A.2 Public Meeting Transcript Excerpts and Comment Letters

LETTER A (Transcript)

Transcript of the Afternoon Public Meeting on December 12, 2000, in Vidalia, Georgia

[Introduction by Mr. Cameron] [Presentation by Ms. Carpenter] [Presentation by Mr. Burton]

Ms. Barczak: Sarah Barczak. This is somewhat related to what you are talking about, but after this 20-year license renewal extension is granted, is that the last chance to renew it, or will they be able to reapply? I was just curious.

Mr. Burton: I don't know whether the Atomic Energy Act allows for additional extensions. I don't know if anyone else here can answer that.

Ms. Carpenter: I was looking at Butch, because I honestly don't know either. I'm not sure if there's an exact length of time that they say, you know, right now it's 20 years they can extend the license, but I'm not sure that there's a limit to that, to be honest with you. I'd have to look it up and we'll have to get back with you on that, but I'm not sure that they give an actual limit.

Mr. Cameron: Is the question can there be a third, in other words, another renewal of the license application? Barry, do you have some information on this for Sarah?

Mr. Zalcman: Sure. My name is Barry Zalcman, also with the Nuclear Regulatory Commission. It's my understanding that the renewed license becomes the new operating license for the facility, and that new license would have an expiration date, and that license could as well, be renewed at some point in the future subject to the same stringent standards recognized in the additional period of operation. So the safety reviews, the same environmental reviews, the same level of inspections would also be conducted at that time.

Mr. Burton: All right. Yes, I did want to say, because as I mentioned before, the technical aspects of operating the plant is really not the limiting factor; it's really the economic. So should there be allowances to extend beyond that as Barry mentioned, we would look again at the technical aspects and see if the applicant is able to continue to operate the plant and meet its current licensing basis into an extended period. We would look at that just as we're looking at it now.

Ms. Carpenter: And the exact same would go for environmental, if that would occur. We'd have to look at the environmental aspects again for an additional period.

Ms. Gres: My name is Dusty Gres. My question to you is, what are the major differences between the safety inspection that you do for the license renewal, as opposed to the regular safety inspections you do for continued operation?

Mr. Burton: Good question. The review that we are performing for license renewal, as I mentioned before, there have been -- the original license renewal rule was promulgated in 1991, and it was amended in 1995. Part of that amendment was somewhat of a narrowing of the focus of the license renewal review. What we do for license renewal, is we really focus on what we call "passive, long-lived structures, systems, and components." What we have found is that active systems, such as valves and pumps and things like that, should they experience some sort of degradation, the fact that they are active, it is relatively easy to recognize and address that. In fact, much of the work that we do, and much of the procedures and processes we have set up lend themselves to recognizing those things.

As part of the development of Part 54, we recognized that there are some structures and components that are not active and that are long-lived, and whose age-related degradation can actually occur and it's not easily recognized. So what we try to do in the staff review, is to look at the application and see how the applicant has identified that universe of structures and components, and identify what aging effects those structures, systems, and components are likely to experience, and that they have programs in place to manage that aging. So to answer your question, the difference between what we're looking at in license renewal versus what we look at more regularly at the operating plant is a really, much more focused review on those things that are long-lived and passive. I hope that answers your question.

[Presentation by Mr. Kugler]

Ms. Barczak: During the process I was just wondering would the Draft EIS that we all have to read through -- why weren't the comments that were received from everyone -- the correspondence included in those?

Mr. Kugler: They were reviewed and considered in our development of the draft. We do not -- you mean, specifically included in an appendix or somewhere?

Ms. Barczak: Correct. There's an appendix that, you know, shows something and et cetera, et cetera, but following what their concerns were, is hard to do when you're just looking at, you know, a letter that was received from Georgians for Clean Energy.

Mr. Kugler: I understand what you're saying. The way we have normally addressed this is we issue a summary of the scoping process, and for Hatch this was issued on August 23rd of this year, which discusses the scoping process, where the comments came in from, and then it lists the comments and the resolution for those comments. We have not, at least up until this point, included them in the EIS itself. We do include the comments that come out of this part of the process in an appendix to the EIS.

Ms. Barczak: Is the August 23rd comment summary available anywhere on the website? Well, you said that they were pulled together and looked at?

Mr. Kugler: Right. We haven't put the Scoping Summary on the web site. There is probably no reason we couldn't do that. I understand what you're saying. In other words, that's a piece of

the process that would be convenient to have in a handy location. We could certainly consider –

Mr. Cameron: Can we put the Scoping Report on the web site?

Mr. Kugler: I don't see any reason we couldn't. I think the only concern we might get into would be, you know, we don't want it to get cluttered to where it gets hard to find things, but I don't see that as a particular problem in this case, so we can certainly consider doing that.

Mr. Cameron: Okay. The transcript from the meetings is on the web site?

Mr. Kugler: The transcript from the meeting is there. That would only have comments that occurred during the meeting. It wouldn't have the written comments that came separately, so to get the whole picture –

[Discussion]

Ms. Sheppard: Thank you. My name is Deborah Sheppard, and this is a follow-up question to the one that was just asked.

You said earlier that you took into consideration the comments that were made publicly and in writing, and you followed those up with additional research. Is there a location where you can link the question and the concerns with exactly what information you sought and what the conclusion was?

Mr. Kugler: I don't believe we have anything that provides that sort of a direct link between the two. In some cases it might be fairly obvious. For instance, for the radiological off-site monitoring question there is a specific location where we discuss the report from the Georgia Department of Natural Resources, and we talk about radiological impacts, but other comments, it might not be clear where in the report that any changes we made, or anything we included show up in response to those comments, other than the general section. For instance, if a comment was on alternatives, it would certainly be Chapter 8, but there's nothing that would tell you specifically, you know, this piece in Section 8 is where that comment was addressed.

Ms. Sheppard: I guess, just as a point of public information, I believe those of us who are attempting to follow this process are in a very difficult situation to be able to follow your thinking as you evaluate this. I would like to suggest that when people come to a meeting such as this one and make written comments, they are doing about all they can do. We don't have huge staffs to follow this and it makes it extremely difficult for us to really understand whether you've addressed the comment and what your thinking is. So if there's a way to -- I will just issue that as a criticism of the process. Thank you.

Mr. Kugler: Okay. I understand what you're saying. I guess, what I would say in terms of the way the process moves forward, the draft is not completely written at the time that we work through the comments. They do kind of run in parallel, but we would probably have to go back

after the draft was completed if we were going to really show a direct -- here's where the comment was made and here's where it appeared. I'm not sure whether we can do that readily, but I understand your concern.

[Discussion]

Mr. Zalcman: Let me offer this. This is Barry Zalcman again from the staff. We have examples of a number of these earlier Supplemental Environmental Impact Statements in the back of the room. The important thing is when we go from the draft to the final stage, we de-aggregate all the comments and enumerate them by category, and give you a direct map so you can see the section of the report that is actually addressing a change from the draft to the final. The question I think that you're raising, deals with the scoping process. When we went to the Scoping Summary Report is there a mechanism that connects that report to the draft EIS? Is that the specific question?

Ms. Sheppard: That a regular person could access in a reasonable amount of time.

Mr. Zalcman: Let me just talk a moment about the Scoping Summary Report that is available in the Public Document Room -- the Electronic Public Document Room, as well as the room that is accessible in Rockville, Maryland. We also made a point of making sure that the public also had it available at the Appling Public Library, to make sure that locals had insight, so those that had a desire to actively participate in the process could actually see that.

The question of how do we build a bridge between the scoping activities and the Environmental Impact Statement is always a challenge for any of the Federal agencies.

What we tried to do with the Scoping Summary Report, recognizing that this is a unique process that is different than if we were to license a nuclear power plant from the start. From the start, everything is open for a nuclear power plant license; everything is subject to a normal review. For license renewal, we have a Generic Environmental Impact Statement that already addresses about a hundred issues that we already believe to be within the scope of license renewal. We have to deal with those along the way. The issues that we're seeking public engagement on during the scoping is, is there something beyond those hundred, that you being proximate to the site, may be aware of to help inform the Agency as we begin on these?

So, as Andy mentioned, there are number of issues where the Agency was already going to look at that issue in detail. So when you brought that issue to us, it was already within the scope of the environmental review. What we're trying to do is isolate those that are unique -- that we have not looked at -- unique to the area that we were not familiar with, to inform the Agency so we can do a more detailed review.

We did have a number of issues that were of interest to members of the public that we attempted to bridge within at least the Table of Contents on the draft. You have good organization on where these issues can be found. That is our attempt at trying to deal with the public engagement issue.

If you have a specific interest in a specific issue area, at least the Table of Contents will isolate it for you, to help you look narrowly to see the discussion that we provided and the rest of the issues that were raised under the scoping, but I will say that we will take the comment that was raised, "Is there a better way to bridge it?" -- We will consider whether or not we can do a better job with that.

Ms. Sheppard: I'd just like to say with all due respect, to everybody within the NRC, whether you evaluate the generic issues and the way all of those things are handled, to a layperson, many of the unique biological and overall environmental considerations to this particular river system are not generic issues. So, you know, I hear what you're saying about reviewing the Table of Contents, but it is still extremely difficult to see how specific work was done in this area to address specific concerns to us. Thank you.

[Presentation by Ms. Parkhurst]

Ms. Barczak: The question that I have is, how far ahead or in the future did the nuclear reactor for the plant project what future refurbishment activities there would be? All the way through 2034 and 2038, or do you know?

Ms. Parkhurst: Through the license renewal period they have to, you know, consider what they have to do between now and license time just to keep their plant going, and then there's the question of what additionally has to be done to maintain the plant during that additional period --the renewal term, and what then is required that would be considered a major refurbishment.

Ms. Sheppard: Thank you. I was afraid I had missed something when I was reviewing the report because I was trying desperately to find some easy reference and I did see the locations scattered throughout, but just as another observation, if you are actually asking members of the general public to review a document like this, if I can't find it, you know, you're acting on maybe a very unrealistic assumption of what people are capable of doing in reviewing your work.

Ms. Parkhurst: That's a good comment, thank you. I think that we will make sure that we have that referenced.

[Discussion]

Mr. Kugler: Are you indicating basically that your preference would have been to see it organized in such a way that they were listed in the same way as in Part 51, I'm not entirely clear on what you would have liked to have seen.

Ms. Sheppard: Perhaps including Part 51 as part of the document with a reference to refer to that would be useful. If you receive the document like this and believe it's a whole and complete representation of the process and you're trying to find lists that are referred to, you can't find them. That's the problem. So maybe merging the two documents would be a solution.

- Mr. Holland: On Slide 30 you mentioned something about threatened and endangered species. You didn't give any particular categories, so I'd like to talk about two in particular.
- A₁₀ The Short-nosed Sturgeon -- was there any possibility that you had a problem there with the Short-nose?
 - Ms. Parkhurst: I've got a discussion coming up on that exact issue.
- Mr. Holland: How about -- there's another one that appears to be heading toward the threatened or endangered species list, which is the Robust Redhorse Sucker. Has this particular animal showed up in that area?

Ms. Parkhurst: I don't recall that right off. I have an aquatic ecologist who was supposed to be here today who could answer that for you. Unfortunately, he was in Detroit and unable to leave the airport. He's snowbound.

[Presentation by Ms. Parkhurst]

Mr. Shaw: This is Doug Shaw. This is a species that -- It's one that has avoided getting on the Federal endangered list by agreement among several parties, but it is a rare species nonetheless, and we were just curious about that.

Ms. Parkhurst: Thank you. I'm sorry, I don't know the answer to that, but it is something that I will make sure that we look at if we haven't already.

Mr. Cameron: Okay. Thank you. Other questions on the areas that we've covered so far on specifics? Sarah

Ms. Barczak: I had a question about the -- I was going to drop this in my comments, but I'll ask it now while you can answer it. On the heat effects that were looked at, it looked like specifically in regard to the Sturgeon population, although I'm sure it was looked at in other ways, I know that the EPD, Environmental Protection Division, does require river monitoring and quarterly reporting of the temperature, the discharge temperature maximum. There isn't from what I'm aware, what I've been told by the EPD, a maximum discharge temperature required within the permit for Hatch. The temperature listed in the GEIS, the maximum temperature in the mixing box was listed at 94 degrees Fahrenheit in the summer, and 54 degrees Fahrenheit in the winter. I was wondering if the Nuclear Regulatory Commission, though a permit required by the EPD is not required, is going to look at that impact of having a 94 degree Fahrenheit maximum discharge temperature. Is that going to be looked at? I know there's no permit requiring that to be looked at, but –

Ms. Parkhurst: Are you asking in terms of whether NRC is looking at it for the Hatch Plant? The discharge temperature?

Ms. Barczak: Yes. For Hatch specifically.

Mr. Cameron: Can I just ask, to make sure that we all understand what the implications of Sarah's questions are, and Sarah, correct me if I'm wrong on this. If the Category 1 issue was bounded by a certain temperature and the Hatch permit is possibly above that temperature, then would that constitute significant new information that would cause that Category 1 issue to be looked at as a Category 2 issue? Is that what you're asking?

Ms. Barczak: Yes, and that in the water-use section, where it refers to the Georgia EPD permit for Hatch, the temperature monitoring and the quarterly date and even monitoring being done, it doesn't -- that permit doesn't address the maximum discharge temperature. So I'm asking is it possible for the NRC to go above and beyond, knowing that there isn't a discharge temperature issue there, although the permit is not in place.

Mr. Cameron: Okay. Thank you, Sarah.

Mr. Kugler: Okay. Let me try to make sure I understand it. I think what you're asking is that since the permit does not limit the maximum temperature, is there something that the NRC will do since a higher discharge temperature could potentially affect the aquatic life, is that? Okay.

Ms. Barczak: The person I had spoken with at the EPD said that for once-through plants, they generally have a maximum discharge temperature of 90 degrees Fahrenheit. Then he confirmed that there wasn't a maximum discharge temperature for Hatch. Then knowing those two numbers, I wondered if that's something that should be addressed.

Mr. Kugler: Okay. I think I understand the question. I would probably have to speak to our aquatic ecologist to get a full answer, but one point that I'll make is that I believe the reason that there is a limit for the once-through cooling plants, is that the volume of water they are putting back into the river is much greater than the volume of water that Hatch will be putting back into the river. So the effect on river water temperature and on the aquatic life in the river would be much greater. The amount of water that Hatch is putting back into the river is a much smaller percentage of the river flow, and so its effect on the overall temperature in the river is much smaller. I would, without absolutely knowing for sure, but I believe that is probably why the Georgia Department of Natural Resources did not impose a specific limit for them. We will need to talk to our, you know, the specialist to gather more information on that.

Mr. Cameron: That will be considered as a comment to the Draft EIS to be addressed.

Mr. Holland: Just a comment. Just because the permit does not address the issue of water temperature, I don't think that excuses Plant Hatch from breaking the law of the water quality issues. I've heard this before in other areas, other than Plant Hatch, so I think you might need to take another look at it.

Mr. Cameron: Okay. Thank you, Mr. Holland. Any other questions right now before we move on? Okay. Go ahead over there and then we'll come back down here.

Ms. Gres: Dusty Gres. I do want to say that while I don't represent a particular organization, I live three miles west of the plant directly on the river. So my concerns are primarily river quality. I do want to know when you considered the heat impact and when you did your environmental studies, did you make specific considerations of the fact that right now the temperature of the water has been abnormally high because of drought conditions which have been predicted to continue for a considerable period of time? We have noticed a considerable temperature increase in the river itself, and we want to know what impact you looked at in terms of the additional temperature increase, on the fact that the river itself is abnormally warm.

Ms. Parkhurst: I'm sure. First off again, heat shock is not considered a problem for cooling tower plants. What you are putting out there is usually, you know, in a once-through cooling system you've got water coming in, it's going through condensers, it's coming out hotter and it doesn't recycle. Here we've got the recycling effect. I don't know what the exact temperature of the discharge is, but again, it's a Category 1 issue for good reason. One of the things they do consider is the differences like you say, from drought years and so on. It certainly is -- it is something we look at the overall averages and kind of like the lower and upper bounds. That's part of the standard analysis here.

I think maybe we ought to go on because the next thing we're looking at is water use and quality. We'll kind of work right into this next one.

Mr. Cameron: Before we do, let me tap in right here with -- is it Doug?

Mr. Shaw: Thank you. Doug Shaw again. I've got two quick questions, I think they're quick, about the endangered species and the potential impact to fish. I'm looking for clarification. I read that this is a Federal review and a Federal action that you are looking at. Does that mean you only look at Federally-endangered or threatened species, or do you also look at State-tracked species, those species that are tracked by the State Natural Heritage Commission, or DNR.

Ms. Parkhurst: I believe we look at the DNR species. Yes.

Mr. Shaw: The Natural Heritage Commission is part of the DNR.

Ms. Parkhurst: Yes. That's part of the analysis.

[Presentation by Ms. Parkhurst]

Ms. Barczak: On page 6-7, under "Onsite spent fuel", the Commission found: "The expected increase in the volume of spent-fuel from an additional 20 years of operation can be safely accommodated onsite with small environmental impacts through dry or pool storage at all plants if a permanent repository or monitored retrievable storage is not available."

What does that really mean? Is it possible that if a permanent repository or monitored retrievable storage isn't available, that it's fine to continue operations at Hatch with storing waste

onsite? Does this mean that onsite storage of highly radioactive waste at Hatch could permanently remain on the cement storage slab outside as the staff concluded further in that paragraph? How can long-term environmental effects of dry cask storage at Hatch be known at this time when the first three casks, casks that have never been used before at any other nuclear plant, were just loaded this summer? How is it possible to know that the casks will not impact the environment 34 years from now?

Ms. Parkhurst: This is an area that is outside the scope of the license renewal. There is a specific Environmental Impact Study or statement for evaluating that area. This is again, outside our scope of study and I'm wondering if there is?

Mr. Kugler: We do evaluate this one particular issue within the scope, but I believe, Barry, I'm not sure if you have further information. My read on that is that it's not intended to be permanent, but I'd have to go back and look to be certain about that. I think it's saying it's okay to store it until the permanent repository is available, but I would have to go back to confirm that.

Mr. Cameron: We're going to go to Cynthia on that.

Ms. Sochor:. That particular clause has to do with after a plant closes down. That does not have to do with the current operation.

Mr. Kugler: But I think here question was, it's not intended to be permanent, forever. The intent is still that there would be another repository at some point.

Ms. Sochor: Yes. That's true.

Mr. Kugler: Okay.

Mr. Cameron: Okay. Thanks, Cynthia. Deborah.

Ms. Sheppard: I have this funny feeling that I'm getting dumber and dumber as this meeting goes on. So please forgive me if what I'm asking should be obvious and I'm not getting it, but it says nuclear fuel is considered in the rule.

Ms. Parkhurst: The management, it's the waste management end of it.

Ms. Sheppard: So it is considered in the rule?

Ms. Parkhurst: The GEIS looks at the fuel cycle and identifies those areas that are relevant here as Category 1 issues. Everything else is outside of the scope of what we are asked to address, as far as the environmental aspects of reviewing the applicant's Environmental Report and writing an Environmental Impact Statement for license renewal.

Ms. Sheppard: Well, is onsite storage of nuclear wastes in the these untested casks going on at other facilities?

Ms. Parkhurst: Untested?

Ms. Sheppard: Well let's delete that word. Is onsite storage of nuclear waste in casks occurring at other facilities?

Ms. Parkhurst: Yes.

Ms. Sheppard: Then is this issue plant-specific or generic?

Ms. Parkhurst: This is a generic issue. Your specific, but there is a specific and separate evaluation of your onsite dry storage cask facility that's separate from what we're evaluating here.

Ms. Sheppard: I'm afraid your regulatory procedures and comments must run opposite on this particular issue because obviously, the nuclear fuel that is sitting at that plant now is part of the fuel cycle, and your observation that it's a small impact, or nonexistent impact is -- I don't even know a word to use to describe it. It's just an observation from the public.

Ms. Parkhurst: Thank you.

Mr. Kugler: I want to try to take a crack at clarifying this though, because I don't want to leave you with the feeling that we're not trying to answer your question.

I think what Mary Ann was saying is that when they established an independent spent-fuel storage facility out there, the dry cask storage facility, that was reviewed as a separate issue to establish it, okay? It's licensed under Part 72, as opposed to being licensed under Part 50. So that action of establishing a storage facility is separate from license renewal.

Under license renewal we do consider the environmental impacts of onsite storage as part of the fuel cycle. So we are considering that, and that's why the issue is described and discussed in our Environmental Impact Statement. So it is considered -- the piece, I guess, that I would say is not considered is the storage of the fuel, eventually in a permanent repository. That is not part of our review.

A₁₈ Ms. Sheppard: The impact of the storage onsite is considered small?

Mr. Kugler: Yes. That's correct.

A₁₈ Ms. Sheppard: How did you make that assessment?

Mr. Kugler: Well, that assessment was made in the Generic Environmental Impact Statement in more detail. In this Environmental Impact Statement what we did, because it was a Category 1 issue, was look to see if there was any new and significant information related to Hatch and its storage of fuel. Since we did not find any, we accepted the conclusions in the Generic Environmental Impact Statement for Hatch.

Ms. Sheppard: Did you evaluate such things as hurricane conditions, flooding, tornadoes, weather-related elements and those kinds of things?

Mr. Kugler: I would have to go back to the GEIS to tell you exactly everything that was considered, but I'm sure weather was an issue that they considered in evaluating the design of the facility itself. The actual storage facility has to be designed to deal with design-basis conditions including weather at the site. That would also include seismic and things of that nature.

Ms. Sheppard: I have another question. How exactly do you assess the cost for the storage of the spent nuclear fuel onsite and the unknowns regarding the cost of nuclear fuel storage?

Mr. Kugler: If you're talking about the cost to the utility to store it?

Ms. Sheppard: Yes. How do you assess that?

Mr. Kugler: We do not assess that.

Ms. Sheppard: Then how do make a comparison about the alternative sources of energy including conservation that are sufficient? You appear to have under-evaluated without having a mechanism to identify and evaluate the cost of what you do. It appears from your presentation, that you are not evaluating the full cost of continuing the Hatch license and extending it.

Mr. Kugler: That issue would be evaluated by the licensee. Really for us, the cost is not an issue. What we are evaluating are the environmental impacts, and determining whether the environmental impacts of license renewal are significant, or what level they reach, what the environmental impacts of the alternatives would be, and making a call on whether the environmental impacts of the alternatives are greater or lesser than the alternative of license renewal.

In terms of the cost, that call really comes down to the utility. If they find that it is more expensive to run this plant than it would be to implement one of the alternatives, then I would assume that they would pursue the alternatives as being more cost-effective, but that is really not an issue that we are concerned with.

It's sort of like a driver's license in a sense. If we renew the license, we are giving them a license to operate. They can decide not to if they find it's not cost-effective. We are not requiring them to run for another 20 years.

[Discussion]

Ms. Sheppard: The argument falls apart because of the cost of investing in nuclear waste. You are speculating on one side about a situation which is known. You do know how to increase efficiency in energy. You do now have information. You have a lot of information about Hatch, and as far as I know, the real issues are the cost of that. So we've got one alternative that we

really do know how to accomplish, but it is perhaps costly. We have another alternative that's continuing to operate nuclear facilities without an end-waste disposal and we don't know the cost of that. You all are telling us that is the preferred alternative, and I think you're telling me that you don't know the cost associated with that.

Mr. Kugler: Well, I think we do know the cost of storing fuel onsite. I think the licensee could clearly indicate how much it costs them to store onsite, but I understand your point. I think what you're saying is, did we consider the cost associated with onsite storage of this fuel for some period of time which is not specified entirely? In considering that, it might become prohibitive.

[Presentation by Mr. Snodderly]

Mr. Holland: Mike, who does the existing analysis, the one that said that \$500,000 it would be unacceptable to look at beyond that? Who does this analysis?

Mr. SNODDERLY: It's a combination. The regulatory analysis guidelines, and I can give you -- Excuse me. I'll get the reference. This is the Regulatory Analysis Technical Evaluation Handbook; this is NUREG/BR-0184. This is what we, the staff use. Two inputs you use from that are the estimated core damage frequency and averted person REM and frequency.

Now those things are determined by, in our case for Plant Hatch, we used the Plant Hatch Individual Plant Examination and their updated Probabilistic Safety Assessment. We also have done Probabilistic Safety Assessments for plants similar to Plant Hatch, and we compare our results with theirs to make sure we are in the same ballpark; that we didn't miss anything, or they didn't miss anything. So it's a combination of those Probabilistic Safety Assessments feeding in, to make the calculation to determine that \$500,000 number.

Mr. Holland: Okay. I find the idea, I mean, just a mere -- that someone could believe that human lives aren't worth more than \$500,000 is totally unacceptable. It's beyond belief. I can't reason it. I can't believe it. My God, some doctor bills come to almost that much. God, can you all go back and do better than this? I'm just going to -- I can't believe this is the way people think. You've got to do better than this.

Mr. SNODDERLY: I appreciate that, Mr. Holland. Let me see if I can try to give you a greater perspective. I mean, give the perspective of the Commission and how we have tried to relate the risks associated with severe accidents to those that we take in our everyday lives.

What they have tried to do is, through the Severe Accident Policy Statement, they tried to assure that -- the goal is that it be a small fraction, one-tenth of one percent of those risks associated with early fatalities and latent cancers. The modeling that we've done has shown that it is a small fraction at .1 percent.

Mr. Holland: A small fraction. I used to work for an organization that billed the government at the end of every month. To ensure that we got our payment within 10 days, do you know what

we put on there? We will give you back one-tenth of one percent. Do you know what? That guaranteed us getting our money.

Mr. Cameron: Mr. Holland, we're not catching you on the record here. I think that might hurt your point. Are there any other questions on this before we go to the final, or the preliminary conclusion? Yes, Deborah.

Ms. Sheppard: This is just a general question and you all might not be the right people, but I believe I read somewhere that the Southern Company is spending \$14 million to proceed with this re-licensing. If that is correct, can anybody answer that?

Mr. Cameron: I think that, I guess I would – off-line if the Southern Company wants to talk to you about that information, they can do that, but I don't –

Ms. Sheppard: Okay. I was just curious when your Department quoted that number.

[Presentation by Mr. Kugler]

Ms. Sheppard: Again, I want to make sure I understand the roles that each of you are playing. Everyone but Ms. Parkhurst is a direct employee of the Nuclear Regulatory Commission?

Mr. Kugler: That's correct.

Ms. Sheppard: That's correct. In the case of Ms. Parkhurst, your firm was contracted by the NRC to prepare what portion of this statement?

Ms. Parkhurst: Assist them with the preparation. We were contracted to assist them with the preparation of this document; assist them with the review of the application of the Environmental Report that SNC provided, and assist them with writing the Draft Environmental Impact Statement.

Ms. Sheppard: Okay, so your part in it is the primary outside expertise that has gone into the project?

Ms. Parkhurst: That's correct.

Ms. Sheppard: I would love to know if you would share with us just a couple of your other clients, and I'd also love to know how many people participated in this from your firm and what direct expertise those people have in Southeast watershed hydrology, biology issues.

Ms. Parkhurst: I'm not sure what is appropriate to respond on that. I will mention that everyone from my organization and from NRC who is involved in writing the document is listed in one of the appendices, along with our specialties. We've got a lot of expertise from a lot of widespread areas. That's one reason that the NRC came to us to look into this area.

Mr. Cameron: Does the expertise and all listed in the –

Ms. Parkhurst: There isn't a -- the specific areas that they addressed or evaluated are in one of the appendices along with our names, our organizations, and the areas specifically, that we were working on in the document is in one of the appendices, I think it's B, Appendix B in the document.

Ms. Sheppard: I'm sure I can find that, but I'm just very curious if you could share with us your knowledge or what specific expertise your team had on Southeastern United States aquatic systems and hydrology and biology.

Mr. Cameron: May I ask you, whatever you know, I think would be appropriate for you to share on that particular issue.

Ms. Parkhurst: I'd rather have -- Barry, please.

Mr. Cameron: Barry.

Mr. Zalcman: Let me try to respond to this. The Agency has a collection of technical specialists on this task and we also contract, and Mary Ann Parkhurst is a representative of Pacific Northwest National Laboratory. We actually have a suite of national laboratories that work with us. It's fundamentally important when we begin the audit process that we bring technical experts that are actually considered experts in the field, but we actually come to the site area and we coordinate and actually have dialogue with those that are specialists in the region, including State representatives on the water side, State and local representatives on the socioeconomic issues so that we have technical expertise. We're talking typically, a national lab employee that at least has a bachelor's degree. Moreover, they can have master's degrees. Some of them have PhD's. The group that we have are typically seasoned individuals that have broad expertise for an extended period of time in the environmental regions. Are they specifically working on a watershed in Hatch vicinity? Absolutely not. Are they technical experts in their field? Typically they are, and if they are not experts they are overseen by experts in the field, but it's with the coordination and the dialogue that we maintain through audit, through this review with the State and local organizations that help us round out what our understanding is of the problems and of the challenges in this area. I hope that explains a little bit. If you'd like, you can provide your CV and John is here if you'd like to your background. You'd have to demonstrate the background that these individuals have to talk to these issues.

Ms. Parkhurst: I can at least mention that. I have an undergraduate degree in chemistry, a Master's in ecology, and a master's in radiological science with many years of project management.

Ms. Sheppard: From what university?

Ms. Parkhurst: Is there a basis for that question?

Ms. Sheppard: Well, yes there is. I mean, you all come from the Pacific Northwest and that's about as far away from this plant as you can get. It's just a common question.

Ms. Parkhurst: It's not necessarily that we're all from the northwest even though that's the organization.

Ms. Sheppard: Yes. I understand that. You could have a University of Georgia PhD on your staff.

Ms. Parkhurst: One of our ecologists that supervises the rest is a Duke University graduate, PhD graduate in ecology. Again, we try to work in those that have specific area involvement as well, and have done this consistently.

Ms. Sheppard: Okay.

Mr. Cameron: Do you have one more question?

Ms. Sheppard: I'm sorry. I'm not trying to belabor this, but the other clients, if you could just share with us three or four or maybe five of your other clients that would be useful.

Mr. Jaksch: Let me talk to the socioeconomics. I have a PhD and a master's in environmental economics from Oregon State University. I spent about 13 years working for the U.S. EPA in Washington, D.C., most of which my focus was down in this area. So that kind of gives you an idea of some of the capabilities that we have. I'm also with the lab out in the Pacific Northwest.

Ms. Sheppard: Okay. Thank you for that.

Mr. Cameron: Just put your name on the record for us too.

Mr. Jaksch: I'm John Jaksch.

Mr. Cameron: We're going to go to Cynthia.

Ms. Sochor: My name is Cynthia Sochor and I have a BS in mathematics and a BA in political science from the College of Charleston in Charleston, South Carolina, as well as an environmental engineering degree from Clemson University in South Carolina.

Mr. Cameron: Okay. I think we need to get on to the statements. Do you want to state any of your work that has been done on similar areas?

Ms. Parkhurst: Are we talking clients here, or are we talking projects like?

Mr. Cameron: Well, I think that the most important part of it based on what Deborah was saying, was projects that were similar analysis.

Ms. Parkhurst: Similar?

Ms. Sheppard: I'm just trying to understand who your firm primarily worked for.

Ms. Parkhurst: Mostly government agencies. We do private work as well.

Ms. Sheppard: Do you work for any utilities per se?

Ms. Parkhurst: Certainly not in -- I see Barry getting up and I would want him to address that. I shouldn't -

Mr. Cameron: We need to stop this. But this is an important point. Barry could you just address the conflict of interest issue? I think that's what Deborah is getting at, and then let's move on.

Mr. Zalcman: The Agency is very careful in assuring that we do not have a situation where an individual employee would work for a utility on the same type of issue that is actually associated with developing the final information that the Agency would be using. So the reason that we use national laboratories as opposed to private consulting firms that actually do consultations for the industry is to remove any appearance of conflict. Wherever we identify an appearance of conflict we terminate that activity. So we're very careful; very judicious in who does or does not work for or with us.

Mr. Cameron: All right. Thanks, Barry. Deborah, I know you have most of the information you needed there, but right now I'd like to go to the people who have -- we've really appreciated the comments and questions that we've heard already, and I think it provides a lot of useful food for thought at least for us. I'd like to go to the people who wanted to make a more formal statement. And I think it would be appropriate to go to the Southern Company -- they initiated the application for this. So I'm going to ask Mr. Lewis Sumner, who is the vice-president for the Hatch Nuclear Project to start us off. Mr. Sumner, do you want to come down here? Why don't you?

Mr. Sumner: Just a little bit about me before I get started. When the question was asked, have you ever lived around a nuclear power plant and the answer was yes, I was at Plant Hatch for 22 years and I raised a family in this local area here, so I'm as concerned about the effects that Plant Hatch has on the environment as anybody, because it directly affects not only my family when they were here, but also I'm concerned about the long-term effects on my family from what might have happened as long as they were down here in the local area.

I started here in Plant Hatch back in 1975 out of the Georgia Institute of Technology with a Master's degree in nuclear engineering. I started as an entry-level engineer and my last position before I left was the General Manager of the plant. I have held several positions there. So I've had a chance to see the plant from an entry-level position all the way up to managing it before I left.

A30

My comments are like this. Number one, I want to thank the NRC for what I believe is a very thorough review. It looks like it has been very comprehensive. I think some of the conclusions that they came to are some of the same conclusions that we came to when we did our review of the environmental effects of Plant Hatch. We wouldn't be doing this if we didn't feel like as a company it was the right thing to do, and I wouldn't be promoting it if I didn't feel like personally it was the right thing to do. Considering all the contributions that Plant Hatch makes not only to the local area, but to the State and local economy and some other security issues I'll mention in the end.

We have been working on this process since around December of '96, so we've been at this for a few years because there is a tremendous amount of work that goes into preparing not only just the environmental review, but the other parts of the license renewal process that you don't see here today. I do believe that the report, the summary of which you've heard today, demonstrates the same conclusions we reached. The impact of renewal is small and certainly acceptable for the renewal period.

The people that operate and maintain Plant Hatch do live in the local area, so the environment that they are affecting is also the environment that they live in. So they try to be good environmental stewards of the very areas that they both live in and recreate in, and their families live in as well.

We are committed to being a good neighbor while we are trying to carry out our mission of generating electrical power for this area of the country. We think we make a major contribution to the local and State economy, as well as to the quality of life in this area by supplying electrical power to power the things that we have become accustomed to. You know, the lights in this room that extend our usefulness and our ability to get things done to the computers we use here to connect ourselves to the outside world and make us more efficient, as well as simple things such as the heating and cooling that make cold nights bearable and very hot days bearable also. So we think we have a mission that does promote, you know, a quality of life improvement here.

I want to thank the neighbors that have continued to support us. We certainly do have an impact on the local economy, on the environment, and on the local area as far as organizations and things that our people not only that work at the plant participate in, but also work toward to help make the local community better.

Like I said earlier, we are continuing to work hard to be good environmental stewards and be a significant contributor to the local area. I personally also believe that we promote the security of reliable electrical power in this country by being an alternative means of generating electricity. Some others were mentioned up there earlier today, and I think if you read in the newspaper about some of the issues that are going on in other states about the reliability of alternative means of generating electricity, you don't see those issues related to our particular form of generating power. So I think we are a viable and valuable contributor to the energy security mix of the United States.

I believe that this is the right thing to do for us. I think it's the right thing to do for the local area. I appreciate the review that the NRC has done and I believe that we will demonstrate as time goes on that we are good environmental stewards of our facility, of the environment, and this is the right thing to do for us. Thank you.

Mr. Cameron: Okay. Thank you, Mr. Sumner.

We have two local government officials here, I believe that we'd like to hear from, and then I'd like to go to Sarah Barczak from Georgians For Clean Energy, and then we have one other speaker. Steve Rigdon, from the City of Baxley. I believe the Mayor?

Mr. Rigdon: Yes.

Mr. Cameron: Mayor Rigdon, okay.

Mr. Rigdon: My name is Steve Rigdon. I am the Mayor of Baxley. I was in this room in May when we had one of the hearings, and at that time I spoke in favor of renewing the licenses.

As I said at that time, I was not a technical person. I didn't understand some of the technical terminology that was used that day, nor could I speak in a lot of the technical terms, but I've lived around Plant Hatch ever since it started. I've raised my family here. I've got a lot of friends that work there.

I have the utmost respect for the personnel that work there. They have the highest integrity and are very concerned about environmental issues and all the issues that were discussed here today, they are very concerned with.

I have followed their safety record on a local level and I know that they have a lot of checks and balances that they have to check every day, and I feel comfortable with those.

After having seen the review today and having read some of it myself, I am more comfortable today than even in May, that the renewing of the license process is the thing to do. I very much appreciate the work that went into it. I had no idea all of the research, the verification, and all that went into the process for the re-licensing.

I am comfortable with the level of work that was done and I'm here to say that Plant Hatch has been good for our community. They are good neighbors. They are very responsive, and I continue my support of Plant Hatch, as well as recommending to the NRC that they continue with the re-licensing process. Thank you.

Mr. Cameron: Okay. Thank you, Mayor Rigdon.

Let's go to Mr. Jeff Baxley, of the City of Baxley.

Mr. Baxley: Thank you, Chip. I'm Jeff Baxley. I'm the City Manager of the City of Baxley.

A35

I probably should have come down with our mayor and stood behind him and just nodded as most good city managers probably should do, because what I have to say basically echoes what he said. I too was here last May to lend my support for this re-licensing effort, and I'm here again today for that same reason.

I would like to commend the NRC for the in-depth process in looking into this re-licensing issue with the environmental impact. As I mentioned in May, I certainly trust the rules and regulations the NRC set forth, but I guess more importantly, because I do live in Appling County and in Baxley, and was born and raised there and have lived there since 1956, I have all the confidence in the world that the people that work at Plant Hatch will be sure that these rules are implemented, and provide a safe place for my family as well as their families.

I think there are about 800 employees at Plant Hatch. About 300 of those live in Baxley and Appling County. I probably know, I would say 80 percent of those employees on a first-name basis. I can assure you that they would not do anything to jeopardize their family or their friends, or certainly the environment. Many of them enjoy -- I heard others comment on some of their concerns and I share those concerns. I share them for the same reasons you do. I don't live on the river. I live about 10 miles from it, but I enjoy going to it almost every weekend to hunt and fish, and I would not be in favor or anything that would damage that. It is a wonderful resource and it's a place that I thoroughly enjoy. I want my kids and my grandkids to be able to enjoy that resource.

I do stand before you today in support of the re-licensing of Plant Hatch. The economic reasons as Mr. Sumner has already mentioned are obvious to us, but I think it is important. I am very pleased with the findings of NRC in their report today, and the fact that the option for re-licensing is considered reasonable. Thank you.

Mr. Cameron: Okay. Thank you, Mr. Baxley.

Let's now go to Sarah Barczak from Georgians For Clean Energy.

Ms. Barczak: Hello everybody. Can everybody hear me? My name is Sara Barczak. I have been working with Georgians for Clean Energy for about a year. We are a nonprofit conservation and energy consumer organization that has been working to promote safe and environmentally sound energy policies for Georgia, for almost two decades. My primary expertise is in biology, and I work in our Savannah field office.

My organization has submitted written comments and presented oral comments at public meetings, etcetera, since the Hatch re-licensing process began. While I myself was not here in May, I did help put together the written comments that we submitted in June. I did read through all of the oral comments from the two meetings that were held back in May and I was very amazed, and struck may be the best word, by the fact that very few people actually spoke about the scope of what the NRC had requested, namely, the environmental impacts of Plant Hatch. From those notes and also from what was said today, Mr. Cameron, who is was Facilitator back in May and now again today, had stressed that the purpose of the NRC being here is to

gain insights on the environmental issues related to the Hatch license renewal application. As I said, almost everyone spoke about how wonderful nuclear plant Hatch is for the economy and how Hatch has been such a good neighbor because it provides such a large percentage of Appling County's tax base, 68 percent in 1998 alone, and they don't know where they'd be without Plant Hatch. Yet economic studies in the Savannah River site region have shown that it isn't healthy for a region's economy to have a nuclear industry contributor that provides even as high as 4 percent of the local tax base. Such reliance is not healthy.

My organization is very concerned that the community is focusing almost entirely on perceived economic benefits and is overlooking the environmental impacts, along with the long-term economic growth implications, including the possibility that there could be a meltdown and catastrophic consequences to the local resources here.

I was struck by the fact that the sheriff of Appling County didn't talk about emergency planning concerns, security issues, and terrorists threats, but rather on how great the plant was or is.

People often spend a lot of time explaining where they are from which is very important. The highest vulnerability from the plant is within this local area. I am from Savannah, and we are also vulnerable in terms of an accident. I do care about what happens here. I am concerned about this region, its people and land, and I do lay awake at night thinking about members that we have in this region and all of you. I want to stress that it isn't a job so to speak, it is a genuine concern that I have for you and this region.

- Georgians for Clean Energy is here to tell the NRC that this nuclear plant should not be re-licensed for a variety of reasons, but as I said earlier, we are to speak about the environmental impacts of the Generic Environmental Impact Statement, Supplement 4, so I will speak about those.
- We would like to state publicly that Georgians for Clean Energy does not believe that our written comments or our oral comments that we presented, and other organizations presented have really been looked at.
- I probably didn't make myself clear in some of my questions, that it is hard to look at this GEIS and figure out, you know, was my concern addressed, or was the Altamaha Riverkeepers concern addressed? What were their concerns? What were other people writing in about? I didn't have the ability to find that very easily, and yes, now we know we can go through the Public Document Room, but that is a feat in itself. I have done that, but it's not easy.
- We sent additional written comments to supplement our previous oral statements and thought that those efforts which were very time-consuming were for naught. All statements submitted either in written form or orally should have been included in the Draft EIS as I had suggested earlier. Valid and strong statements of environmental concern were made and were supported by a multitude of documents that the NRC needs to pay attention to, and we are disappointed that the first team of reviewers did not.

- So as a request to the panel that we have before us, we request that this panel reevaluate all of the oral and written comments concerning environmental issues that were previously presented to the NRC during the Environmental Impact Statement process.
- Specifically, we take issue with Appendix D, "Organizations Contacted." Not one non-governmental, environmental, or conservation organization was contacted. It appears that in this Environmental Impact Statement, effort was put forth to contact Realtors, but not one group 17 that focused on the environment, health issues, or conservation issues. The State of Georgia agencies that were contacted do not have expertise in radiation and its effect on species as a whole, and the ecology of the region.

The drought issue was commented on earlier as well, but I'd like to highlight this. Everyone here knows that we've been experiencing a very tenacious drought, and that water issues are in the forefront of many people's minds including our Governor. The Altamaha River is very important as we all know, to this region for the wildlife, commercial fishermen, recreational enthusiasts, and more. Plant Hatch has to rely on water resources too, and it relies on them to an alarming degree.

According to the licensee, Hatch is permitted to withdraw a monthly average of 72 million gallons of water per day, with a maximum 24-hour rate of up to 104 million gallons per day from the Altamaha. Hatch's average is about 57 million gallons per day, with 25 million gallons returned to the river. So overall, on average Hatch consumes about 33 million gallons of water per day. That is impacting the river flow. That is a problem under severe drought conditions and could alter river habitat in unexpected ways.

Furthermore, we should not forget, and I hold this dear to my heart because of where I'm living in Savannah, we should not forget that Hatch is permitted to use a monthly average of 1.1 million gallons of water per day from the Floridian aquifer. We have our own issues with that in Savannah, with the dredging and everything else. That's what they are permitted to use. Their average is less than that, but that is what they are permitted to use.

- When this plant was licensed, the severe concerns over our water resources did not exist. We weren't in drought conditions. We are now. These permits and conditions need to be reevaluated based on current laws and regulations. If this were a new nuclear plant that they were trying to license, they would need to comply with all current State and Federal water usage and pollution-control standards. This license application renewal should be viewed in the same light. I know it's not, but that's what we feel that it should be. Yet according to this Draft GEIS, license renewal will not have an adverse impact on the Altamaha ecosystem. We challenge that determination. I am hurrying here, so bear with me.
- A48 Since Hatch was built, the Southeast has entered a period where we have had more severe droughts. We do not believe that the NRC has conducted a thorough and site-specific investigation of this issue. At the very least, the NRC needs to more accurately determine how Hatch impacts the region during extended drought periods. A consumptive loss of 3.1 percent during minimum discharge periods is not insignificant and certainly needs to be researched

further. For instance, how does the NRC know whether or not the drought and the strain that Hatch places upon the river's flow during a drought, doesn't increase the stress on the already endangered Short-nosed Sturgeon to a level that the species can no longer handle?

Many of the reports that were referenced in the Short-nosed Sturgeon section of this Draft GEIS, were based on studies that were done in the 1970's and 1980's. So conditions have changed and I think they need to be reevaluated.

Additionally, the GEIS didn't address concerns around discharge temperatures at the point it enters the river or within the mixing box. I did mention this earlier in a question, but I'll rephrase it. A maximum discharge temperature in the mixing box, which is reported to the EPD quarterly, was 94 degrees Fahrenheit in the summer. Does that effect the river more so during periods of drought, in which fish and plants, etcetera, are already stressed? What is the temperature at the discharge pipe on a daily basis? If that is not being measured, why not? These studies need to be done before a license extension can be granted.

Additionally, why hasn't the EIS addressed additional water quality concerns regarding the release of radioactive contaminants to the environment? We will identify further water quality concerns in our written comments, so look in the appendix next time and maybe you can read them.

- Though many people at the first hearing seemed convinced that nuclear power does not release emissions into the environment, I would like to point out that radioactive water vapor is lost to the atmosphere every day. It is a fact of nuclear power plant operation. In Hatch's case, as I said earlier, an average of 33 million of gallons of water per day is lost, primarily in the form of radioactive water and radioactive water vapor. It is unfair and misleading to the communities to be told otherwise.
- Through the water cycle, the contaminated vapor is often deposited in the form of precipitation. This precipitation then makes its way into our rivers and onto the grass that our cows eat, and through the ingestion pathways, eventually to the milk in our coffee. State EPD Reports show that measurable levels of man-made radioactive contaminants are found in vegetation samples, and there are a number of rare and threatened species that are sampled and do show these levels.

How can the NRC determine that a license extension of Plant Hatch will not add to the stress of the many rare and threatened plant species in this area? Especially when many plants species are already undergoing stress under drought conditions, along with continuous contamination from the Hatch facility. It is an established scientific fact, that radioactive contaminants bioaccumulate up the food chain. There are of course, regulatory limits, but let's remember that these limits were not set with the health effects of low-level radiation exposure in mind. The limits are generally set to allow industry to operate. That's just kind of the way it is. It's not any comment on anyone in this room.

Studies on the effects of tritium, which is essentially radioactive hydrogen, a primarily man-made radioactive element produced during nuclear reactor operation, have found that it easily crosses the placenta and may have the greatest impact on the developing fetus. As water, tritium can easily enter our cells. Yet our drinking water standards base the tritium limits on the average-sized man. Cesium-137, which is also a man-made radioactive contaminant and gamma emitter, has been measured in fish, shrimp, and crab samples as far down as Wolf Island.

As Mary Ann said earlier, when she referred to seafood and said -- I'm paraphrasing here -- seafood as in shrimp and things like that, that really struck me that there is a bi-annual report that the EPD does, where they collect shrimp, and mussels and fish, and all kinds of things and it's in there. It's in the meat of the fish. Some of it's in the bones of the fish and they are not at levels that should necessarily send up a red flag, but they are there and they are very far away.

Cesium-137 mimics potassium and collects in the muscles and Strontium-90 mimics calcium and collects in our bones. It is a fact that the decay products coming off of nuclear plants, whether it is through the stack or directly into the water, generates Cesium-137 and Strontium-90. The effects for instance, of Strontium-90 leads to many types of bone cancers. The elderly, children, and people with immune disorders are most susceptible to the effects of ionizing radiation.

At the meetings last May, people spoke about how the fish still taste good, maybe even better.

Radioactive contamination is the most insidious form of pollution perhaps because it is the most sly. We can't see it, taste it, or smell it, so it's hard for people, including our regulatory agencies, including myself to understand it. The fish won't taste different. They'll just have stuff in them that may be affecting them and their offspring just as it may eventually affect you and yours.

Now I'm going to wrap up. Back to the economics that people love to talk about. Plant Hatch its alongside the Altamaha River, Georgia's largest waterway, near prime agricultural areas and is two counties upstream from Georgia's beautiful Golden Isles. The interests of South Georgia's communities and the thousands of nature-based jobs that support at least one-fifth of our region's economy are impacted by the NRC's decision to re-license this aging nuclear plant. Georgians For Clean Energy demands that the NRC conduct proper, site-specific evaluations of the actual 24 impacts of Plant Hatch on this region. Past plant operations, accidents, spills, worker contaminations, and routine releases have to be considered which are already listed on the NRC's own docket and have obviously gone unread.

I'm not going to go through this list, but I had a brief list of Licensee Event Reports that happened the last week of August to the first week of September. Maybe I'll just submit this to Chip, but we had one on the 31st, the 4th, the 8th, the 11th, the 20th, the 25th, the 27th, and the 29th. Those aren't all that's required to be reported, and they are not necessarily all serious events, but some of them were and they need to be looked at.

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A57 Simply stated, the plant is aging as we are all aging, and there's no excuse for an unauthorized person to enter the plant. That was one of the things that had happened. The NRC needs to read the entire docket, which wouldn't be very fun at all. Every violation, every LER, everything going back to start-up. No one would allow this plant to be re-licensed if they sat down and read the entire docket.

A58 Please include in the EIS review, new problems or incidences and indicators of problems at Hatch that have developed in the past few months. We strongly believe, given the extensive documentation that we have collected, that if a proper analysis were done, the NRC would have no other choice but to deny Plant Hatch's license renewal application.

If this license renewal application goes through, there will be many heavy stones left unturned. Unfortunately, the heath of this community and surrounding regions is what we stand to lose and we can't afford that, nor do we accept that. Thank you.

Mr. Cameron: Okay. Thank you, Sarah. If you have a copy of that we could attach that to the record. All right. Our last speaker tonight, is it Dusty Gres? All right, Dusty.

Ms. Gres: My name is Dusty Gres. I am the director of the Regional Library System, which covers the areas of Toombs, Tattnall, and Montgomery Counties, all of which border the Altamaha River. I also live on the Altamaha River, and since I don't see any of my neighbors here, I live closer to the plant than anybody in this room. I live three miles west on the Altamaha upstream.

- I appreciate all of the information that is in the draft document. I can tell you that after working in the government documents business for 25 years, trying to help the public read and understand city, county, State, and Federal documents, this one ain't bad.
- A60 I would like to see more in the appendix in the initial draft document, and I do point out to the NRC the efficacy of indexing, which you don't do yet. As a draft document it contains a great deal of information.
- I am gravely concerned about the environmental impact, and I am gravely concerned about the fact that many of the tests were done earlier and have not taken into account certain environmental issues, particularly the drought.

When you look for instance, at the temperature of the water as it's going in, I happen to know what the temperature of the water was when it was coming out and we are not dealing with the fact that the water that's coming in has risen in temperature a great deal. Given the fact that -- Do you want to say that I am impacted because of the economic issues? Yes, because my patrons live in this area, but I don't get tax money from the plant.

I will say that I am in favor of the renewal. I am in favor of the renewal because I've lived next to a coal-fired plant. I've had a library next to a railroad track where coal trucks went by and I know that there are environmental impact issues that are greater in different kinds of plants. So I

support this. I support it because I canoe down that river, I swim in that river, and I eat the fish out of that river, but I have seen that there is not a great deal of environmental impact right now and I can name at least 30 different plants and animals that are either rare or close the endangered list, that I personally have identified on that property, that are growing. So I continue to support it in those terms, with the caveat that I believe that better testing needs to be done.

I also formally request the NRC, that since the counties that I represent in my public library are more counties than just Appling, that all documents be deposited in my library as well, because I have more of an impact than Appling County does since I have more counties that are within that service area.

Transcript of the Evening Public Meeting on December 12, 2000, in Vidalia, Georgia

[Introduction by Mr. Cameron] [Presentation by Ms. Carpenter] [Presentation by Mr. Burton] [Presentation by Mr. Kugler] [Presentation by Ms. Parkhurst]

A65 Ms. Ray: Thank you, Chip. What do you mean by refurbishment?

Mr. Kugler: Okay. In this context, what we're talking about is activities beyond just the normal ongoing refurbishment activities that are going on in a plant every day. In other words, these plants are always working on their equipment, upgrading it, and maintaining it, but that's not what we're talking about here. We're talking about activities that are above and beyond the normal activities that are done every day at the plant.

An example might be something like the replacement of a steam generator in a pressurized water reactor. Something that could have environmental impacts outside the plant. So it's not just the day-to-day type work that's done. I mean, they have re-fueling outages every 18 months at each of these units and there's always activities going on in those outages. We're not including that. Does that make sense?

Ms. Ray: Didn't you say that was an issue that wasn't applicable to Plant Hatch, so you didn't look at it?

Mr. Kugler: In other words, what they indicated in their application is that they have no plans for major refurbishment activities in the license renewal period. They are not planning to do anything beyond the normal activities that go on. Does that make sense?

Ms. Ray: Yes. It makes sense. It's just odd.

Mr. Cameron: Okay. Janisse, do you have any other questions on this at this point?

Ms. Ray: This is different. Human Health is one of the issues that you looked at. Right? I didn't see it up here, but I do see it here. I want to know what you looked at to determine whatever you found out about human health.

[Presentation by Ms. Parkhurst]

Ms. Ray: The question is a little more generic. That is the use of your scale for judging. You say the impacts are small, but I haven't seen anything come up that says that such and such a percent falls under small, and such and such a percent falls under large. So all we can do is take your word that in a generic sense the impacts are small. Do you see what I'm saying? We have no real data.

Ms. Parkhurst: Well, let me just -- there's just one thing that came out of the most recent study, the 1999 Monitoring Report on doses from the plant. What they determined was that the estimated whole body doses to the most limiting member of the public was about 0.064 millirem per year based upon vegetation, fish, and sediment. Now that 0.064 millirem per year, if you want a comparison, the normal radiation in our environment from background radiation, runs 300-360 millirem per year for most areas of the country. That equates to about one millirem a day. The amount they calculated here on a yearly basis from vegetation, fish, and sediment was about 0.064 millirem per year.

The amount from gaseous and liquid effluent releases is about 0.074 millirem per year. Again, relate that to one millirem a day that we're getting from natural sources.

Ms. Ray: I'm familiar with Plant Hatch and I understand the dosage -- that the radiation would follow. I understand that dosage information. However, I will say that there have been no epidemiological studies at all about what the health effects within the population surrounding the plant -- within 10 miles or 15 miles -- there have been none. I know that it's not required by the Nuclear Regulatory Commission, but I live here.

There's one report where 12 reactors were closed between '87 and '98, and five of those were 70 miles from another nuclear plant. The infant mortality rates in those places fell 15-20 percent. I'm going to give you one other statistic. Calvert Cliffs, since 1990 the death rate of older children has risen and cancer deaths have tripled.

A70 So all I'm saying is that I know the statistics in terms of something measuring dosage, but we have no real information about health effects in our community. I know you're not required to do that and I'll forever be appalled at that.

Mr. Kugler: Well, there's another report that -

Ms. Parkhurst: I don't know. Do we want to further discuss this issue at this moment? I am aware of the report -- of the documents you're talking about. One of the problems with epidemiological studies in general and specifically with something like radiation from plants, or

radioactivity from plants and so on, is it's very difficult. It's easy to make associations, correlations with one thing to another, whether it's positive or negative or whatever. It's very difficult to get into cause and effect. This is one of the problems that makes it especially difficult to try to do this on a plant-specific basis. Especially when you don't have enough numbers that would give you statistical quantities to work with, enough quantities. Now, I think really, that's all I've got to say on it right now. Andy, did you want to add anything at this point? Okay.

Mr. Cameron: All right. Janisse, do you have a follow-up?

Ms. Ray: It's not a question, but one idea is to look at cancer rates in a 10-mile radius, and then look at 10 miles somewhere else in the coastal plains of Georgia where there is no nuclear plant. Look at cancer rates before the nuclear plant came and then look at them now. Look at them among children, older people, and not just cancer, but other conditions.

Ms. Parkhurst: Those are good statistical strategies in doing this. Again, one of the difficulties is there is so much that has changed in our environments over a lot of these same years that it's very difficult to tie them into any specific thing. Also, with people moving in and out it's a very difficult process and an expensive one as well -- difficult to do like this, but I appreciate your comment and I understand your concern.

Mr. Cameron: Okay. Anybody else in the audience have questions on radiological impacts while we're here? Mary Ann also went through water quantity, water quality, endangered species, and all of those specific types of impacts. I guess I would ask if there is anyone who has any questions on those before she goes on? Janisse, anything?

Ms. Ray: Does she want to reply to what small means?

Mr. Cameron: Okay. Can you talk a little bit about the use of the term small? I think you might have defined that, but maybe you can explain it a little bit more.

Ms. Parkhurst: I'll mention it again. This is the terminology from the GEIS. Small means the affects are not detectible or are too small to destabilize or noticeably alter any important attributes of the resource. Okay?

A72 Mr. Person: My name is Jeff Person. I was just wondering what the actual scale was.

Ms. Parkhurst: The moderate impact is one that is sufficient to alter noticeably, but not destabilize important attributes of a resource. A large impact has an effect that is clearly noticeable and is sufficient to destabilize important attributes of a resource.

Mr. Cameron: Mary Ann, I don't know if you can do this, but is there a hypothetical example that you could use that would tell people more graphically perhaps, what a small impact versus a moderate impact, versus a large impact would be?

Ms. Parkhurst: That sounds like a question for the NRC rather than me specifically to answer. It's their definition that we're using as the scale. Is there somebody -- would you care to answer?

Mr. Cameron: Andy, do you know where I'm trying to go with this? I don't know if you could do it, but it might help people understand the difference between small, moderate, and large.

Mr. Kugler: I'm not sure if I can do it off the cuff either, but I'll give it a shot.

Small is probably the easiest because we deal with a lot of those. An example would probably one that Mary Ann has discussed, which is the effects on the fish due entrainment and impingement in the in-take structure.

What we found is that the rate of impingement and entrainment is very small, and that the numbers of fish therefore, that were being entrained and killed were very small and were not enough that you would really even be able to tell that it was happening in terms of the population of fish out in the river. You'd never see it. So that would be small. Those are easy.

Large may be relatively easy as well. I guess when we start talking about alternatives, we'll talk about the possibility for replacement power of building a new plant at a new site. Well, to do that you're going to level a number of acres of trees, you'll be drawing water off in a new location. If you're using coal, you'll be dumping all the results of the coal burning into the atmosphere and you'll have your ash piles and all that. All of those things generally, will fall into the large category because you actually have a significant impact upon the resource in that area. I mean, you've taken out all those trees. Moderate, I guess I'd have to say just falls somewhere in between there. Perhaps an example might be building a gas-fired plant in place of Hatch, on the Hatch site and using the cooling water system that already exists.

You will have to clear some more land for that, but not a large amount of land. You will be dumping some gases into the atmosphere from the burning process, but not as significantly as you would be in a coal-burning process. So that would fall somewhere in between.

It's kind of a rough thing to try to give you an idea of what we mean by those.

Mr. Cameron: I believe Mary Ann is going to get into -- when she's looking at alternatives -- she's going to talk about small, moderate, and large, and that will be a further explanation. I don't know if that's helpful to all of you, but any other questions on the specific impacts before we go on to alternatives?

Ms. Ray: Andy, this may be for you. For the freshwater mussels, how would you do a study? How does the Department of Natural Resources and others look at that? I mean, did you study population sizes upriver, downriver? How would that have been done? For the Short-Nosed Sturgeon, my question is how can you say that there is no impact to the Short-Nosed Sturgeon or the freshwater mussel? How would you know?

Mr. Kugler: Okay. I think this is a basic explanation of the methodology of how these types of studies are done to get a result.

Ms. Parkhurst: First, let me mention that we have an aquatic ecologist on our team who got snowed-in at Detroit. He was supposed to be here tonight, and could have answered that much better than we can, but we have enough understanding of the process and in particular with the Sturgeon, that perhaps we can, you know, give you a crack at the answer. Again, we have been through the process and our aquatic ecologist can respond to this in the final document.

Mr. Kugler: Okay. We submitted a biological assessment to the National Marine Fisheries Service where we took a look at what we considered would be the potential effects on the Short-Nosed Sturgeon. I'm trying to recall some of the details of that. This isn't something I worked on directly.

I know some of the things we looked at for instance, is that the areas that they tend to exist in the river -- they aren't really seen around the plant that much, but there are certain areas that they go to. They spend most of the summer, I believe, down toward the area where there's an interface between the ocean and the river. As winter comes on, they don't like the cold water very much and they tend to go into certain locations -- deep holes mostly in the riverbed, where they can basically stay quiet most of the winter. They don't move around much in the winter. They don't eat a lot in the winter.

What we found was that these areas that they appeared to go to, based upon information that was gathered from various sources, don't exist right around the plant. It also isn't an area where they tend to spawn. They tend to spawn further upriver, I believe. So based on that information and the fact that the effects of the plant on the river itself are very localized in terms of temperature, that was really mostly the basis, I believe, for our conclusion in our biological assessment. The details are in that assessment, which is included as Appendix E, I believe, or part of Appendix E in the draft. So you can take a look at that as well. It has more detail.

[Presentation by Ms. Parkhurst] [Presentation by Mr. Snodderly]

Ms. Ray: Will there be some periodic looking at this [Probabilistic Safety Assessment results]?

Mr. Snodderly: Yes.

Ms. Ray: Some of this stuff looks like it could be important and I don't know exactly how you would get a figure for total benefit of all of this. For example, providing reliable to the fans. So are you going to revisit it after another two years or whatever?

Mr. Snodderly: Well, let me -- let's say -- First of all, you have to understand that there are already three or maybe even four ways to presently provide power to that -- Which example were you talking about?

Ms. Ray: It's the second one on that list.

Mr. Snodderly: Yes. There's already, I think, four ways to provide the power to the fans. Now we're talking about adding a fifth way. So you can see at some point, there is a point of diminishing return, and what we're doing is making sure that those four result -- they give us that core damage frequency that is low enough relative to again, the safety goals that the Commission has established. The goal is for core damage frequency of one in every 10,000 years. So that's 10 to the minus 4th frequency, and Plant Hatch is at 1.6 times 10 to the minus 5th, which is considerably below that. So that's another reason why we didn't expect to find any cost-beneficial alternatives, but we wanted to take a look to make sure.

Now the other point I wanted to make to you. The Probabilistic Safety Assessment is -- even though this report is going to become final -- the Probabilistic Safety Assessment has become a very important tool to the Commission and also I believe, to the utility. It's a living document because as the plant operates, you get more and more reliability data and you may find that some things that -- as a matter of fact, things that used to be very important to the plant because they were looked at more closely, say emergency diesel generator reliability, at one time we realized that was a problem, or that's where improvements could be made. That's where a lot of the risk at the plant was.

So by improving the reliability of that component, that risk went way down, but then something else relative kind of pops up. So the Probabilistic Safety Assessment is a living document. It is a thing that is going to be constantly changing and giving us insights to improve our resources and how we look at the plant, and also how Plant Hatch decides on where it is going to put its resources, and what are the most important parts of the plant to look at and improve? So it's been a very good tool for us and one that we're going to continue to develop and improve.

Mr. Cameron: Okay.

Ms. Ray: I don't want to take up all the time, but what you're saying to me is, you know Hatch has a history of accidents including this past year. Are you saying that all those things have been looked at and they are among the 22 different things that misfired or did not work? Those things have been fixed? Is that what you're saying?

Mr. Snodderly: Well, I'm saying -- I can't – Well, the 22 things that we've talked about were possible plant improvements that should be considered. When Plant Hatch considered those improvements and the cost of them, they said that makes sense and they implemented those improvements. Now those aren't linked specifically to an accident per se.

In other words, it would be something like more of a physical plant change. Something that you're changing to the plant. To put in an improved, a more highly-reliable pump and that's how you then reduce the core damage frequency and the possibility of that particular accident group.

Mr. Cameron: Andy, are you going to perhaps put that in perspective a little bit for us?

Mr. Kugler: Okay. I'd like to say. Where you have operational events that are reported, those issues may or may not be that significant in terms of risk. Our reporting requirements are fairly stringent, so something may show up there that, while it's reportable to us, does not really show up in risk space. So the improvements that we're talking about may have nothing to do with some of those things that have been reported. On the other hand, they may, but in general, what we're saying is that where they found that improvements would be cost beneficial, they've already implemented those.

When they did this review they went back and looked again, and we looked at it and found that there were no additional improvements that would significantly reduce risk enough to be cost beneficial. Operational events will continue to occur. Individual components may fail, but the plant is designed to survive events with the failure of active components. If something fails, we've built that into the plant. That's why there is so much equipment there. There is a lot of redundant equipment.

Mr. Cameron: Those operational events are not accidents.

Mr. Snodderly: But those operational events are considered as part of the significance determination process, which does use the Probabilistic Safety Assessment to determine the significance of that event. So some events may not be -- that's where you put it in to see how close you came to core damage. In general, I'm not aware of any event at Plant Hatch in the last year that wasn't evaluated as part of that process and determined not to have a significant increase.

[Presentation by Mr. Kugler]

Ms. Ray: I just have two statements to make while I'm at it. One is I think that you guys are the energy-planning decision makers and that we should be really honest here and say that you're doing it for a corporation.

The other thing that -- I've forgotten it. Oh, I want to ask you, what is the possibility, and I'm asking you to be honest -- What is the possibility for Southern Company saying, okay, this is not economically feasible? I know you can't really say, but I'm asking you to be as honest as you can in public.

Mr. Kugler: Well, I guess what I'd say is that the best I could determine is that it would be unlikely. When you have a plant that has been built and in this period I would assume it's paid for, the odds of some other option being more cost effective are pretty small. I'm not going to say it couldn't happen and therefore, all we're really saying is if we grant the renewed license, you have our permission -- assuming you continue to meet all the regulations -- you have our permission to continue to operate for this additional period.

The decision to actually run the plant is an economic one, and that's not our call. We only decide whether it's safe and environmentally acceptable, but we don't determine whether it's

economically the best decision. That's up to others. So that's what I'm trying to say I guess. The economic decision is not our call.

[Discussion]

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Mr. Sumner: Thank you, Chip. Let me make a comment that I worked at Plant Hatch for about 22 years. I came in as an entry-level engineer. I have a master's degree in nuclear engineering and a bachelor's degree in mechanical engineering from Georgia Tech. My final position before I left the plant was Plant Manager. So I've held various positions there and have a pretty good understanding of how the plant operates, being also licensed at the plant for 10 years while I was there.

The first thing I'd like to do is thank the NRC for their review. I think their review has been very comprehensive. I think the conclusions that have been arrived at, at least of a preliminary nature, match up pretty well with what we found when we did our review. If you look at the impact on the environment that Plant Hatch has, it's pretty benign compared to what you would find for maybe other sources of generating electricity.

I also want to thank them for clarifying a couple of points. At least one was made in this session. That is, we have a pretty, I guess, agreed upon definition of what an accident is. There have been no accidents at Plant Hatch. We do have operational events and every plant has operational events. There are ways that you report those and we have requirements that we notify the NRC on those particular operational events.

There was also a statement made in the previous session that alluded to some radioactive water vapor that we give off. I think that's a technical misunderstanding of the way the cooling towers work, and the circulating water system works. We don't release radioactive water vapor. I just think that needs to be clarified here. That's really a technical misunderstanding of how the plant operates.

We wouldn't be moving forward with this unless we felt like it was the right thing to do for a lot of reasons. We have been working on this particular project since around December of '96, and we've put a lot of effort into evaluating whether this was the right thing to do for the Southern Company, for the State of Georgia, and for the nation. I think the report demonstrates the same conclusions that we have reached, and that is that the effects of the plant on the local environment are pretty reasonable.

The people that operate and maintain Plant Hatch also live in this area. So the environment that is being influenced by the operation of Plant Hatch is the same environment that these people raise their families in, that I raised mine in when I was here, and that they recreate in -- the local area around here. So the environment that this report is reporting on that shows what the effects are is the same environment that the people that operate the plant also live in.

We are committed to being a good neighbor while we carry out our mission of generating electricity. We believe we are a major contributor to the local and the State economy, as well

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as to the quality of life by supplying electrical energy to power those things that we have become very accustomed to, like the lights that are on making this meeting possible as we sit here right now, computers that connect us to the outside world through the Internet, and allow us to be more productive and do some of the things, and some of the analysis and evaluations that couldn't be done any other way without the use of computers. Also for such things as keeping us warm when it's cold outside, and keeping us cool when it's hot outside. So we think we provide a very valuable commodity here for the local area and for the State.

I want to thank the neighbors that we serve that have gladly supported us also in the various endeavors that we've had to be a part of the local environment. We continue to work very hard to be good environmental stewards and we continue to be, we believe, a significant contributor to the prosperity of the local economy.

We also believe that we promote the security of reliable electrical power by being an alternative means of generating electrical power for this area. Demand for electrical energy continues to be strong in this area of the country. We need to continue to meet this in order to sustain the economic growth and maintain the electrical grid security.

Each means that you may pick to generate electrical power is going to bring with it it's own unique set of environmental issues. I don't foresee that there is going to be a decreasing demand for electricity during the period of time that's going to be bounded by the renewed license period from Plant Hatch. So that electricity is either going to come from Plant Hatch or from some other source out there. We've got 25 years of experience with operating the plant and I believe we fully understand what the environmental impact is of the plant based on that and the studies that we've done.

A83 I think the plant will continue to operate in the same manner in the renewal period as it has over the last 25 years. I believe its impact on the environment will not be measurably different from what we've already experienced. So I believe that renewing the license of Plant Hatch for another 20 years is the best solution for meeting the future electrical energy needs of this area of the country. Thank you.

Mr. Cameron: Thank you very much, Mr. Sumner. Next let's go to, is it Otha -- Otha Dixon?

Mr. Dixon: Yes. I can only speak about Plant Hatch from layman's terms. I'm a business man here in town at the Holiday Inn Express, but I do want to tell you that I moved here in 1969 to help build Plant Hatch. I was working indirectly with Georgia Power at that time.

I'd just like to say first off, the guidelines imposed on us while building Plant Hatch were guidelines that I'd never seen in construction. I never thought we'd get the plant built under such strict guidelines and the ways we had to build the plant, but I feel very comfortable about how the plant was built. I think it's sound. I think it's as safe as anything I've ever seen. I've never seen anything that was built even close to that in the fossil fuel business anywhere else.

After we built this plant, I also decided to stay here. I could live anywhere in the State, but I decided to stay here in Vidalia. I like Vidalia and I wanted to raise a family here, so I felt comfortable enough to raise a family here. I fished and I hunted on the river. I'm a hunter and a fisherman. My son is a hunter and a fisherman. I taught him to hunt and fish around Plant Hatch. Since '69, I've been hunting and fishing there. I haven't seen anything that I thought changed the environment. I think I catch as many fish now as I caught in '69. The only thing I see different is maybe there's a few more homes down that way, but I don't see any difference in the deer population. I don't see any difference in any of it. It just seems the same as it always was. I still do about the same things.

As far as one thing that I'd like to say from a businessman's standpoint, the economic impact that Plant Hatch has on us is great. Of course it provides salaries for a lot of people in the surrounding areas, as well as it provides taxes for the infrastructure where we can bring more business into our area.

I just want to say that I feel very comfortable with Plant Hatch, and I appreciate what Plant Hatch has brought to this area. Thank you.

Mr. Cameron: Okay. Thank you, Mr. Dixon. Mr. Lindell -- Cole Lindell --

Mr. Lindell: Half was right. I'm with the Municipal Electric Authority of Georgia. We are co-owners of Plant Hatch. 48 communities in Georgia invested \$3 billion, that's with a b, in Plant Hatch and Plant Vogtle during the construction of these plants.

We are also part-owner of a couple coal-fired units near Atlanta, some combustion turbines, and some hydroelectric power, but our nuclear fleet provides the most cost efficient and reliable base for our operations. We rely on the nuclear fleet and then bring the other units on to provide power as needed.

The present rolling brownouts and blackouts in California, and the price spiking that they saw in San Diego last summer, reflect the wisdom of the people that initially designed, certified, and built Plant Hatch.

As an example, last week during our mini cold snap, we were selling power at \$180 a megawatt. That's times the normal cost. I think we were shipping it down to Florida to pay for all those lawyers, but without Plant Hatch as the basis for our power, your electric bills would have spiked 10 times during the last week. It's awfully hard to run the economy of an area when you're costs are spiking like this. The beauty of Plant Hatch and Plant Vogtle -- our nuclear fleet -- is their reliable baseline that gives us the power we need and keeps our costs way down.

A88 Hatch has been a leader in industrial safety. It also stands high in the performance indicators, both for the NRC and for the IMPO. We are proud and pleased with our investment and we strongly support renewed operation.

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Mr. Cameron: Thank you, Mr. Lindell. Do we have anybody else that wants to say anything at this point? Janisse, you have one final comment for us?

Ms. Ray: I do. I wasn't going to speak and I just decided that I have to go on record. I'm going to send in written comments, but I have to go on record as saying that I am absolutely, completely, vehemently opposed to the re-licensing of the plant, only because I am so concerned about the health effects on the people living around it.

I know you don't have to look at that stuff. I realize too, that I am probably the only person in this room with no economic ties to Plant Hatch at all except that I use the electricity. I think I do --part of it -- from there. I have no other ties. I have no business. I do have a child and there are children that I love who live here.

That's all I want to say is that I have nothing to gain from Plant Hatch closing or staying open. I can do without the electricity and I am absolutely opposed to the re-licensing. Sorry.