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Statement presented by Sara Barzcak, Georgians for Clean Energy, at the December 12, 2000, public meeting in Vidalia, Georgia, to discuss the draft supplemental environmental impact statement regarding the license renewal application for Hatch Nuclear Plant, Units 1 and 2.

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## **Hatch Comments:**

My name is Sara Barczak. I have been working with Georgians for Clean Energy for over a year. We are a non-profit conservation and energy consumer organization that has been working to promote safe and environmentally sound energy policies for Georgia for almost 20 years. 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 since the Hatch re-licensing process began. And while I myself was not able to attend the public meetings back in May, I did help compile our formal written comments that we submitted in June. I did read through all of the oral comments that were presented in May. What I was struck by is that very few people spoke about what the scope of what the NRC had requested—the environmental impacts of Plant Hatch. From my notes, our facilitator today, Mr. Cameron, was also the facilitator then. And he explained then that:

"...our [NRC] purpose today is to gain insights on the environmental issues related to the Hatch licensing renewal applications...But we want to try to keep us focused on the environmental aspects of license renewal to make sure that we hear all of the comments on this issue before we leave here today."

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% in 1998 alone—and they don't know where they'd be without 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 14% 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 resource base.

I was struck by the fact that the sheriff of Appling County didn't talk about emergency planning concerns, security issues, and terrorist threats but rather on how great the plant was. People also spent a lot of time explaining where they were from. 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 our region, its people and land. I sometimes lay awake at night thinking about our members near the plant—and all of you.

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 today we are to speak about the environmental impacts and the draft Generic Environmental Impact Statement, Supplement 4. So I will speak about those.

Let me go back to something Mr. Cameron said at the last meeting, the one in May:

"But I want to emphasize that any comments we hear from you today will be considered by the NRC as formal comments on scoping. You don't have to send anything in writing to get these on record."

We would like to state publicly that Georgians for Clean Energy does not believe that statement. We sent additional written comments to supplement our previous oral statements and feel that those efforts, which were quite time-consuming may I add, were not given consideration in the draft GEIS that we are now discussing nor were they included in the appendices. All statements submitted either in written form or orally should have been included in this draft GEIS. 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.

We request that this panel re-evaluate all of the oral and written comments concerning environmental issues that were previously presented to the NRC during the Environmental Impact Statement process and license renewal meetings.

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 that focused on the environment, health issues, or conservation issues. 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.

Everyone here knows that we've been experiencing a very tenacious drought and that water issues are on the forefront of many people's minds, including our Governor. The Altamaha River is very important to this region, for wildlife, commercial fisherman, recreational enthusiasts, and more. And Plant Hatch has to rely on water resources too—and Hatch 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 about 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 that Hatch is permitted to use a monthly average of 1.1 million gallons of water per day from the Floridian Aquifer. When this plant was licensed, the severe concerns over our water resources did not exist. These permits and conditions need to be re-evaluated 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. Yet according to this draft GEIS, license renewal will not have an adverse impact on the Altamaha ecosystem. We challenge that determination.

Since Hatch was built, the Southeast has entered a period where we have had more droughts and 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 conditions. A consumptive loss of 3.1 % 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 shortnose sturgeon to a level that the species can no longer handle? The GEIS does not address this. Additionally, the GEIS didn't address concerns around discharge temperatures at the point it enters the river or within the mixing box. A maximum discharge temperature in the mixing box, which is reported to the EPD quarterly, was 94 F in the summer. Does that affect the river more so during periods of drought, in which fish and plants, etc. are already stressed? What is the temperature at the discharge pipe on a daily basis? If that's 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.

In cases of flooding on the other hand, which also occur, special precautions are needed that the draft EIS does not address. [I refer you to prior testimony that was raised by others and ourselves on the flooding issues.]

And 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 everyday...it is a fact of nuclear power plant operation. In Hatch's case, an average of 33 million gallons of water per day is lost—primarily in the form of radioactive water and radioactive water vapor. And it is unfair and misleading to the community 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, groundwater supplies, 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. 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 plant 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 were generally set to allow industry to operate. 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 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. It is a fact that the decay products coming off of nuclear power plants, whether it is through the stack or directly into the water, generate Cesium-137 and Strontium-90, among others like plutonium and Cobalt-60. Cesium-137 mimics potassium and collects in the muscles. Strontium-90 mimics calcium and collects in our bones—leading 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...you can't see it, taste it, or smell it. So it's hard for people, including our regulatory agencies, 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 your offspring. The gene pool is being affected.

Back to the economics that people love to talk about. Plant Hatch sits alongside the Altamaha River, Georgia's largest waterway, near prime agricultural areas and is two counties upstream from Georgia's 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 impact 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.

For example, here is a brief list of licensee event reports that are required to be filed for incidents that occurred in the last week of August and for the month of September (these are not violations, not inspection reports, and there are often other events that are not required to be reported, separate from those with different criteria):

- 8/31/00 Failed relay results in unplanned actuation of engineered safety features
- 9/4/00 Trip of 600-volt supply breaker causes loss of reactor power system protection supply and unplanned ESF system actuation
- 9/8/00- Component failure resulting in erratic flow signal rendered the high pressure coolant injection system inoperable—previous events like this in past 2 years in licensee reports: 4 times so this is the fifth
- 9/11/00 Inadequate procedure resulted in an unplanned actuation of an engineered safety feature (actuation means start-up)—reactor coolant flowed into something it shouldn't have
- 9/20/00 Component failure results in failure of an engineered safety feature to actuate. A primary containment isolation valve failed to close as expected. (To contain the radiation).
- 9/25/00 Unauthorized person enters protected and vital areas. Contract worker entered the area to perform normal duties—required checks were not performed prior to entering. Personnel error occurred in the Badge Office.
- 9/27/00 Personnel error results in a condition prohibited by the plant's technical specifications—the B loop of the core spray system was rendered inoperable (that would cool down the reactor). The A loop of the low pressure coolant injection (LPCI) function of the residual heat removal systems had previously been rendered inoperable as well for scheduled testing. These systems would help protect the public in case of a major accident.

-9/29/00 Trip of the reactor feed water pump resulted in low reactor water level and a manual reactor SCRAM (shut down reactor in a hurry by hand. Water levels were low and serious)—level reached a minimum of approximately 40" below instrument zero causing the automatic initiation of the reactor core isolation cooling system and the high pressure coolant injection system

Simply stated, the plant is aging, and there's no excuse for an unauthorized person to enter the plant. The NRC needs to read the entire docket-- every violation, every LER, everything going back to start-up. No one would allow this place to be re-licensed if they sat down and read the entire docket.

And please include in the EIS review new problems of 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 nuclear Plant Hatch's license renewal application.

If this license renewal application goes through, there will be many heavy stones left unturned. And unfortunately, the health 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.