 information that has not yet been uncovered and we believe
11 it will take more than a few months from now to get all that
12 information correct. Correctly into the record.

13 One thing that I do ask. I mentioned last night
14 about the operations of the Corps of Engineers project and
15 the contract that Santee Cooper has with the Corps of
16 Engineers operative project. That contract has direct
17 effect on the FERC licensed part of the Santee Cooper
18 system, and we ballivo that that should be thoroughly
19 evaluated.

20 There was disputed legal issue, I guess, that we
21 have submitted comments to the FERC, as far as what the role
22 of that contract is in the FERC licensing. We understand
23 that Santee Cooper has a different opinion of that. Now,
24 that is a legal issue and we think it should be resolved
25 through the legal channels. It should not be resolved

1 through the NEPA document. So, we ask that you evaluate
2 through the NEPA document, both project operation with and
3 without the Corps of Engineers project being involved and do
4 a full assessment then, and not necessarily curtail that
5 analysis based on one party's opinion of whether it is part
6 of the FERC jurisdiction or not.

7 Also, I want to mention that there is another
8 endangered species involved that has not been mentioned yet.
9 That's the red cockade woodpecker. As of a couple of years
10 ago it was heard within the project boundaries of the
11 Chrysanthemum Island. There's a population there that has
12 been managed by the Department of Natural Resources and it
13 has been overseen by the U.S. Fish and Wildlife Service.
14 That is another species that needs to be part of the NEPA
15 Analysis for this project.

16 One thing, some things that came up at last
17 night's meeting I wanted to respond to. One thing that
18 Peter, you mentioned that you were going to do an analysis
19 in scope of NEPA down to the head of tide for the Santee
20 River. We do not believe that goes far enough. The project
21 effects the entire Santee River from dam all the way down to
22 the estuary, actually sometimes effects are going into the
23 Atlantic Ocean.

24 The Corps of Engineers project which operates
25 intermittently does alternative flows to the Santee River.

1 So there are large periods of time where that Corps of
2 Engineers project does not operate. As a matter of fact, in
3 recent drought years there were nine month periods when that
4 Corps project did not operate. So, in that case, the FERC
5 project were the only facility finding any water to the
6 Santee River from the Lake Marion or Wilson Dam all the way
7 down to the Atlantic Ocean. The results of that -- 500 CFS
8 flow that's being confirmed now was salt water intrusion
9 where salt water intrusion where salt water crept up into
10 the fresh water marshes. We will be providing some
11 information on the change in the vegetative community since
12 the crops have been built and it does show the impacts of
13 the project operations as far as salinity damage to fresh
14 water marshes.

15 So, we ask you not to stop ahead of time, but
16 rather to go down into the actuary, perhaps all the way to
17 the coast because that is the full range of the project
18 impacts on the Santee River.

19 Also, as last night's meeting there were some
20 inaccurate statements that were made by Dave Molecki of the
21 South Carolina Water Power Association. I don't know if
22 you're familiar or not. But, he attributed to the American
23 Rivers to Coastal Conservation League, the U.S. Fish and
24 Wildlife Service and Noah Fisheries some inaccurate
25 information about flow recommendations that would drain the

1 Lake and would be excessive and it will be out of balance.
2 So, I wanted to clear the record that our organizations, and
3 I want I want to speak to you federal agencies, but our
4 organizations have not made any political recommendations
5 for this project. One of the reasons why is because the
6 interesting flow study that is needed for the Santee River
7 has not been completed. As a matter of fact, we have not
8 yet seen a study plan that was ordered by the FERC back in
9 October, 2004 for Santee Cooper to provide a study plan and
10 review a study plan with our organization plus state and
11 federal agencies. So, that study has not been completed and
12 we will not be making any official recommendations until
13 after we have that information plus, perhaps some other
14 information to help us make the decision of what we will do
15 then. The appropriate flows for the Santee River. We do
16 think that the flows need to be cancelled because of water
17 quality violations, because of risks to endangered species
18 and because of lack of public recreation opportunities.
19 But, we are not prepared at this time to make any
20 recommendations, and any assertions that we have made
21 recommendations and the results of those recommendations all
22 mean overall product calculations are false. I just want to
23 clarify that.

24 Again, just to remind FERC that it is your
25 responsibility through this legal process to be sure there's

1 an adequate record and that would be through collection of
2 information not only provided by the power company and
3 provided by other parties, but, perhaps that FERC themselves
4 will meet and collect information to make sure there is an
5 adequate record for the legal process and for the license
6 decision. That's going to be it. Thank you all for coming
7 down here again and look forward to today's meeting and this
8 afternoon's meeting also. Thank you.

9 MR. FOOTE: Thank you. Ed Duncan.

10 MR. DUNCAN: My name is Ed Duncan. I'm the
11 Environmental Programs Director for the South Carolina
12 Department of Natural Resources and I'm representing that
13 Agency here today.

14 I'd just like to take this opportunity to
15 welcome the FERC team to South Carolina. It's good to put
16 some faces with the names that we've seen so much of this
17 project and I'm sure we'll be seeing a lot more.

18 I know that y'all have been touring the facility
19 here the last few days and got the idea how complex and huge
20 this project is. The project is a huge asset to save the
21 South Carolina fish and wildlife resources, water resources,
22 recreation and project lands are very beneficial to wildlife
23 management.

24 Ever since the project has been here, we've been
25 cooperating with Santee Cooper, who managed the land and

1 water resources. It's been a very beneficial arrangement
2 for both parties. It's re-diversion project we've now added
3 the Corps of Engineers to our partnership and they've
4 devised a more formal partnering agreement where we meet
5 periodically to address the issues with the re-diversion
6 project in operation for the lake and facilities.

7 I'm going to be real brief today. We will be
8 submitting detailed and written comments, but we have not
9 had the opportunity to complete that today. There are a few
10 issues I'd like to address.

11 The issue of Geographic Scope, as the scope of
12 the document says, it could bear greatly depending on the
13 subject being addressed at the particular time, whether it's
14 recreation or diadromous fish.

15 But, in terms, particularly, of diadromous fish
16 management, it would be impossible to adequately assess the
17 diadromous fisheries without considering everything from the
18 ocean to the spawning habitat upstream of this project.
19 Recreation issues, it can be certainly much more time, but
20 we will be providing some detailed recommendations for
21 geographic scope for all of the fisheries involved.

22 The Temporal Scope, boy, it's hard to imagine
23 what this place will look like 50 years from now, having
24 seen what has happened in the last 50 years. It's going to
25 be incredible. What we can speculate and pretty much count

1 on is the population is going to continue grow, there's
2 going to be an increased involvement and the pressure of
3 aquatic resources and water supply issues that's going to be
4 tremendous in the future. So, whatever term of license
5 there is, there has to be some flexibility in there, there
6 needs to be periodic reviews and adjustments to -- a group
7 addressed to changing technology and resource needs during
8 the next license period.

9 On the heading of Water Resources, one thing that
10 the current proposal fails to adequately address is the
11 issue of water supply. Santee Cooper has now gotten into
12 the water supply business. In the future that may be the
13 liquid gold of all the eastern states. Our DNR sees this as
14 potentially serving most of the coastal area from Edisto
15 Beach up to Georgetown. Water supply is a huge issue that
16 needs to be addressed in the cycle. And in terms of water
17 supply and Aquatic Resources, there needs to be a drought
18 contingency plan for dealing with the fair, evaluative
19 assessment of what to do in a drought situation. Of course,
20 the quiet resources of extraordinary interest to our Agency,
21 our Agency was born as a fish and wildlife agency and we
22 still tend to be that even though we our area of
23 responsibilities expanded greatly.

24 There's a huge resource out there in terms of a
25 recreational fishery and that's been indicated since the

1 construction of the project and the navigational lock, there
2 has been diadromous fish passage through these -- the sewer.
3 With the rediversion project and additional fish passage
4 facilities added, we've had some huge problems with that
5 facility over there, but it's operated fairly well. But, we
6 feel we can do a lot better with diadromous fish management
7 and we're looking forward to adding FERC to our partnership
8 in addressing these issues to you now.

9 Terrestrial Resources, I feel there needs to be a
10 particular emphasis placed on the Upper Santee Swamp area,
11 which is known to us as the Forks Swamp. It's very --
12 headwaters up there. It's a huge -- the best undisturbed
13 swamp and ridge forest up there and it's undergoing some
14 vegetative changes in there. And also to address the
15 waterfowl management area that we operate on the lake and,
16 of course, the federal areas.

17 That concludes my comments, and as I said, we
18 will be developing detailed written comments and providing
19 those within the comment period.

20 MR. FOOTE: Thank you.

21 MR. BROWN: Good morning. My comments are
22 primarily addressed to the public to help the public
23 understand how some of the other agencies are involved in
24 the process.

25 MR. FOOTE: Identify yourself.

1 MR. BROWN: Prescott Brown, I am with the
2 National Marine Fisheries Service. We're part of the U.S.
3 Department of Commerce. We are a federal agency and our
4 primary role and responsibility is to take care of fishery
5 resources, primarily commercial fishing resources as well as
6 recreational fishery resources for the public. We typically
7 become involved in large projects, such as this. There are
8 a number of laws and processes that bring us together and I
9 wanted to kind of give you an overview of that. We
10 typically have become involved in the Federal Energy
11 Regulatory Commissions' licensing process in several ways.
12 One of those, of course, is the Magnuson-Stevens Fishery
13 Management Act. An Act with Congress which was
14 established a few years ago, does concentrate on management
15 of marine fishery resources. And also, it told us in
16 working with the states and the fishery management councils
17 to identify essential fish habitats. These are habitats --
18 these are places where fish, there are areas really need in
19 order for their life cycles to be completed. It's called
20 essential fish habitat. Of course, this project does have
21 essential fish habitat and on the Santee River and the
22 Cooper River. Generally, these are habitats that are very
23 important to the fish that we sometimes find in the seafood
24 market. Such fish as the red fish or channel bass, as some
25 people call them, and the flounders, the blue fish, the

1 mackerel, a large number of fish that are out to sea, we
2 call them the highway migratory fish species. They're
3 sharks, the tunas, a whole number of different fish and
4 these all have federal management plans that have been
5 worked out with the States and fishery management
6 counselors. So, what we've done is taken a look at what are
7 the habitats that we need to be concerned about to try to
8 protect the quality of the habitat that these fish depend
9 upon. That's how we came about with essential fish habitat.
10 And with this particular project, essential fish habitat has
11 been designated for all the taddle portions of the Santee
12 River as well as the tattly influenced portions of the
13 Cooper Group, who will be, as I say, will be coordinating
14 with FERC and the states, the other resource agencies of
15 Santee Cooper to make sure that whatever we do with the
16 licensing project, does everything we can to make sure that
17 we protect these core fishery values.

18 Another process, of course, that we coordinate
19 typically with FERC on is the Endangered Species Act, as
20 does the U.S. Fish and Wildlife Service. And as we've
21 mentioned a couple times from earlier speakers that we do
22 have a pretty interesting fish here that's an endangered
23 species, that's short and disturbing, that is, a fish that
24 is under the authority of the National Marine Fisheries
25 Service that is present in this basin. We, of course, will

1 be working with FERC on all the other state and federal
2 agencies and Santee Cooper to do what we can to know and
3 protect that species, but hopefully, find ways that we can
4 assure the survival of that endangered species, perhaps even
5 to get it off of the endangered list one day.

6 We also have a related species, the Atlantic
7 Sturgeon. That's a larger fish, that probably will be
8 listed in the future. In our work area here, it probably is
9 less abundant than the short sturgeon. Many river basins,
10 and certainly suffers from a lot of different problems with
11 overfishing in the past and Habitat loss or water quality
12 problems, similar to those experienced by the short nosed
13 sturgeon.

14 Another area that we typically become involved
15 with the Federal Energy Regulatory Commission as a sister
16 federal agency is looking at passage of public trust fishery
17 resource. When you have a river system and you have
18 populations of what we call diadromus fish. It's a
19 complicated term. But, these are fish that need to live in
20 the Ocean and in the saline or salty water. They also need
21 to come up into fresh water sometimes through estuaries in
22 order to survive. They're depending upon rivers and the sea
23 you might say, for different parts of their life cycle.

24 When we take a look at projects like this we try
25 to do what we can to make sure that the public's fishery

1 resources are taken into consideration and we often times --
2 we do have an authority under the Federal Power Act that we
3 share with FERC to sometimes prescribe passage for these
4 fish at dams and they truly can get to their core habitats.
5 So, that process we sometimes call the section 18 fish
6 passage prescription process. We always work on that
7 process, we review a project, we review and coordinate with
8 other agencies and take a look at other fish passage if it's
9 present.

10 Now, I have a couple of comments here I'd like to
11 make about the scoping document itself and some suggestions
12 that we have for FERC primarily on the analysis now that
13 we're participating and scoping for and we will provide
14 detailed comments subsequent to this before the June 20.
15 We have some detailed comments on this suggesting the
16 representation. One comment I have is on the schedule for
17 the proceeding. We've heard a couple of other speakers
18 mention that. It's an ambitious schedule. I know that FERC
19 has been very interested in trying to be timely and move
20 these processes along. We do have a very complicated
21 project here. We have a lot of complicated resource issues.
22 And a lot of the outstanding study that we've initiated with
23 Santee Cooper and the other agencies has not been completed
24 yet. It will be. But, I think we may need to have some
25 additional time. We will work out some of the details. If

1 you've ever reviewed critical studies that are incumbent to
2 make recommendations that work out a grievance on these
3 recommendations, some of those kinds of information needs
4 are against marine study that was mentioned earlier. It's a
5 very complicated marine, that's a study where you take a
6 look at the flow releases from the project and compare that
7 to the natural conditions, and take a look at the needs of
8 the aquatic resources like fish, water, fowl, whatever the
9 case may be. Take a look at those habitat needs and see
10 what we can do to prove or at least protect the habitats
11 that are there.

12 Another one, of course, is conducting a fish
13 passage assessment project. These projects, of course,
14 they're three different dams as Mr. Hopkins explained
15 earlier. And we will be conducting a fish passage
16 assessment. Our engineers are working on that and I think
17 we'll be coordinating the Santee Cooper as well as the Corps
18 for this project and take a look at the existing passage and
19 try to identify things that maybe can be done to improve
20 that in certain cases at each of these three dams. So,
21 that's one thing we'll be looking at. That's a critical
22 study need that obviously was well beyond September. We
23 have an outmigration study that we've been talking about --
24 to try to get a handle on these fish, the diadromus fish,
25 once they get upstream; they spawn the upper reaches of the

1 rivers. Then they must come down stream and they have to
2 leave the project to be able to get back to the estuary or
3 the sea and one of the things we want to look at is where
4 these fish actually, what are some constraints in their
5 ability to safely leave the system and get back to the ocean
6 where they can complete their life cycle. So, we will be
7 looking at that and additional analysis for that. We're
8 also taking a look at through that study, as well as others,
9 just taking a look at, if you think about it and the project
10 here, of course, the main way that the fish can get out is
11 if there's a spill at the Santee Dam when the water flows
12 over the dam. Sometimes that's a great way for fish to get
13 out, but it depends on the flow conditions. That sometimes
14 can be very hostile to fish that are falling essentially
15 over the top of this dam and they experience some mortality.
16 And the only other way for the fish to get out is to go
17 through the hydropowered generated turbulence and we're
18 taking a look at that situation right now. We will need
19 study effort on that. It's an inter-Agency coordination to
20 determine what the levels of mortality we're experiencing
21 are now. There has been some study to give us a kind of a
22 preliminary view. Mortality of fish -- we'll need to take a
23 second look and that's going to require some additional
24 time.

25 Quickly here, one thing that I would like to

1 mention that these processes and the scoping meetings
2 sometimes tend to be kind of boring. Maybe I'm being
3 boring, but I'll say there is something that is very
4 interesting that we should know about. I think everybody in
5 the public would find this interesting, I hope. This Santee
6 Basin is probably the second or third largest basin along
7 the Atlantic Coast as far as, in terms of this area of water
8 shed. It's a very interesting system when you get into the
9 history of the basin or the culture that has existed in the
10 past over back to the Native Americans, it's a very
11 interesting situation.

12 We had, for example, Hernando DeSoto, who came on
13 his original travels through here he stopped at a very large
14 Indian town and wrote about it. He was, of course, broke
15 about this time, and the teepee town which is actually on
16 the, subsequently has been found or refound on the watery
17 river, right down the street of Campbell. It's very close
18 to Campbell. And that was an early very large Native
19 American culture that existed which perhaps one of the
20 largest, most highly developed Indian cultures in the U.S.

21 Of course, cultures were settling often times in
22 these areas near where we called hulls. It's the area where
23 you transition from the coastal point of Piedmont and they
24 settled there. Oftentimes there was an abundant supply of
25 fish. The problem was, their most important food supplies

1 was these diadromus fish, particularly the American Shad and
2 the Herring Backs that actually came there every year by the
3 millions in the past when we had open rivers well before we
4 were we were colonized in this country by folks like me and
5 all of us. There were millions of fish literally coming up
6 all the large river basins along the coast. We don't really
7 know how large these populations were.

8 An example of one that we know the population in
9 1825 was the Potomac that closed by -- you know -- with
10 Washington, the herring, was still about 22.5 million
11 pounds. Though Shad, in 1825, for example -- we don't have a
12 lot of good data on how big the population of fish was, but,
13 we know is what likely to be in millions at any rate. So,
14 now, past history is quite interesting. What we've found
15 out in looking at river basins and looking at these
16 diadromus fish and it's important to keep in mind those
17 things -- you know, what's important about Shad -- who cares
18 they don't look pretty, they smell bad and what we found
19 though, in recent years is that the Shad and the Herring
20 primarily are important. The most important components of
21 the diet, whether it is managed fisheries that we have out
22 in the ocean, for example mackerels, the humpbacked whales,
23 for example, the dolphins, all the marine mammals that are
24 predacious; that is that they eat, fish and younger animal
25 matter. They survived on these fish. There were some

1 others out there, but by far the largest feeding supply was
2 the shad herring. So, its quite an interesting story.

3 But, anyway, what happened here, of course, as we
4 developed our country we built dams.

5 As we cleared the land for agriculture, we
6 brought lots of -- well of course, this was crucial to the
7 habitat for shad and other fish as well. And that move down
8 the basement ring, around the early 1800's we started being
9 able to build larger dams and we would have by 1825 or so we
10 able to build dams that would power, use hydromechanical
11 power, and it was vital to the development of the country at
12 that time. You can see one of these today. If you go to
13 Columbia you can see the remnants of some of the old mills
14 that existed at the City of Columbia right at the falls and
15 we were able to begin to harness hydromechanical power. We
16 built dams there, and for example, Congeree, just upstream
17 here, just head of the Congeree River there was a diversion
18 dam built in 1824 or so, essentially blocked the moderation
19 of the shad bearing sturgeon at that point from 1824 on.

20 Later on, of course, you know we were able to
21 build larger dams and the country could always use the
22 power. The power companies would build lots of hydropower
23 dams at the falls which would flow on it's own to all the
24 tributaries. Later, of course, we built this dam, we were
25 preparing for WWII, in this and number of other regions. It

1 looked like at that time, that that was probably going to
2 totally block -- it should -- totally block the shad,
3 particularly the shad.

4 What's most incredible about this is that after
5 walking through this dam, the shad, for example, were
6 isolated from their spawn and habitat extreme. But, they were
7 able to do an incredible change, unbelievable change,
8 actually. They started -- instead of coming up the sand)
9 they would come down from the North Atlantic where they
10 spent several years of their life. When they come up to
11 Cooper and evidently were able to sense the smell of
12 material from water coming up from the Santee. Then, we
13 couldn't know, after 1942, if they began to come up this
14 water. And I don't think anybody would have thought that
15 possible. So, they did come up and to make a long story
16 short; efforts were begun way back. I think a lot of dam
17 operations were beginning to pass fish here. And that's
18 what kept the shad alive, for example. They were able to
19 continue to get past through the swog, make their journey
20 through this little canal to their spawning habitats. And
21 that enabled them to fuel up.

22 It's interesting to keep in mind that in the
23 forties, most of the other river basins along the Atlantic
24 coast, lost their shed, almost entirely. In some cases they
25 did lose an entire shed. This project was unique in that it

1 did produce some passage here. It might have been partly
2 unintentional, or partly intentional, and so what happened
3 is, we began to build up a shed and here comes the re-
4 diversion project. Re-diversion project caused another very
5 interesting phenomenon. Like everybody, including myself,
6 who was working on the studies from rediversional project
7 three years -- if you cut off the flow back in the Cooper
8 and put it all back in the Santee, you're probably going to
9 lose all this fish bass in here. It's all going to be gone.
10 And I don't think anybody thought this was possible. But in
11 1985 when water was released back down into the Santee. The
12 fish changed again, they went back. And despite the broken
13 journey, they again came up the Santee. Fortunately, though
14 they continue to come up here as well. So, it's just
15 interesting. Maybe I've talked a bit longer but I thought
16 you might be interested to share that story with you. I
17 think it's a very incredible and personal story.

18 Two other aspects of that -- when this dam was
19 built, nobody was thinking about this. But, it captured
20 essentially some striped bass upstream, as well. There's
21 some striped bass in the school of the river here. And
22 evidently there was a shortness of sturgeon, probably of
23 Atlantic sturgeon that was upstream with the dam. Of
24 course, the primary dam here allowed the movements of these
25 fish, but as we all know, if you've paid attention to this

1 area, one thing led to another and we ended up with what you
2 might call a world class striped bass fishery. Well,
3 obviously, according to the back of the 50 to 60 -- these
4 fish were captured with, they were cultural operations of
5 the natural resources and the wildlife part and the
6 properties these fish, and the good population and the
7 transport took I think around the world, these young striped
8 bass and they've been used and this is the reservoir striped
9 bass were used to repopulate three years old coast, anyway.
10 So, that's a very important part of the history and it's a
11 very important part of the project. We still have -- I'll
12 mention this. I'll try to stop. We still have a population
13 of sturgeon up here and we've been looking at this very
14 closely with the other Agencies, state and federal agencies
15 for a long time who realize now that essentially a cap view
16 population of sturgeon in the lakes. They're able to get up
17 stream to spawn. We need more information for these fish.
18 The only way they can get out of the system is going out
19 through the turbulence here at the station. We're going out
20 through the turbulence here and occasionally they may pass
21 over the dam here and spill. So, we believe and we need
22 further study on this -- it's very likely that probable
23 spawning population of this fish is located in the lake. We
24 have some treatment going on that's probable. This is
25 occurring from available -- what appear to be suitable

1 spawning habitats upstream in the Congeree and Santee
2 rivers. Then the fish or egg will get out through the
3 system and come down and come out through the Santee. So,
4 now we essentially have some short-nosed sturgeon that can
5 be found in the Cooper River, not many, in the Santee River
6 and this upstream population. And we know that the probable
7 primary impact on that species has been the placement of the
8 primary dam here on the rivers. So, make a longer story
9 short, we will, of course, looking at that very closely,
10 look at that situation. That's an objective now, that for
11 our Agency, but I think for all the parties that are going
12 to be licensing and to figure out what can we do to protect
13 this population, the short nosed sturgeon, perhaps before
14 their disappearance we will have adverse impact. We feel
15 that the project from an Agency standpoint, we feel that the
16 project definitely is adversely affecting the short nosed
17 sturgeon. Now what we've got to do is figure out what we're
18 going to do about it. Work on our program , allow us to
19 study the sturgeon, to take action where we can, to try to
20 protect that population and also restore it, if possibly
21 recover that population. So, that's all I have to say
22 presently.

23 MR. FOOTE: Bill Manson?

24 MR. MANSON: My name is Bill Hanson, I'm a
25 hydrologist with the U.S. Forest Service. We're going to

1 provide workmen from our Agency, but I just wanted to make a
2 few comments for the technical specialist who's done a lot
3 of work for me over the years. I've also done some work
4 with FERC projects over the years in hydroelectric projects,
5 but not a lot, it's not my main experience.

6 I like some of the comments that I've heard so
7 far without mentioning the basin and that a project like
8 this is affecting more than just near the area. I believe
9 this project is affecting all the way down to the ocean, the
10 Francis Moran National Forest is down in this area below
11 where the St. Stephen's Dam Oasis. Primarily, I used to own
12 a piece of land that went into Lake Moltrey, but we traded
13 that years ago, unfortunately or fortunately, I don't know.
14 Depending on how you look at it. But, when you put a dam in
15 on a basin this size or a basically any dam you're going to
16 have changes in the channel upstream to the dam you're going
17 to get aggravation of sediment. I know quite a bit about
18 sediment. I know quite a bit about sediment because I work
19 in the Piedmont where we have a lot of gullies. We have
20 some gullies that are still unfilled; we have a lot valleys
21 that should have been filled in by all this sediment. And
22 now because of better land management practices, which
23 channels are now recutting down through the sediment and you
24 go to the Piedmont today you see a lot of entrenched
25 channels where the channels are cutting down throughout that

1 sediment delivering it downstream. Eventually, a lot of
2 that sediment is working through the system. Sooner or
3 later we're going to get a lot of settlement and I think we
4 should look at the sediment routing. I don't know what the
5 license period is, but there's a lot of sediment in the
6 system still. It's going to pulsing through at some time or
7 another. And, as that sediment reaches the dam, usually you
8 get aggregations. Once you get aggregation in your channel
9 you get more flooding upstream, things like that, so when
10 you change the base level, how far has it gone, how far has
11 it changed? So far in the last 60 years, I think that
12 should at least be the minimum extent upstream. But, in the
13 next 50 - 60 years, there's going to be additional changes
14 forward from all this sediment that's stored in Piedmont and
15 mountains that are eventually going to be pulsing through.

16 Downstream of this area, there's changes on us.
17 We're seeing, and have probably gotten used to it. The
18 flooding of some little forced roads, people who want to use
19 the river, you get extreme fluctuations. The Santee River,
20 when the pulsing goes on, you get the minimum flows that
21 below the dam are not high enough to maintain the channels.
22 So, the channels tends to entrench and vegetation encroaches
23 on the Lord Channel section. I don't have a lot of
24 specifics; I don't have a lot of data on it. We're not
25 actually working at it. These general things that I'm

1 talking about happen -- there are hundreds of dams across
2 the nation. I'm sure you're very familiar with these
3 things, General Chambers. And these changes can occur for a
4 long distance downstream. People tell me that at one point,
5 the Santee River, historically was a fresh water river all
6 the way to the ocean. Now, salt water goes upstream quite a
7 ways.

8 I know -- one of our wilderness areas gets salt
9 water, brackish water, I guess you could say, with some
10 solidity anyway, into the wilderness area and some it -- it
11 probably didn't occur naturally as long as the Santee River
12 had really high flows, but now you're getting salinity up
13 and this is because of this project.

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1 MR. HANSON: Probably nobody wants brackish
2 water, I guess you could say, with some salinity anyway into
3 the wilderness area and some of it -- it probably didn't
4 occur naturally as long as the Santee River had really high
5 flows, but now you're getting the salinity up and this is
6 because of this project. Nobody wants to probably remove
7 the dam, but if this could be managed a little bit different
8 where you don't have such spiking releases of the flow and
9 you could have more of a natural flow, instead of the, as I
10 mentioned, January through April, I think, of 5600 CFS flow,
11 a constant flow basically of 5600 CFS is not good for
12 channel formation as well as habitat. If the flow -- if you
13 could take that same flow and fluctuate it, you'd come out
14 with a better channel and better aquatic habitat and things
15 like that. So I think that's the kinds of things that you
16 should be looking at.

17 It's not just the old engineering, well this is
18 to maximize power output, but how can we take -- if you're
19 going to have a certain amount of flow released, how can you
20 take that release and optimize also the channel stability
21 and habitat. And I think that would really help.

22 I think we should -- in this document should
23 adjust the changes that have occurred in the channel and the
24 channel capacity, as I mentioned, the vegetation
25 encroachment, the channel form, and the water quality,

1 including the sediment routing, which I mentioned. I'm not
2 up on exactly what they're doing with sediment routing. I
3 know usually dams take a lot of the sediment out so
4 downstream you get a lot of cutting of the channel, but
5 there are ways they can route sediment through systems. Of
6 course, you can't do it if you're not releasing much flow.
7 That still should be something that's addressed.

8 You have recreation sites and use on the river
9 and the releases are affecting the national forests --
10 they're affecting some of those sites and it's been going on
11 for a long time so I think many people are used to it. But
12 still we have some recreation sites that have minimum use
13 now because at one time we had more use but the roads are
14 flooded out at certain times, people have to wait until the
15 water goes down before they can get out of that area, and
16 it's become more dangerous on the river in certain sections
17 because of the fluctuations.

18 I'll try to get information -- talk to our
19 archaeologist, but he knows of at least one site in our
20 section that's along the riverbank that he believes may have
21 been affected by the fluctuating flows. And it's very
22 common, when you fluctuate flows rapidly and frequently, to
23 cause a lot more streambank erosion and damage. He
24 mentioned to me that he would like to see in one of these
25 studies a survey of the stream bank areas. In the Francis

1 Murray National Forest to do a timber sale we're spending
2 hundreds of thousands each year just to cut timber, you
3 know, because of all the archaeological sites in Francis
4 Murray National Forest. And many of the sites along the
5 river, you know, because you've got high banks and things,
6 there's probably a good share of sites along the river and
7 those should be at least categorized and catalogued as to
8 what they are and decide, you know, how to protect them or
9 at least recognize what they are.

10 What have been the effects to the wetlands? Any
11 time you change the frequency of flow or channel dimensions
12 the adjacent wetlands, especially if you get entrenchment of
13 the channel and lack of flow, it can drain adjacent
14 wetlands. So what has been the impact to those wetlands?
15 And I think it was mentioned on one of the slides that you
16 were going to be looking at wetlands, so that's good.

17 We've sent in several letters regarding this. We
18 feel like the connected actions -- the St. Stephens Dam I
19 know is a Corps project, but it's connected in this.
20 Anything when you take a natural river and impound the water
21 and then you start putting it into other basins and
22 rediverting it back and things like that, the basic change
23 of the project vis a vis wetlands upstream and downstream.
24 So regardless of the Corps project, I think it should be
25 included in the analysis and it sounded like somebody said

1 they were going to analyze it. I don't see how it can be
2 divorced from the project; even though it isn't really part
3 of the project, it's still connected to it.

4 As I mentioned, I'd like to see an alternative
5 that would consider augmenting the flows to the Santee River
6 from the Santee Dam downstream that would have a more
7 natural oasis, more natural looking hydrograss, and identify
8 what the historic flows were in the river, what they think
9 they were and the fluctuations, and try to -- and then make
10 those flows as well as you can, at least develop an
11 alternative to be more fishery friendly in the Santee River
12 or recreation friendly. And I understand, you know, that
13 there's a lot of economic issues, huge economic issues with
14 this project, but could there be an alternative that would
15 also -- and everybody wants to talk about balance, but
16 couldn't there be an alternative that would balance more --
17 if we want to optimize or improve resources in the Santee
18 River and get it back a little bit more to the historic flow
19 conditions and habitat conditions, what could be done within
20 the existing project guideline.

21 I would like to say, and I'm sure that my boss
22 would like for me to mention that the Forest Service does
23 intend to be cooperative in this project any way we can,
24 within our limited resources, of course. And we have a lot
25 of other activities going on. We've always had good

1 relations with Santee Cooper and FERC, and if there's
2 anything that we can do to help you or any information that
3 we might have that could help in this analysis, feel free to
4 call on us.

5 Thank you.

6 MR. MC KITRICK: Thank you.

7 Okay. That completes the list of those that said
8 they would like to speak. Is there anyone that would like
9 to make any comments at this point?

10 (No response.)

11 MR. MC KITRICK: If not, I certainly appreciate
12 you all coming and it's been a very informative meeting. We
13 appreciate your comments and we look forward to any written
14 comments, further explanations or information that you might
15 have within the next 30 days.

16 I might mention that if there is any questions
17 about the process and what we're doing or for some reason
18 this still is extremely confusing, feel free to contact me
19 and I can talk to you about that or we can talk after this
20 meeting. If you have any questions about how this thing
21 operates, talk with John. We're still learning.

22 I do appreciate you coming and look forward to
23 any of you that want to talk to us this afternoon about some
24 specific things. We're starting at 2:00. We do need to end
25 at 5:00; we've got people catching planes. So we need to

1 kind of focus our discussion and keep on track and see what
2 happens and see what happens from that point. So we look
3 forward to starting at 2:00 this afternoon for those who
4 would participate.

5 VOICE: Do you have an e-mail address for the
6 comments?

7 MR. MC KITRICK: The electronic filing is -- what
8 I can recommend, it's not strictly an e-mail to the
9 secretary. You need to go to our website, which is
10 www.ferc.gov. In that, there'll be a little link you can
11 find about electronic filing and they'll explain that to
12 you. There will also be a telephone number for you to call
13 when you don't understand this and they'll explain it to
14 you. But it's not that -- after you do it once, it's pretty
15 easy.

16 Any other comments?

17 (No response.)

18 MR. MC KITRICK: If not, I appreciate you all
19 coming and officially closing this scoping meeting. Thank
20 you.

21 (Whereupon, at 11:25 a.m., the meeting was
22 adjourned.)

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