

LETTER B

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PAGE 01/02

P. 01

Center for a Sustainable Coast

P.O. Box 198 Darien, Georgia 31305 Voice: (912) 437-8160 Fax: (912) 437-8161

65FR 17543
April 3/08
①

STATEMENT IN OPPOSITION TO THE PROPOSED RELICENSING OF PLANT HATCH

The Center and many others are deeply concerned about the proposed relicensing of Plant Hatch, an aging nuclear power plant in Baxley along the Altamaha River, a short distance from the coast. Not only is the plant one of the nation's oldest facilities still in use, its design is dangerously obsolete, providing no containment structure for protection in case of an accidental release of radioactive contaminants. The Georgians for Clean Energy report that the facility has a history of accidents, suggesting significant threats with continuing operation of Plant Hatch.

B02

B01

Added to the unjustifiable risks of allowing this plant to operate is a new proposal to store spent fuel outside, in concrete casks to be located on the plant site and within close proximity to the Altamaha River, Georgia's largest and most naturally productive waterway. Because of their vital importance to the nation's marine resources, the expansive coastal estuaries supported by the Altamaha are designated as Essential Fish Habitat by the National Marine Fisheries Service. Jeopardizing these indispensable national resources and the existing nature-based business activities that critically depend on them is not justified by the need to keep Plant Hatch operational when there are readily available lower-risk alternatives.

B03

B04

Georgians for Clean Energy warn that the proposed outdoor storage is an unproven technology that introduces yet another significant threat to public health and natural resources. Lethal concentrations of radioactive materials released in even a minor accident could cause long-term damage to natural habitat and wildlife resources, not to mention the health and prosperity of tens of thousands of coastal residents who live in the vicinity, especially those whose income is derived from these natural resources.

B05

There are conventional forms of power generation and newly emerging technologies that are far less hazardous, and far more efficient, on the basis of accurate and complete assessment of long-term costs and benefits. Under the present situation, the operators of Plant Hatch are, in effect, shifting their costs of operation (including risks) onto the general public, and thereby unfairly profiting by using this dangerously obsolete technology. Relicensing the Plant Hatch nuclear power facility under these circumstances is most definitely not in the public interest according to any objective evaluation of impacts, alternatives, and uncertainties - as required under federal law.

B06

For these reasons, the Center for a Sustainable Coast declares unqualified opposition to the proposed relicensing of Plant Hatch. We strongly urge the Nuclear Regulatory Commission and Governor Barnes to thoughtfully consider the full implications of the proposed relicensing, in light of the region's quality of life as well as our economic interests in the sustainable use and responsible protection of productive natural resources. By denying the license and supporting safer alternatives, public officials will be serving the true interests of all Georgians and setting essential standards of accountability in safeguarding the public trust.

B07

B08

Template - ADM - 013

*F.R.I.D.S - ADM - 03
Add: W. Burton (WFB)*

LETTER C

David L. Meyer, Chief
Rules and Directives Branch
Division of Administrative Services,
Mailstop T & D 59
U.S. Nuclear Regulatory Commission,
Washington, D.C. 20555-0001



PAMELA BLOCKEY-O'BRIEN, D23 GOLDEN VALLEY
3631 Dallas Hwy, Douglasville, GA 30134 USA

65FR17543
Dec. 10th, 2000 April 3/10
②

Comments for the Record : in the matter of the Draft Report for
Comment concerning the GEIS, Supplement 4, regarding the
Edwin I. Hatch Nuclear Plant, Units 1 and 2 and Southern Nuclear
Operating Co. Inc's desire to re-license this radioactive wart
on the face of the planet for another twenty years, and the NRC
intending to sanction it.

There is one question the NRC forgot to ask, because NRC was too
busy jumping to fulfill Southern's request - NRC forgot to
ask how high it should jump up from its grovelling position it
takes on, while resting, in front of the nuclear industry, in order
to get this re-licensing through ; it jumped, and jumped and
jumped happily regurgitating large chunks of the License Renewal
Application while tossing the phrase "the staff has not identified
any significant.....(fill in the blank)" like confetti.
As far as the NRC is concerned, radioactively gassing South Georgia
via the Direct Torus Vent System while trying to gain time in the
event of a MELTDOWN is just fine, That a meltdown at Hatch was
calculated IN NRC's CRAC - 2 Report and the estimate of the
dead (700 dead per Unit based on the 1982 data for population)
and of the 20 mile FATAL RADIUS (twenty mile) and the 70 mile (sev-
enty mile) injury radius doesn't matter either - after all,
I provided all this information back to the NRC, as one has to
show the NRC its own documents and U.S. House of Representatives
documents on NRC's documents, as the NRC suffers collective amnesia,
and it was ignored. As long as Southern Nuclear says the public
is going to evacuate at 8.2 feet a second (p 5-9 GEIS) the question
to be answered by Southern is , how fast and how far are the
dead meant to be tossed in order to get the bodies out of the area ?
Does Southern intend to bring in squads of Olympic weightlifters
to help ? Who will toss them, as they die ? How many more will be
needed ? How many lead-lined coffins does Southern have in storage
to bury the radioactively contaminated dead ? The GEIS has not
addressed the issue, or the risk-benefit costs Southern and the
NRC love, of lead-lined coffins versus just plain lead coffins and
who gets to try lift them. - The ~~meteorological~~ data only covered
3 years - but NRC

C01

C02



ignored what I said about that too.
Rather than reargue what I already have said, I am enclosing
my May 10th testimony, supplements dated May 29th, June 4th, June 7th,
all of 2000, plus my June 15th and June 18th 2000 letters con-
cerning the 2.206 Petition against this dump NRC talked its way
out of, with the reminder that THE JUNE 15th, 2000 LETTER SAID IT
WAS TO BE PROVIDED TO THE HATCH RELICENSING STAFF AS IT WAS MEANT
TO BE PART OF IT ALSO. I would also note that both the NRC and FEMA
have been giving me the runaround on the fact that the area could
not be evacuated in time etc. etc. and NRC (according to FEMA) did
not supply FEMA with all documents, and NRC admitted to me, after

slate - ADM-013

E-RIDS-ADM-03
Call: W. R. ... (WFB)

an argument we had that would have made the breaking of the sound barrier pale in comparison, that SINCE THE NRC DOES NOT CONSIDER A MELTDOWN CREDIBLE, THEY SENT FEMA WHAT TO WORK ON BASED ON WHAT THEY THOUGHT WAS CREDIBLE - EVEN THOUGH THEY ALSO ADMITTED TO ME THAT A MELTDOWN WAS POSSIBLE . I FIND ALL THIS ABSOLUTELY INCREDIBLE.

C03

I expect everything I have enclosed to be included in full in any and all subsequent GEIS reports on Hatch , Draft or FINAL.

- A. The NRC staff's preliminary recommendation is, quote" that the Commission determine that the adverse environmental impacts of license renewal for HNP are not so great that preserving the option of license renewal for energy-planning decision makers would be unreasonable."
- B. The GEIS also says that the NRC staff considered public comments recieved during the scoping period for the review.
- C. The GEIS also states that the GEIS serves as the principal reference for all nuclear plant license renewal Environmental Impact Statements.

Regarding "A" above : define "not so great"

Regarding "B" above : If they had considered public comments instead of blatantly disregarding them, the NRC staff would be recommending DENIAL of license renewal - but, as stated earlier, they were too busy jumping to fulfill Southern's request. It's hard to read whilst jumping.

C04
C05

Regarding "C" above : God help us all. The bloody thing isn't worth the paper it's written on.

License renewal is how the NRC and the industry is trying to get around all federal and state laws and other requirements that would come into play if there were a request to license a new nuclear power plant. Because old nuclear plants are so degraded and radioactively contaminated through and through and have contaminated the surrounding environment and population, such license renewals are nothing but an attempt to circumvent current standards and is not only deceitful, but puts the environment and public at grave risk.

C06

C08

To add insult to injury, NRC brought in the D.O.E. - the Death Of the Earth squad, who have massively radioactively contaminated every site beyond redemption, for millenia, as contributors to the supplement, (p. B-1), for example from INEL, where the plutonium reaches 110 feet below the site and a forty square mile plume of Tritium lies beneath it and they have been brought in regarding Hatch on ecology, water use and hydrology etc., give me a break! Bringing in the Death Of the Earth squad as back-up doesn't enhance the NRC's own lousy reputation.

C09

My comments are these two pages and the enclosures. It speaks for itself. And, from now on, whenever the NRC tells me how amazed it is at the depth and breadth of my knowledge, I'm going to ask you all put it in writing. Bearing that in mind, DON'T RELICENSE THIS FACILITY. Shut it down.

C07

Pamela Blockey O'Brien.

Pamela Blockey-O'Brien.

PS. Do the Vidalia onion growers know their crops'll be impounded in event of a meltdown and same goes for all farmers ?

Enclosures as cited in text.

LETTER D

December 31, 2000
304 Manor Drive
Santee, GA 30571

David L. Meyer, Chief
Rules and Directives Branch
Division of Administration Services, Mailstop T 6 D 59,
U.S. NRC
Washington, D.C. 20555-0001

Dear Mr. Meyer,

**As a citizen of Georgia, I respectfully request the
NRC to deny the relicensing of Plant Hatch.**

I have followed nuclear issues in Georgia for a number of years, have attended risk assessment workshops run by both the U.S. Department of Energy and various non-governmental organizations, and receive regular reports on nuclear activities around worldwide. In other words, this request is not based on mere ideology or vested interest.

We take a big chance if we operate any nuclear reactor beyond the time for which it was designed. The technology is very good, but the consequences of an accident, however remote, are unacceptable.

Furthermore, due to Georgia's proximity to the Savannah River Site and the prospect of a major new undertaking at that location, our state is in danger of becoming a nuclear dumping ground. Do not increase our problems by relicensing Hatch.

Sincerely,

Joan O. King
Joan O. King

Template = ADA-013

65 FR 67418 - 11/9/00
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DEC 29 10 49 AM '00
Rules & Directives Branch

D01

D02

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*E-REDS = ADA-03
Add = Andy Kugler (ASK)*

LETTER E

CRF

Fax: 4045624766

Jan 9 '01 12:21

P. 03

THE ENVIRONMENTAL JUSTICE & ECOLOGICAL STEWARDSHIP MINISTRY OF SAVANNAH PRESBYTERY, PRESBYTERIAN CHURCH (USA)

A.K. PENTECOST ECOLOGY TRUST FUND
3590 DARIEN HIGHWAY
SUITE 8
BRUNSWICK, GA 31525
TEL: 912-264-1997; FAX: 912-262-6815
www.savannahpresbytery.org

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65 FR 67418

(4)

RECEIVED 12/18/00

Relicensing of Hatch

December 18, 2000

Luis Reyes
Nuclear Regulatory Commission (Local)
61 Forsyth Street Suite 23T85
Atlanta, GA 30303

Re: Relicensing of Plant Hatch

Dear Mr. Reyes:

Relicensing Plant Hatch for another 20 years, I believe, is not the most prudent direction for us to take as we work on our energy needs for Georgia's future.

Having the nuclear repository of spent fuel in such an environmentally vulnerable region of the state is a serious concern. The natural areas, aquifer recharge zones and fish habitat which are downstream from Plant Hatch contribute significantly to Georgia's economic stability and diversity. Georgia's agricultural productivity, seafood industries, tourism industry, as well as the forestry industry along the Altamaha River and south coastal areas are at perilous risk with the radioactive waste stockpile at Plant Hatch.

To add the the volume of spent fuel that 20 additional years of operation would produce is more risk than I think should be taken for Georgia's citizens, environment, and economy.

Wiser action, it seems to me, is to proceed with research in and support of renewable energy projects. Georgia and The Southern Company are lagging behind others in the whole renewable energy arena. Since we are one of the top ten fastest growing states in the nation, I would expect more creative energy leadership for our citizens.

Sincerely,

Miriam A. Bass
Miriam A. Bass
Staff Associate for Ecology



Dr. Carl Schlich, Executive Presbyter
Miriam A. Bass, Staff Associate for Ecology



E01

E02

E03

E04

Template = ADM-013

E-REFS = ADM-03
Add = RUDY Kugler (ASKI)

LETTER F

NRC Cover Page

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.

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.]

F01

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.

LETTER G



United States Department of the Interior

OFFICE OF THE SECRETARY

OFFICE OF ENVIRONMENTAL POLICY AND COMPLIANCE

Richard B. Russell Federal Building
75 Spring Street, S.W.
Atlanta, Georgia 30303

January 17, 2001

65 FR 67418
11/9/00
(6)

ER-00/843

Chief, Rules Review and Directives Branch
Division of Administrative Services
Mailstop T 6 059
U. S. Nuclear Regulatory Commission
Washington, DC 20555-0001

Dear Sir:

The Department of the Interior has reviewed the Generic Environmental Impact Statement for License Renewal of Nuclear Plants, Supplement 4, Edwin I. Hatch Nuclear Plants, Units 1 and 2, Appling County, Georgia, as requested.

General Comments

The Altamaha River and its surrounding environs and wetlands provide habitat essential to many species of fish and wildlife including neotropical migratory songbirds, wading birds, reptiles and amphibians, mammals, and important inter-jurisdictional fishery resources. Since, no new construction or increase in operating conditions is proposed as part of the license renewal, adverse impacts to terrestrial resources from continued operation of Plant Hatch should be minimal with the exception of radiological impacts. Fishery resources of particular concern to the Fish and Wildlife Service (FWS) are anadromous species, including American shad, hickory shad, blueback herring, striped bass, the Atlantic sturgeon, and shortnose sturgeon. American shad, striped bass, and sturgeon have historically been a significant commercial fishery along the Altamaha River, and populations of all of these species have experienced dramatic declines in the past from which they currently have not recovered. The FWS is also concerned about potential adverse impacts to other resident species, including largemouth bass, redbreast sunfish, and native riverine suckers. The Altamaha River provides important recreational opportunities for the residents of and visitors to Georgia. The Altamaha River is a destination for many out of state anglers and is a critical element of the natural heritage of Georgia.

The FWS remains concerned that the entrainment and mortality of fish at Plant Hatch has not been effectively evaluated for the combined 2-unit operation which began in late 1979. The FWS letter dated November 8, 1999, indicated concern about fish entrainment and mortality at Plant Hatch and requested additional information to evaluate the potential impacts of project license renewal on those aquatic resources. On December 7, 1999, the FWS received a response from Southern Nuclear Operating Company (SNC) which included a Biological Information Update, the 1981 Thermal

G01

G02

Plume Model Verification Study, and the 1981 316(b) Demonstration Study to evaluate fish entrainment at the plant. Additionally, after the completion of the 1981 studies, a low water weir was constructed in the Altamaha River which may significantly increase the potential for fish entrainment by changing the physical surroundings of the intake structure. Entrainment of aquatic species must be evaluated for river conditions where the weir affects the water intake for Plant Hatch.

G09

Construction of Plant Hatch Unit 1 began in 1968 and commercial operation began in December 1975. Plant Hatch Unit 2 construction began in 1972 and commercial operation began in September 1979. Entrainment samples for Plant Hatch were collected in 1974, 1975, 1976, 1979, and 1980. Samples were collected weekly from 1974 through 1976 and monthly in 1979 and 1980. During nearly all of the sampling period, 1974 through September 1979, only Unit 1 was operating at Plant Hatch. Unit 2 began operating in September 1979, and the only data on fish entrainment and mortality at Plant Hatch under normal 2-unit operation was collected during the "monthly" sampling conducted in 1980. Given that the information on fish entrainment and mortality at Plant Hatch is over 20 years old and only represents one year of monthly collections under normal 2-unit operation, the FWS is concerned that these data do not reflect the actual fish entrainment potential at Plant Hatch and cannot be reliably used in evaluating the potential adverse effects on fishery resources in the Altamaha River.

G03

The existing water intake structure for Plant Hatch is approximately 150 feet long and 60 feet wide and stands approximately 60 feet above the normal water elevation. The water intake openings are 27 feet wide and extend from 16 feet below to 33 feet above normal water elevations. Large woody debris is removed by trash racks of an unknown dimension, and smaller debris is removed by vertical traveling screens with a 3/8 inch mesh. SNC also reports that intake velocities increase with lower river levels, but specific values are not reported for any evaluation. Based on some of the intake velocities reported in the 1981 316 (b) Report, it is likely that 2-unit operation at Plant Hatch, particularly during spawning seasons, may have significant adverse impacts on fishery resources through increased entrainment of eggs, larvae and juvenile fish, especially in years with lower than usual flows such as occurred in 1999 and 2000. The FWS recommends that SNC conduct a thorough and complete assessment of fish entrainment and mortality at Plant Hatch under various flow conditions that reflect actual normal 2-unit operation and 2-unit operation at low river flows.

G04

The FWS letter dated November 8, 1999, also indicated concern about the potential impacts of thermal discharges from Plant Hatch on aquatic species in the Altamaha River, and requested additional information to evaluate the potential impacts of project license renewal. The existing NPDES permit for Plant Hatch has established limits for the thermal discharge which is not to exceed 90 °F or 5 °F above ambient. Twelve thermal plume monitoring surveys were conducted during 1980. Seven of these 12 monitoring surveys showed inconclusive results according to the 1981 report. Three of these surveys were conducted with only one cooling tower releasing heated water. Three additional surveys did not detect a thermal plume. The remaining survey postulates that on August 12, 1980, a "secondary thermal plume" was the cause of "excessive solar heating" of adjacent

shallow water, and that the survey of the thermal plume from Plant Hatch was biased due to hot weather. These results cannot be considered reliable due to the very limited field verification of the nearly 30-year old model in which seven of only 12 field surveys of the thermal plume were "inconclusive." The notion that a "secondary plume" had developed near a sandbar during a hot August day must be rejected since this is a natural occurrence during the summer months, and the purpose of the model and the study was to determine whether Plant Hatch would be expected to adversely impact aquatic resources of the Altamaha River regardless of natural conditions. The thermal impacts of the heated discharge may also become exacerbated during low flows where the weir within the river channel may affect the dilution of heated effluent due to altered flow patterns and river channel dimensions.

The FWS is concerned that the results of the Thermal Plume Model and the field verification survey are not capable of characterizing impacts to the river or temperature deviations resulting from the full 2-unit operation of Plant Hatch during low summer and fall flows. The FWS recommends that SNC conduct actual field measurements of the discharge and the resulting temperature plume in the Altamaha River under various flow conditions during the warmer months. Actual field data on heated water discharges from Plant Hatch is critical during low flow periods when the river experiences drought or near drought conditions. These low flow periods are when the potential impacts to aquatic species in the Altamaha River are the greatest. These acute impacts are due to higher ambient water temperature, reduced dilution of wastewater from upstream sources, the increased percentage of river flow consumed at Plant Hatch, and the significantly reduced dilution potential for the heated effluent. Field studies of the thermal discharge should be conducted, at a minimum, on a daily basis during various river conditions and the critical low flow periods in summer and fall when ambient water temperature is highest and dissolved oxygen is lowest.

G05

G06

G07

Section 4.3 of the EIS for Plant Hatch addresses the radiological impacts of normal operations, which does not include a discussion of the radiological impacts to fish and wildlife. Further, the EIS does not describe the actual levels of radiation in the ambient environment or the level of increase attributed to operations at Plant Hatch. Section 4.3 only states that the radiation dose to the general public will continue at current levels, and that occupational doses would be below regulatory limits without indicating the actual values for Plant Hatch. Our understanding from SNC was that the issues raised in the November 8, 1999, letter would be addressed in further detail in the Draft EIS. The FWS contends that the radiological impacts to the environment have not been evaluated for Plant Hatch in the draft EIS, and that avoidable impacts to fish and wildlife resources may exist and have not been carefully considered.

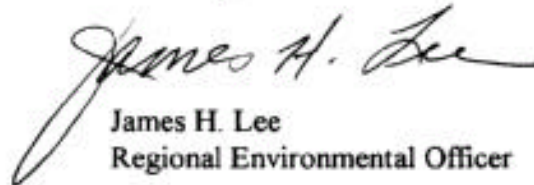
G08

The FWS letter dated January 13, 2000, indicated, based on the information provided by SNC, concurrence with SNC's determination that license renewal for Plant Hatch would not adversely affect threatened or endangered species under purview of the FWS. Our understanding is that Section 7 consultation has been initiated with the National Marine Fisheries Service concerning potential impacts to the federally-threatened shortnose sturgeon.

As the Federal agency responsible for the protection and conservation of fish and wildlife resources in the Altamaha River, the FWS recommends that the NRC require a thorough fish entrainment and mortality study to be conducted to adequately characterize fish entrainment under full 2-unit generating conditions prior to any license renewal for Plant Hatch. We further recommend that thorough field studies be conducted to evaluate actual thermal discharges under full 2-unit generating conditions during low flow periods for multiple years. Further, we recommend that the radiological environment of Plant Hatch be fully described, and the potential for impacts to the environment and fish and wildlife resources evaluated according to appropriate scientific methods.

Thank you for the opportunity to review and comment on the Draft Generic EIS for Edwin I. Hatch Nuclear Plant. If you have any questions or comments or need additional information please, contact staff biologist Mark D. Bowers of the Fish and Wildlife Service, Georgia Ecological Services Field Office, at (706) 613-9493.

Sincerely,



James H. Lee
Regional Environmental Officer

LETTER H

January 19, 2001

SUBJECT: statement of opposition to proposed relicensing of Plant Hatch nuclear Power plant.

Dear Sir:

Georgia Coast Watch is very much in opposition to the proposed relicensing of Plant Hatch. Just downstream from the Plant is a thriving fishing industry of fish, shrimp, crabs, and shellfish, and a multimillion dollar tourism industry which could not survive a nuclear accident. I will not go into the obsolete design and record of past accidents of Plant Hatch. They are well known, and most are documented. If a person were to carefully choose a spot where a nuclear power plant should not be placed, this sensitive bioregion on the Altamaha river would be chosen. The relicensing of this aged, and dangerous plant would be a crime against nature and a slap in the face to those who work and live downstream. If the plant continues to operate we will work diligently to increase public awareness of this killer in our backyard and we will employ non-violent civil disobedience when necessary.

H01

H02

Submitted for the record, January 19, 2001.

Sincerely,



Gary G. Drury
Georgia Coast Watch
Rt. 9, Box 281
St. Simons Island, Ga. 31522
ggdrury@earthlink.net
(912) 638-6852

60

CS

LETTER I

Louis Sumner
Vice President
Hatch Project Support

Southern Nuclear
Operating Company, Inc.
43 Business Parkway
Post Office Box 1286
Birmingham, Alabama 35201
Tel 205 992 2276
Fax 205 992 8341

65 FR 67418
4/3/00
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HL-6034

January 23, 2001

Docket Nos. 50-321
50-366

Chief
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Division of Administration Services
Mailstop T 6 D59
U. S. Nuclear Regulatory Commission
Washington, D.C. 20555-0001

Edwin I. Hatch Nuclear Plant
Comments on Draft NUREG-1437, Generic Environmental Impact Statement
for License Renewal of Nuclear Plants, Supplement 4
(65 Federal Register 67418 dated November 9, 2000)

Ladies and Gentlemen:

Southern Nuclear Operating Company (SNC) has reviewed the draft NUREG-1437, Supplement 4, for Edwin I. Hatch Nuclear Plant, Unit 1 and 2, published in 65 Federal Register page 67418, dated November 9, 2000. SNC is providing the enclosed comments as requested.

If you have any questions regarding these comments, please contact this office.

Respectfully submitted,

H. L. Sumner, Jr.

HLS/JTD

Enclosure: SNC Comments on Draft SEIS for HNP

Template = ADM-013

E-RIS = ADM-03
Call = J. Kugler (ASK) /
A. B. V. (AFB)

U. S. Nuclear Regulatory Commission

Page 2

cc: Southern Nuclear Operating Company

Mr. P. H. Wells, Nuclear Plant General Manager

Mr. C. R. Pierce, License Renewal Services Manager

SNC Document Management (R-Type A02.001)

U. S. Nuclear Regulatory Commission, Washington, D.C.

Mr. C. I. Grimes, Branch Chief, License Renewal and Standardization Branch

Mr. L. N. Olshan, Project Manager - Hatch

Mr. W. F. Burton, Project Manager - Hatch License Renewal

Ms. Brenda J. Shelton, Chief, Information and Records Management Branch

U. S. Nuclear Regulatory Commission, Region II

Mr. L. A. Reyes, Regional Administrator

Mr. J. T. Munday, Senior Resident Inspector – Hatch

SNC Comments on Draft SEIS for HNP

General Comments

1. Emphasis on Archeological/Historic Resources

There appears to be an overstated emphasis throughout the SEIS on the significance and potential of impacts to historic/archeological resources on the HNP site. This is most pronounced in Chapter 2, but is also evident in other chapters. The level of detail in the Section 2.2.9 discussion of historical/archeological resources seems out of proportion considering the historic/archeological impacts section in Chapter 4 which states "Consultation between the license renewal applicant and the Georgia State Historic Preservation Office resulted in a determination by the State office that no known historic properties included in or eligible for inclusion in the National Register of Historic Places would be affected by the proposed action." The section also concludes that impacts to these resources from license renewal would be "SMALL."

101

The CEQ regulations ("Regulations for Implementing the Procedural Provisions of the National Environmental Policy Act") provide the following guidance on environmental impacts:

- "Environmental impact statements shall be analytic rather than encyclopedic... There shall be only brief discussion of other than significant issues." (40 CFR 1500.2)
- "The environmental impact statement shall succinctly describe the environment... to be affected by the alternatives. The descriptions shall be no longer than is necessary to understand the effects of the alternatives. Data and analyses... shall be commensurate with the importance of the impact..." (40 CFR 1502.15)

The sheer weight of the information begins to confer significance on impacts that have been determined to be "SMALL". Chapter 4 (p. 4-26) of the SEIS states that license renewal is unlikely to jeopardize cultural resources and may, in fact, "...have a beneficial effect..."

102

It is recommended that Section 2.2.9 (Historic/Archeological Resources) be shortened and made more concise.

2. Scope of Chapter 8

Chapter 8 currently discusses potential impacts of "dramatic" post-decommissioning land-use changes, especially those associated with "eventual sale or transfer of the land" (p. 8-3). Based on the speculation that these dramatic land-use changes are a given (or at least a reasonably foreseeable possibility), Chapter 8 goes on to suggest that impacts to unidentified historic/archeological resources could be "SMALL to LARGE." In fact, it is difficult to predict future use of the unrestricted property, however any post decommissioning land-use would be subject to applicable environmental and resource laws. SNC recommends that the discussion of speculative "dramatic" potential impacts be avoided in Chapter 8. SNC recommends revising the conclusions in table 8-1 for Historic and Archeological Resources to "SMALL" with a revision to the comment.

103

Specific Comments

The following matrix contains specific comments and their proposed resolutions. Text recommended for deletion is shown as lined out (i.e., ~~deleted text~~). Recommended new text is shown as underlined (i.e., new text). Most comments are primarily editorial while some are more substantive.

Page/line #	Comment	Proposed resolution
Page 1-9, Table 1-1, Lines 7,9,12,14,16	Some permits include "state" in the requirement column description. To clarify that the permits are state and not federal, SNC recommends adding the word "state" to the items described. Also add the identified words for clarification.	Requirement Column: <u>State</u> air quality <u>State</u> drinking water quality <u>State</u> storm water discharge <u>State</u> NPDES discharge permit <u>State</u> solid waste landfill
Page 2-4, Figure 2-3	HNP revised permit and added two wells for irrigation of ornamental plants after ER was written. This change in the application was communicated to the staff by letter dated December 15, 2000.	See the revised Figure 2-3 attached which identifies the location of wells 4 and 5.
Page 2-11, Lines 32 and 34	SNC recommends clarification of description of mixed waste and hazardous waste.	HNP also provides for <u>accumulation and temporary onsite storage</u> of mixed wastes, which contain both radioactive and chemically hazardous waste. Storage of radioactive material is regulated by the NRC under the Atomic Energy Act of 1954 (AEA), and <u>accumulation and temporary storage</u> of hazardous wastes is regulated by the U.S. Environmental Protection Agency (EPA) under the Resource Conservation and Recovery Act of 1976 (RCRA).
Page 2-12, Line 1	A copy of the ODCM is only included if the ODCM was revised during the year.	includes the ODCM as an appendix if it is revised during the year covered by the report (Southern Company 2000a).
Page 2-14, Line 1	From review of preceding text and review of plant drawings, the offgas recombiner building should be included in this description.	The major system components are located in the turbine building, <u>offgas recombiner building</u> , and in the waste gas treatment building.
Page 2-14, Lines 34-36	Per our review of HNP FSAR and year 2000 49 CFR, it appears that 171 through 185 would apply to HNP.	Solid waste is packaged in containers to meet the U.S. Department of Transportation requirements in 49 CFR Parts 171 through 477 <u>185</u> . Disposal and transportation are performed in accordance with the applicable requirements of 10 CFR Part 61, and Part 71 , and 49 CFR Parts 171 –185 respectively .

Page/line #	Comment	Proposed resolution
Page 2-15, Line 1	Please add text to clarify that number is for disposed waste.	From year to year, the volume of radioactive contaminated waste generated will vary. The average value of <u>disposed waste</u> at HNP over the past 5 years is about 320 m ³ (11,300 ft ³).
Page 2-20, Line 6	Permit has been revised since application to allow a change in monthly average. This change in the application was communicated to the staff by letter dated December 15, 2000.	SNC is permitted (Georgia Department of Natural Resources [GADNR] Permit 001-0690-01) to withdraw a monthly average of up to 273,000 m³/d (72 million gpd) 322,292 m ³ /d (85 million gpd) with a maximum 24-hour rate of up to 392,000 m ³ /d (104 million gpd). As a condition of this permit, SNC is required to monitor and report withdrawals.
Page 2-20, Line 31	HNP revised permit and added two wells for irrigation of ornamental plants after ER was written. This change in the application was communicated to the staff by letter dated December 15, 2000.	Although the current permit indicates four six onsite wells, there are actually only three wells providing groundwater for domestic and process use. <u>Wells four and five provide water for irrigation of ornamental vegetation.</u> The fourth sixth well was intended to provide make-up water for a wildlife habitat pond that was not completed; therefore, the well has not been installed.
Page 2-21, Line 4	HNP revised permit and added two wells for irrigation of ornamental plants after ER was written. This change in the application was communicated to the staff by letter dated December 15, 2000.	Change "three" to "five"
Page 2-21, Line 37	SEIS states that HNP is located in western Georgia. Various other references to HNP location state south central Georgia.	Change "western" to "south-central".
Page 2-28, Line 15	Drinking water samples are not included in the REMP	shoreline sediment and water samples from the Altamaha River, and drinking water samples ,

Page/line #	Comment	Proposed resolution
Page 2-28, Line 30	For clarification between ODCM results and REMP make the following changes.	<p>Southern Company reported the following estimated whole body doses to the most limiting member of the public for 1999:</p> <ul style="list-style-type: none"> • approximately 0.00064 mSv/yr (0.064 mrem/yr), based on vegetation, fish, and sediment results from the HNP environmental monitoring program (Southern Company 2000b) • approximately 0.00074 mSv/yr (0.074 mrem/yr) based on gaseous and liquid effluent releases (Southern Company 2000a). <p><u>For 1999, dose estimates were also calculated based on radioactivity detected in the environment and attributed to plant operations as part of the REMP.</u></p> <p><u>Southern Company reported the following potential whole body doses to the most limiting member of the public for 1999:</u></p> <ul style="list-style-type: none"> • <u>approximately 0.00046mSv/yr (0.046 mrem/yr) based on vegetation, 0.00013 mSv (0.013 mrem/yr) based on fish, and 0.000049 mSv/yr (0.0049 mrem/yr) based on sediment (Southern Company 2000b).</u>
Page 2-33, Line 21	States that the US 1 widening project is expected to be "undertaken" within 5 years. However, the reference document states that this project is anticipated to "begin" within 5 years. "Undertaken" implies that it will be completed in that time frame.	Change the wording "expected" to "anticipated" and "undertaken" to "begin".

Page/line #	Comment	Proposed resolution
Page 2-38, Line 21	In Table 2-13 the last number in the 30-40 Miles column is incorrect.	Change this number from 82,270 to 87,270.
Page 2-42, Line 24	<p>The text refers to one "historical site" known to exist on the HNP site, the Bell Cemetery. While the phrase "historical site" is not defined, its use within the section entitled "Historic and Archaeological Resources at HNP" can suggest an unintended meaning. This is because related regulations define "site" as a location of a significant event, activity, or structure [36 CFR 60.3(l)] and "historic property" as something included in, or eligible for inclusion in, the National Register [36 CFR 800.2(e)]. NRC does not seem to suggest that the Bell Cemetery has historical significance and, in fact, cemeteries or even graves of historical figures ordinarily are not considered eligible for inclusion in the National Register (36 CFR 60.4). As communicated in SNC letter, dated August 11, 2000, Plant Hatch is required by "Georgia Power's Human Remains Policy" to protect any known or discovered cemeteries or burial grounds whether it is a historical site or not.</p>	<p>Only one unrecorded historical site is known to exist on the HNP. This is The Bell Cemetery that is indicated...</p>
Page 4-26, Line 25.	See comment for Page 2-42, Line 24	Delete the word "historic"

Page/line #	Comment	Proposed resolution
Page 4-26, Lines 32-35	The text seems to suggest that SNC would have to perform a formal study to determine the likelihood of cultural resources being present before, for example, logging. A requirement for performing cultural resource evaluations has not been required of previous license renewal applicants. For HNP and the previous plants, NRC indicated that studies in the area found cultural resources and NRC imposed on the applicants only the standard of care. There is no apparent basis for treating HNP differently and the discussion on an evaluation should be deleted.	Such activities may include not only operation of the plant itself but also land management-related actions such as ground disturbance. Since the plant site has not been subjected to an intensive cultural resources field survey to identify and record all cultural resources, any landscape modification or ground disturbance of previously undisturbed areas should be preceded by a cultural resource evaluation to fulfill obligations under the National Historic Preservation Act of 1966 and implementing regulations.
Page 4-31, Line 16, 18	HNP revised permit and added two wells for irrigation of ornamental plants after ER was written. This change in the application was communicated to the staff by letter dated December 15, 2000.	Change "yield" to "use" Add to end of paragraph: Two smaller wells for irrigation of ornamental vegetation were placed in service in early 2000. Those wells typically draw 9000 GPD each and are used as needed.
Page 4-32, Line 10	HNP revised permit and added two wells for irrigation of ornamental plants after ER was written. This change in the application was communicated to the staff by letter dated December 15, 2000.	Add to end of paragraph: Irrigation wells four and five are also located in the Floridan Aquifer. A sixth well has been permitted in the Miocene Aquifer but has not been constructed.
Page 4-34, Line 33	Clarify text to edit description of shortnose sturgeon. As written the text could imply differences from other shortnose sturgeon	Thus, an additional 20 years of operation of HNP should not affect the viability of the Altamaha River shortnose sturgeon or result in any population decline.

Page/line #	Comment	Proposed resolution
Page 4-32, Line 35	<p>Section 7(2) of the Endangered Species Act reads as follows: "Each Federal agency shall, in consultation with and with the assistance of the Secretary (of Interior), insure that any action authorized, funded, or carried out by such agency...is not likely to jeopardize the continued existence of any endangered species or threatened species or result in the destruction or modification of habitat of such species...which is determined..to be critical, unless such agency has been granted an exemption for such action. In fulfilling the requirements of this paragraph each agency shall use the best scientific and commercial data available." Both the NRC and SNC biological assessments for the shortnose sturgeon are based on the "best scientific and commercial data available" and indicate that the impact would be small. The conclusion at the end implies that this is potentially an open item. SNC recommends that preliminary be deleted.</p>	<p>Based on the results of the NRC biological assessment, it is the staff's preliminary conclusion that the impact to the shortnose sturgeon is SMALL and that mitigation is not needed.</p>
Page 6-2, Lines 16, 17, 19, and 20	<p>Table 6-1 appears to contain an incomplete listing of GEIS Sections.</p>	<p>Add Section 6.6 to the GEIS Sections column in Table 6-1.</p>
Page 8-3, Line 34	<p>There are currently no known or identified Historic and Archaeological resources on the Plant Hatch site. Text implies that there are currently "known" resources and implies that the Visitors Center is one of them. These resources should be included in the socioeconomic paragraph and not under a heading titled "Historic and Archeological Resources. SNC also recommends revising conclusion as stated in the General Comments section.</p>	<p><u>Historic and Archaeological Resources</u>: The potential for future adverse impacts to known or unrecorded <u>cultural</u> historic and <u>archeological</u> resources at the HNP site following decommissioning will depend on the future use of the site land. Known resources and activities include the current Visitors Center and associated interpretative efforts that are funded and maintained by SNC. Eventual sale or transfer of the land within the plant site could result in adverse impacts on these resources should the land-use pattern change dramatically.</p>

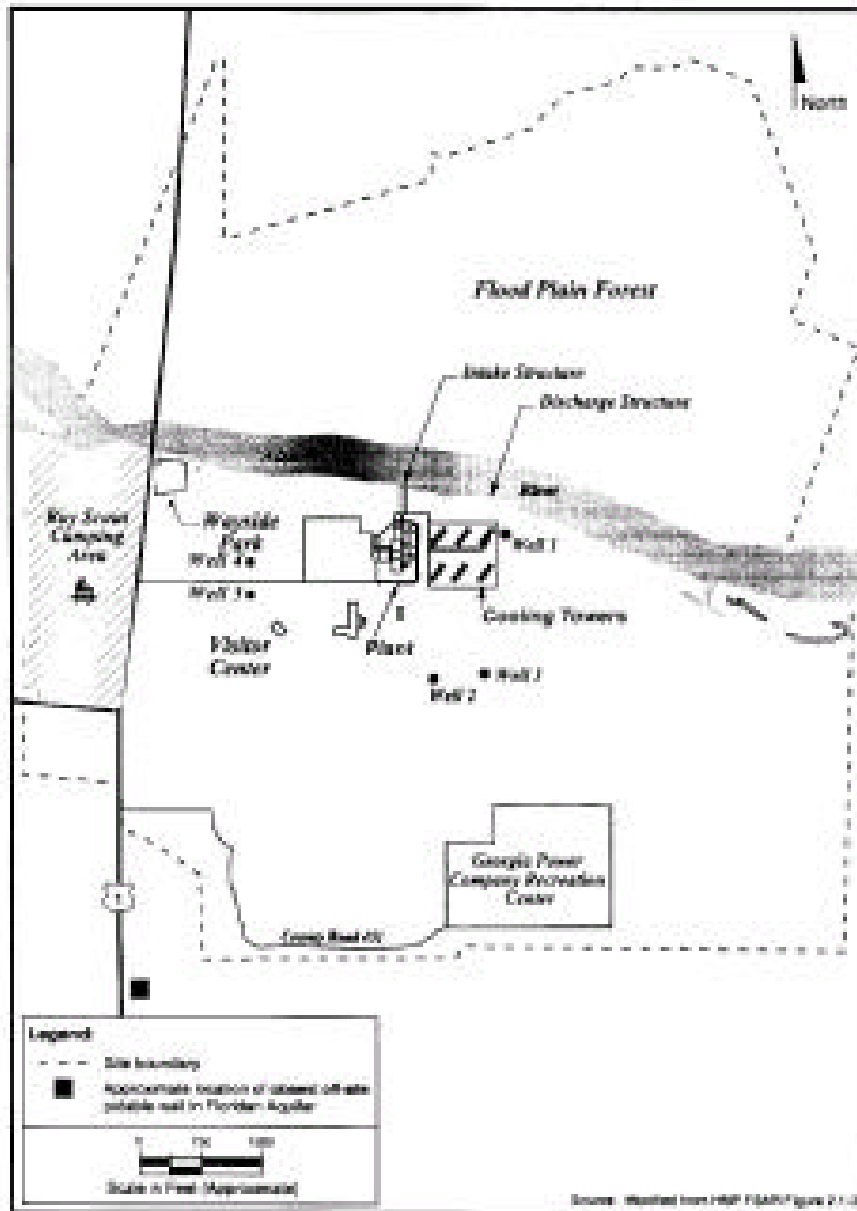


Figure 2-3. Hatch Nuclear Plant Property Plan

LETTER J

Lonice C. Barrett, Commissioner
David Waller, Director

Georgia Department of Natural Resources Wildlife Resources Division

2070 U.S. Highway 278, S.E., Social Circle, Georgia 30025
(770) 918-6400

January 22, 2001

65 FR 67418
11/9/00 (8)

Chief
Rules Review and Directives Branch
Division of Administrative Services
Mailstop T 6 D59
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555-0001

RECEIVED
JAN 27 11 33
DIVISION OF ADMINISTRATIVE SERVICES

Dear Sir:

The Georgia Wildlife Resources Division (WRD) offers the following comments on the Generic Environmental Impact Statement for License Renewal of Nuclear Plants, Supplement 4, regarding the Edwin I. Hatch Nuclear Plant Units 1 and 2. The report does not adequately address the affects of water withdrawals and blowdown during extreme drought conditions. Reduced withdrawals should be evaluated, and an emergency drought plan should be developed which would be implemented whenever river discharge drops below a pre-determined minimum level.

J01
J02

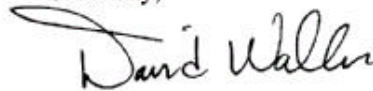
State and federally protected plants and animals were identified on the area and within transmission line corridors. Plant Hatch personnel should coordinate with WRD in the management of these transmission line corridors and areas outside of the plant operational boundaries to insure that management practices are not detrimental to these protected species.

J03

Additionally, the Plant Hatch facility could provide much needed public access to bank fishing on the Altamaha River. We feel Wayside Park, which is operated by Plant Hatch, could be improved to provide bank fishing or a fishing pier. WRD staff would like to see fishing access provided at this location or elsewhere on the site and would be available for consultation to design this access. Thank you for your consideration of these comments.

J04

Sincerely,



David Waller

DW:bd

LETTER K

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January 24, 2001
sent via certified mail

65FR 67418
11/9/00
(10)

David L. Meyer, Chief
Rules and Directives Branch
Division of Administrative Services
Mail Stop T 6 D 59
U.S Nuclear Regulatory Commission
Washington, D.C. 20555-001

RE: Draft Supplement to the General Environmental Impact Statement for License Renewal of Nuclear Plants, Supplement 4, Regarding the Edwin I. Hatch Nuclear Plant, Units 1 & 2 [Draft NUREG-1437, Supplement 4]

RECEIVED
JAN 27 11 22 AM '01
NRC

COMMENTS OF GEORGIANS FOR CLEAN ENERGY

The following comments are filed by Georgians for Clean Energy as part of the Environmental Impact Statement process for the License Renewal Application for Edwin I. Hatch Nuclear Reactors I and II by the Southern Nuclear Operating Company and others. The comments herein are a supplement to oral comments made by Sara Barczak, December 12, 2000, before the NRC in Vidalia, Georgia.

Georgians for Clean Energy is a non-profit conservation and energy consumer organization headquartered in Atlanta with a field office located in Savannah. We are a statewide organization with members throughout Georgia and have focused on energy and nuclear concerns for 17 years.

Evaluation Concerns

Georgians for Clean Energy, formerly known as Campaign for a Prosperous Georgia, has been involved in the Hatch relicensing process since it began. We are struck by the broadly insufficient review the Nuclear Regulatory Commission (NRC) conducted in producing Supplement 4 for the draft Generic Environmental Impact Statement (GEIS). Therefore, we resubmit herein all of our past comments and request that these be reviewed again. The following can be found as attachments:

- Attachment 1--CPG Comments on Environmental Impact Statement Application--6-9-2000
- Attachment 2--2.206 Petition Filing by CPG--2-22-00

Additionally, we request that the NRC review our oral comments again. Comments from the NRC meeting in Vidalia, Georgia made by Rita Kilpatrick on May 10, 2000 can be accessed at <http://www.nrc.gov/NRC/REACTOR/LR/HATCH/transcript1.htm> for the afternoon session and <http://www.nrc.gov/NRC/REACTOR/LR/HATCH/transcript2.htm> for the evening session. Comments made by Sara Barczak at the December 12, 2000 meeting in Vidalia, GA have not yet been posted to the NRC's License Renewal site but a link to that meeting will likely be found at <http://www.nrc.gov/NRC/PUBLIC/LR/scopingmtg.html>.

Georgians for Clean Energy finds that the GEIS process thus far does not allow for a site-specific analysis of the actual impacts of relicensing. Many organizations, including ours, object to this generic evaluation because it overlooks major site-specific problems. This fundamental flaw in regulatory oversight is glaringly apparent in the Hatch draft GEIS. Many of our and other organizations' site-specific concerns appear to not have been addressed in the draft GEIS, assumingly due in part to the generic assessment process. Georgians for Clean Energy took the time to thoroughly investigate our comments on behalf of the public interest and request that our concerns be properly addressed and incorporated into the final GEIS.

K01

Given how the Hatch draft GEIS is organized, it is impossible to tell if a specific comment made by others or ourselves was ever considered or addressed. For example, Appendix C lists the correspondence the NRC received from various citizens and organizations. It does not provide the comments themselves and, in particular cases, the NRC's responses. Though these documents should be available from the NRC's Public Document Room or ADAMS, both are time-consuming, cumbersome and at times, cost-prohibitive pursuits. What results is a document that appears to have completely dismissed valid, site-specific comments.

K02

Comments on December 12, 2000 NRC Meeting

Georgians for Clean Energy attended the NRC's public meeting and saw that many questions posed by the public were not adequately answered. In many cases, questions were asked and no one on the task team could provide an answer. We are awaiting information from the NRC as to how or where those questions will be answered. Currently, concerned organizations and citizens have no way of knowing whether or not their questions were ever answered.

K03

The Environmental Review presentation led by Task Leader Mary Ann Parkhurst was especially troubling and raised many new concerns surrounding the inadequacy of the NRC's review. Due to poor weather conditions, the aquatic ecology expert was unable to attend the meeting. No one present could satisfactorily answer many of the public's questions that pertained to one of our most significant concerns—Hatch's impact on the aquatic ecology and hydrology of the region. At one point, when the review of the site's impact on our aquatic species was summarized, a comment was made about generic "seafood" in this region. Evidently Ms. Parkhurst did not really know what types of species are present. This region has many types of "seafood" that are eaten by a vast number of locals and tourists throughout the year, not to mention other predatory

K04

species. It is unsatisfactory for the environmental review panel to not be familiar with this simple fact. Additionally, it appeared that the task leader was surprisingly unfamiliar with this environmental review—particularly the site-specific concerns that citizens raised during the meeting despite how some of these concerns were being raised for the second or third time. We were told at the meeting that local “experts” were consulted, though in Appendix B it is readily apparent that specialists with knowledge of the Southeast’s unique geology, hydrology, and ecology are nowhere to be found. We ask the NRC to conduct thorough site-specific analyses using recent data and information, to contact local or regional organizations and specialists, and to fully address our and others concerns with properly documented information easily accessible to the public.

K05

Additionally, it is of overall concern that many of the studies used to support the belief that relicensing the plant will not cause any damage are extremely dated. Many of them were conducted in the mid to late 1970s. Many conditions have changed since then—and many, especially in relation to water supplies, have worsened. A review of the most recent studies is imperative. If there are not updated studies available, it seems equally imperative that they be done prior to the NRC submitting a final GEIS.

K06

During the review of the Environmental Impact of Postulated Accidents, it was apparent that this region is looked at as no more than a number within a massive file of other numbers. Though Mr. Snodderly attempted to present clear information, his numbers and equations raised questions about their relevance in addressing our concerns. The audience in Vidalia was told that if the cost of a Severe Accident Mitigation Alternative (SAMA) is greater than the \$500,000 cost associated with the maximum potential risk benefit, it is dropped from review. This is further confirmed on page 5-12 of the draft GEIS. We are concerned that this method is flawed.

K07

After seeing this approach continually applied when assessing SAMAs, we have become increasingly concerned that the safety of the public and the environment is not of paramount concern to the NRC. This concern is dramatically highlighted on page 5-4 of the draft GEIS when the NRC requested additional information from Southern Nuclear Operating Company regarding how they identified potential SAMAs. The company’s responses “addressed the staff’s concerns and reaffirmed that none of the remaining SAMAs would be cost-beneficial.” This dialogue should have been published in the draft GEIS and we request that the NRC make those documents publicly available. It is apparent that financial costs to the plant owners are more important than the health and safety of the region. Though the NRC does not consider the chances of a meltdown or a catastrophic release to the environment as “credible” they do deem them as “possible.” We ask the NRC to address the impacts of a meltdown and catastrophic releases to the environment, provide the information to us, and include them in the GEIS. 1

K08

K09

K10

1 As a further example of our concerns, regarding the NRC’s approach to SAMAs, the NRC’s panel did not seem to be aware of a recent, regional controversial issue that also revolved around financial costs to the plant owners instead of the costs borne by the local environment. The Southern Company successfully urged the Army Corps of Engineers to drain

Area of Vital Ecological Significance

The relicensing of Hatch nuclear plant has and will continue to negatively impact Georgia's largest river, the Altamaha, which is also the second largest river basin in the eastern United States. For that fact alone, special attention needs to be placed on properly analyzing this ecosystem. In previous comments, Georgians for Clean Energy listed several past releases of contamination into the environment that have detrimentally impacted the region. The NRC should review the entire docket prior to issuing a final GEIS for the plant. Hatch nuclear plant is located in Appling County along the banks of the Altamaha River--an area of vital ecological significance to Georgia and the region. The livelihood of hundreds of thousands of people depends on this river and billions of dollars of resources from fisheries, agriculture, tourism, and other coastal activities are at stake here.

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A full review of the most recent studies pertaining to the region's ecology, including all flora and fauna, is extremely important, which requires site visits by the NRC staff to the affected region, not just to the site of the plant. Meeting with locally informed specialists and non-governmental organizations would provide much needed perspectives beyond the ones presented in the draft GEIS. Appendix D indicates that not one regional environmental or conservation group was contacted. Additionally, the state agencies contacted are not specialists in nuclear power related discharges or related environmental activities.

K06

Aquatic Impacts / Concerns

Had specialized organizations been contacted, the NRC review panel would have been alerted to the fact that the robust redhorse, a big-river fish, was inaccurately considered to be extinct in the 1970s and is currently present. Therefore, a review of the impacts of relicensing on this species should have been done in the draft GEIS. Though the fish is currently not a federally listed species, there is concern as to why that designation has not occurred. The NRC review team should investigate these concerns by contacting the Georgian Department of Natural Resources (GADNR) Wildlife Resources Division and the Fish and Wildlife Service, among other agencies, to research their efforts to update lists of threatened and endangered species at both the state and federal levels.

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Many concerns about the shortnose sturgeon, a federally endangered aquatic species found near the plant, have still not been properly addressed. The Fish and Wildlife Service (FWS) and the National Marine Fisheries Service (NMFS) voiced written concerns as well—including concerns

K16

billions of gallons of water from reservoirs to increase the water levels in the Chattahoochee River so that they could float barges large enough to deliver new steam generators to their aging nuclear Plant Farley just across the Georgia border in Alabama. If the generators could not be delivered by barge, it was estimated that delivering the generators in another way could cost the company more than \$500,000. Yet, though this region of the country is experiencing a severe drought, costs to the company were considered more important than costs to the environment and the region's drinking water supply.

over the freshwater mussel and the flatwoods salamander. The draft GEIS fails to present the public with important information documenting the correspondence that occurred between the numerous agencies and industry representatives. From the draft GEIS, it is not clear whether or not the NMFS has yet concurred with the NRC staff's assertion that the license extension will not impact the sturgeon population. Nor is it clear regarding the dialogue that ensued as to whether other species have been determined not to be impacted either.

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In Appendix E, the NRC states that the potential additional twenty years of plant operation at Hatch "may affect, but is not likely to adversely affect, the shortnose sturgeon." Does that statement imply that the plant could somehow positively affect the sturgeon? This possibility is highly doubtful. The analysis provided does not clearly state how the species would or would not be impacted. Specifically, the impingement samples listed in Table 2-2 were collected from 1975-1980 and were used by the NRC in this draft GEIS to provide a characterization of the fish of the Altamaha River and vicinity (Section 2.2.5). The region has changed drastically since then. Those numbers do not accurately reflect current conditions in the area—especially the extreme drought situation that has continued over the past years. Using such old data affects all the listed species; therefore, this is not just a concern for the sturgeon. Also, many of the studies referenced in Appendix E are out-dated as well. Most of the recent studies were not conducted on the Altamaha, but rather were studies commissioned for the shortnose sturgeon population found in the Hudson River in New York. Georgians for Clean Energy is interested in knowing why more recent studies of the Altamaha were not commissioned. Furthermore, Georgia Environmental Protection Division (GAEPD) readings 2-10X above background levels of cobalt-60, zinc-65, manganese-54, and cesium-137 were found in river sediment, in some cases up to 100 miles downstream. Given that the sturgeon is a bottom feeder, why hasn't a study been commissioned for the NRC on the Altamaha sturgeon population to determine whether or not these levels impact the species? The species has declined over the decades and this document fails to prove that plant Hatch operations have not contributed to this decrease.

K18

The study on the sturgeon listed in Appendix E of the draft GEIS suggests that the temperature conditions for the reproductive success of the sturgeon is very important. Plant Hatch currently does not have a maximum discharge temperature requirement with the GAEPD. Maximum discharge temperatures within the mixing box have been reported at 94 F in the summer. It is possible that the discharge temperatures, along with the severe drought conditions, among other factors, could negatively impact the sturgeon. We demand the NRC to conduct new, independent studies for the sturgeon population in the Altamaha. Additionally, Plant Hatch's National Pollutant Discharge Elimination System permit is due to expire in 2003. NPDES permits do not address radioactive effluents but the NRC should review potential future NPDES discharge temperature limits to more effectively gauge whether the plant can comply with state and federal requirements.

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Furthermore, plant Hatch is the largest permitted water user on the Altamaha River. The draft GEIS inaccurately states that they are permitted to consume a monthly average of up to 72 million gallons per day with a maximum 24-hour rate of up to 104 million gpd. The Surface Water Withdrawal Permit was amended in April 2000 to increase the monthly average to 85 million gpd with the maximum daily use remaining the same. This permit will expire in 2010. The NRC should update this recent change and contact the GADNR Water Resources Division to investigate future permitting concerns especially in light of the current, sustained drought that this region is experiencing.

K21

As mentioned earlier, the data on the impingement samples are extremely old. Georgians for Clean Energy does not believe that more than twenty-year-old data is reliable to use in order to project future impacts for the region thirty years from now. For instance, the most frequently recovered species listed in the impingement data was the hog choker, a freshwater flounder. Since then, the Altamaha has experienced a wide spread invasion by the non-native flathead catfish and the hog choker has not been as widely seen. In the 1997-99 GADNR Environmental Protection Division's Environmental Radiation Surveillance Report, only one flounder sample was measured, while ten catfish were sampled, out of a total of seventeen samples. Though the EPD report does not explain sampling methodology, this uneven "catch" should raise concerns within the NRC regarding the use of such old sampling data when reviewing the license renewal. The EPD report is only a surveillance study and does not address the biological impacts of radiation within the region's ecosystem.

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Terrestrial Impacts / Concerns

A significant number of federally and state-listed endangered terrestrial animal and plant species are found at the Hatch site or within the transmission line rights-of-way (Tables 2-3, 2-4, 2-5). The draft GEIS fails to provide the specific results of the field surveys that Southern Nuclear Operating Company commissioned of the region so it is unclear as to when the sampling occurred, what was sampled, and who conducted them—a reference citation suggests 1998 but it is unclear if that study pertains only to the freshwater mussels in the area. Similarly, the gopher tortoise data appears to be from 1987. Additionally, where can the recent analysis of the bird populations be found? This lack of specificity in NRC reporting is unacceptable. Species of plants, reptiles, amphibians, birds, and mammals were listed in those tables. The draft GEIS fails to document how the NRC assessed that an additional twenty years of plant operation, beyond the current license expiration dates of 2014 and 2018, would have little to no impact on these species. It is unclear as to what agencies specifically were asked to provide comment on the potential future impacts on these species. For instance, correspondence between GADNR, FWS, and NMFS occurred, but what species were they addressing? Did they assess all the species listed or just those overseen by their agencies? How can this assessment be properly reviewed if a full review by knowledgeable organizations and governmental agencies have not been involved in the initial review and resulting correspondence? For example, it appears that the GADNR's Non-

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Game/Heritage Program was contacted and they do indeed have expertise in this area. But were they asked to comment just on the mussel study that was completed in 1998?

The analysis of various species of mussels that are found along the Altamaha is not mentioned in the draft GEIS yet public comments have been raised about several endemic species. Several species have lessened in their frequency downstream of plant Hatch. How has plant Hatch been ruled out as not partially contributing to that decline? Furthermore, the Altamaha spiny mussel likely will be recommended to add to the state's list of concerned species and may also be a candidate for federal listing. These designations could occur after plant Hatch receives a license renewal. With this information, how can the NRC confidently predict that the continued and extended operation of this plant will not impact this species? Other species of plants, birds, animals, reptiles, amphibians, or aquatic organisms could change their listing status as well and it is not clear that the NRC looked at future listing changes. Yet, it can somehow be predicted that the plant itself will not impact the region's future ecosystem even though the draft GEIS is lacking a future projection of what the region may be like. We ask the NRC to meet with the GADNR, FWS, and the NMFS to discuss changes that may be made to threatened and endangered species lists in order to more accurately assess future impacts of plant Hatch on these organisms. Additionally, these agencies should receive copies of all the inspection reports, violations, and past contaminations to the river, the nearby wetlands, and the site itself that have occurred from the docket so they can see how plant Hatch has negatively affected the environment.

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Air Quality Impacts / Concerns

On page 2-21 the draft GEIS incorrectly states "HNP is located on the Altamaha River between Savannah and Macon in western Georgia." Plant Hatch is more accurately in south central Georgia, definitely more east than west. Additionally, Hatch is southwest of Savannah and is along the Altamaha between Macon, where one of the Altamaha's headwater sources is, the Ocmulgee, and Darien, where the mouth of the Altamaha is found, not Savannah. The NRC review staff is obviously not familiar even with the location of the plant.

K31

The closest non-attainment area is soon to be Macon since Georgia's Governor Barnes has alerted the EPA that Macon, Columbus, and Augusta have violated the new ozone ambient air quality standards. The EPA will likely designate Macon as a non-attainment area based on the old 1-hour ozone standard in the near future. Though Savannah has not yet violated the ozone standard it has come close and may do so in the future. If it does, this could potentially affect surrounding areas, including Hatch. The draft GEIS analysis is lacking crucial, current information in assessing Hatch's impact on the region's air quality.

K32

Furthermore, there is significant concern over the emissions from the plant's cooling towers. A tremendous amount of water is lost every day in the form of radioactive water vapor from the towers. The draft GEIS states that plant Hatch consumes an average of 33 million gallons of water per day. Fine particulate matter would be suspended in that water vapor and carried

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through the air to be deposited elsewhere within the region. Given Plant Hatch's daily water vapor losses, these numbers could be significant and may qualify the plant as a major source and should be assessed under the federal Prevention of Significant Deterioration program specifically in reference to its PM-10 emissions. It is not clear if Plant Hatch's Title V permit properly assessed whether or not the cooling towers should be added as a source—currently they are not. The permit will expire in February 2004 and therefore the NRC should consider future amendments. Additionally, there are mercury advisories for various fish species in the Altamaha. Depending on the levels of mercury present in the river water, mercury could also be present in the water vapor, and though not currently listed as a criteria pollutant, it may be in the future. An assessment of the Altamaha's water quality should be conducted in order to properly determine the towers' possible emissions. Additionally, radioactive decay products coming from the cooling towers decay to, for example, cesium-137 and strontium-90, which contaminate the surrounding populations and ecology. Georgians for Clean Energy demands that the NRC review staff thoroughly review these concerns before granting the license renewal.

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Impacts of Uranium Fuel Cycle

On page 6-7, under "Onsite spent fuel", the NRC found: "The expected increase in the volume of spent fuel from an additional 20 years of operation can be safely accommodated on site with small environmental effects through dry or pool storage at all plants if a permanent repository or monitored retrievable storage is not available." At the public meeting on December 12, 2000 in Vidalia, Georgia, the NRC staff made statements that were somewhat confusing when asked about this subject. Does the draft GEIS address the site's Independent Spent Fuel Storage Installation (ISFSI). If not, why not, as it directly affects the environmental impact of plant Hatch operations – now and in any relicensed future? The ISFSI is storing "onsite spent fuel" so it seems reasonable that the impacts should be addressed.

K37

Is it the NRC's assessment that if a permanent repository or monitored retrievable storage is not available in the future then it will be acceptable to continue storing waste at plant Hatch? Does this mean that on-site storage of highly radioactive waste at plant Hatch could permanently remain on the outdoor cement storage slab, the ISFSI? How can the long-term environmental effects of dry cask storage at Hatch be known at this time when the first three casks, casks that have never before been used at any other nuclear plant, were just loaded this summer? How is it possible to know that the casks will not impact the environment more than thirty years from now? The generation of highly radioactive waste is an unavoidable result of nuclear power generation. According to the relicensing application, plant Hatch will generate 5000 more radioactive spent fuel assemblies (as each assembly contains 60 spent fuel rods, that equals 300,000 additional spent fuel rods). It is imperative that a proper analysis of the facility's waste generation and how that future generation will impact the surrounding community and regional ecosystems be included in the final GEIS. We request that the NRC answer these questions and add the ISFSI and its projected future impact on the region into the scope of the license renewal review.

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Inadequate Analysis of Alternatives

The NRC staff analysis of alternatives considers merely one combined option: replacing plant Hatch with gas plants and energy efficiency. This analysis does not consider a more robust mix of natural gas, purchase power from non-utility generation, energy-efficiency, and distributed generation technologies.

K41

Nor does it adequately compare alternatives over the life cycle of Plant Hatch and the subsequent storage of spent fuel. Plant Hatch's current license assumes retirement in 2014 and 2018. These dates are approximately 13 and 17 years away. NRC staff analysis fails to consider technological changes in the maturation of generation technology such as fuel cells and solar photovoltaic that may occur in the coming decade, as well as other opportunities with environmentally sound biomass options.

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Considering that the most recent long-range Integrated Resource Plan for Georgia Power Company, approved by the Georgia Public Service Commission, identifies ways that the company plans to secure power supplies in the long term based on future, projected demand and assumes that Hatch is not relicensed, it is clear that the analysis of alternatives along the planning horizon is inadequate.

K48

Georgians for Clean Energy holds that the application and the NRC staff analysis fail to consider the ability of renewable energy supplies in combination with energy efficiency and cleaner generation (fuel cells, cogeneration, micro turbines, high efficiency gas, bio-fuels, etc.) to make a major, low cost impact on the applicant's high polluting and unsafe generation profile.

K43

In the summer of 2000, the severe drought in Georgia forced Georgia Power Company to purchase peak priced electricity – almost \$100 million dollars worth that was not planned. Money spent on these “band-aid” supply-side solutions does not return any value to company customers. Had the money been invested in distributed resources and peak-clipping technology, a return would have been realized for many years beyond the summer of 2000. Shortsighted planning such as this and the inadequate review of alternatives presented in the application fail to provide value to consumers and to protect the environment.

K49

Regarding market-based, renewable energy programs, Georgians for Clean Energy urges that the Southern Company and its partners continue working with our organization, the renewable energy industry, and the Center for Resource Solutions, a voluntary certification program that requires utility participants to follow specific guidelines that promote renewable resources to offer clean renewable resources to its customers. We request the NRC to review the Integrated Resource Plan mentioned above and to re-evaluate alternative energy options for this region.

Conclusion

Georgians for Clean Energy maintains that the NRC's history of frequently categorizing problems as generic industry problems is not serving the public interest in the case of plant Hatch's relicensing. We request that the NRC treat all problems and areas of concern raised about Plant Hatch in this re-licensing proceeding and others as "site specific problems," not generic industry problems. Many have been identified in these and previous comments and require further review.

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Building a safe, affordable and efficient energy supply that provides safe jobs to the area is a top priority. Georgians for Clean Energy does not believe that the relicensing of Plant Hatch will work towards those goals. Along with the variety of reasons mentioned in these comments and those issued previously, we are opposed to the license renewal of the plant. Extending the life of this decrepit nuclear plant will only ensure the continued degradation of the environment and increase the already high risks to the surrounding population and downstream and downwind communities. We urge the NRC to thoroughly investigate our concerns and those of other organizations and individuals who have raised concerns in the public interest.

K46

Respectfully submitted,



Sara Barczak
Safe Energy Director

Attachments (3)

LETTER L



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 4
ATLANTA FEDERAL CENTER
61 FORSYTH STREET
ATLANTA, GEORGIA 30303-8960

65 FR 67418
11/9/00
13

February 6, 2001

4EAD

Chief
Rules Review and Directives Branch
Division of Administrative Services
Mailstop T 6 D59
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555-0001

RECEIVED
2001 FEB 13 AM 9:10
Rules and Directives
Division
EPA

**RE: EPA Review and Comments on
Draft Generic Environmental Impact Statement (GEIS) for
License Renewal of Nuclear Plants, Supplement 4
Edwin I. Hatch Nuclear Plant, Units 1 and 2
Draft NUREG 1437
Appling County, Georgia
CEQ No. 000380**

Dear Sir/Madam:

Pursuant to Section 102(2)(C) of the National Environmental Policy Act (NEPA) and Section 309 of the Clean Air Act, the U.S. Environmental Protection Agency (EPA) has reviewed the document entitled "Generic Environmental Impact Statement for License Renewal of Nuclear Plants Regarding the Edwin I. Hatch Plant, Units 1 and 2", Draft Report for Comment, NUREG-1437 (Draft GEIS). This document provided information to educate the public on general and project specific environmental impacts and analysis procedures, and allowed the public review and disclosure aspects of the NEPA process. The purpose of this letter is to provide the Nuclear Regulatory Commission (NRC) with EPA's comments regarding concerns of potential impacts of the renewal of the Edwin I. Hatch Nuclear Plant (Plant Hatch) Operating License. In addition, EPA has received correspondence from concerned citizens who have voiced their concerns over the Plant Hatch relicensing.

Plant Hatch is a nuclear power electric generating facility that has process water discharges regulated by the National Pollutant Discharge Elimination System (NPDES) program which provides effluent guidelines for the steam electric generating category, including cooling tower blowdown and low volume waste. NPDES programs in the State of Georgia are managed by the Georgia Environmental Protection Division (EPD). According to Georgia EPD, Plant Hatch is in compliance with its NPDES permit, and a recent search of EPA's Permit Compliance System likewise shows no NPDES violations for this facility.

inplate - ADM-013

*F-RIDS = ADM-03
Add = A. Beranek (A=B)*

Internet Address (URL) • <http://www.epa.gov>

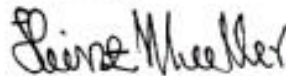
Recycled/Recyclable • Printed with Vegetable Oil Based Inks on Recycled Paper (Minimum 30% Postconsumer)

EPA has reviewed correspondence of concerned citizens who have voiced concerns over the relicensing of Plant Hatch. These concerns referenced potential and alleged spills of radioactive materials at the site, and alleged radioactive materials contaminating the environment. While EPA is concerned about these allegations, EPA does not regulate the radioactive components of any waste streams; that is the responsibility of the Nuclear Regulatory Commission (NRC). Regulatory levels of α , β , and γ radioactivity for all waste streams are under the authority of NRC and their state regulatory counterpart. The NRC and its licensee share a common responsibility to protect public health and safety. Therefore, we are forwarding copies of this correspondence to NRC under separate cover, and request that the concerns are thoroughly addressed in the Final EIS.

Based upon the information provided in the Draft GEIS we rate the document "EC-2," that is, there are environmental concerns on some aspects of the proposed project, and more information is needed. Specifically, more information is needed regarding environmental justice, clarification of potential impacts, and on-site groundwater wells. The attached comments detail our concerns regarding the Plant Hatch relicensing.

Thank you for the opportunity to comment on this Draft GEIS. If you have any questions or require more information please contact Ramona McComney of my staff at (404) 562-9615.

Sincerely,



Heinz J. Mueller, Chief
Office of Environmental Assessment

EPA Review and Comments on
Draft Generic Environmental Impact Statement, Supplement 4
Edwin I. Hatch Nuclear Plant, Units 1 and 2
NUREG 1437
Appling County, Georgia
CEQ No. 000380

GENERAL:

Throughout the document, there are references to both a Generic Environmental Impact Statement (GEIS) and a Draft Supplemental Environmental Impact Statement (DSEIS). Clarification of the document format is needed.

L01

There is concern that the plant is exempted from certain regulations, such as the Georgia Coastal Zone Management Act and other local land use and/or zoning restrictions, due to its location. Are these elements being tracked and can the results be quantified?

L02

Submission of all referenced documents would decrease the amount of review time. For example, the Office of Nuclear Reactor Regulation office letter (NRC 1999b).

L08

WATER:

Drinking Water & Underground Injection Control: Information reviewed from the Safe Drinking Water Information System (SDWIS) showed that the plant has not experienced a Safe Drinking Water Act (SDWA) violation since 1993 and no health-based violations or monitoring, reporting, and other violations have been reported. With over four new Rules being promulgated through the SDWA within the next 3-8 years, how will the owners address the impact of these regulations?

L03

There are inconsistencies regarding the number of Drinking Water wells permitted at the site and the associated ID numbers for these wells. In Appendix E, it is stated that the permit authorizes withdrawal from two wells, on pages 2-30 and 2-31, it is stated that there are three wells, and later in the document it is stated that four wells are permitted. There should be consistency in the number of wells operated by the facility.

L04

The Drinking Water ID number of the wells reported in the document were not consistent with the ID number assigned to the facility by the State. Not having the correct information, including the ID numbers, slowed the review process.

ENVIRONMENTAL JUSTICE:

Per Executive Order 12898 (59 FR 7629), Environmental Justice (EJ) is to be considered under NEPA. The document mentions EJ, but on pages 3-3, 4-20, it is stated the EJ was not addressed. More details are needed in order to make an informed assessment and to provide more clarification for information provided. Specifically, page 4-27 presents a list of five parameters that could impact human populations, however, there are no explanations of how these parameters could migrate to impact surrounding areas, nor an

L05
L07

explanation of what the potential impacts could be. Clarification and more details are needed.

More information is needed to clarify what is meant by water use conflicts, what the source of potential electric shock is, which microbial organisms are of concern and what their potential impacts are, and more detail on your evaluation of postulated accidents with respect to EJ populations. It is also unclear what environmental pathway some of these parameters would use to impact human populations.

L06

LETTER M



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE

Southeast Regional Office
9721 Executive Center Drive N.
St. Petersburg, Florida 33702
(727) 570-5317, FAX 570-5300

65 FR 67418
11/9/00
11

January 29, 2001 F/SER4:PB:am

Chief, Rules and Directives Branch
Division of Administrative Services
(Mailstop T6D59)
U.S. Nuclear Regulatory Commission
Washington, DC 20535

REC'D - NUCREG
1/30/01 11:19 AM
FISHERIES

Dear Sir or Madam:

The National Marine Fisheries Service (NMFS) has reviewed NUREG-1437, Supplement 4 concerning the Generic Environmental Impact Statement for License Renewal of Nuclear Plants, Edwin I. Hatch Nuclear Plant (Hatch Project), Units 1 and 2 (SEIS). The Hatch Project is located on the Altamaha River in Appling County, Georgia. The SEIS was prepared by the U.S. Nuclear Regulatory Commission (NRC) in response to an application by Southern Nuclear Operating Company (Licensee) to renew the operating licenses for the Hatch Project for an additional 20 years.

General Comments:

In general, the document is well written and adequately addresses project-related effects on existing fishery and aquatic resources of the Altamaha River. Based on our review of the SEIS and supporting information, we concur with your staff's determination that the project's effects on diadromous fishery resources are not significant at this time. However, we are concerned that these impacts may become much greater during the license period since impingement and entrainment of adult fish and/or their eggs and larvae are likely to increase. The Altamaha River is currently the focus of cooperative efforts by state and Federal natural resource agencies to protect and restore fishery and other aquatic resources. The river's diadromous fish populations include striped bass (*Morone saxatilis*), American shad (*Alosa sapidissima*), blueback herring (*Alosa aestivalis*), American eel (*Anguilla rostrata*), Atlantic sturgeon (*Acipenser oxyrinchus*), and the Federally-listed endangered shortnose sturgeon (*Acipenser brevirostrum*). Although populations of these species have been seriously reduced throughout their range, the Altamaha River continues to support relatively modest numbers of these fish, and may harbor the largest remnant population of shortnose sturgeon south of Cape Hatteras, North Carolina.

M01

Template = ADM-013

E-RIS = ADM-03
Call = DON BECKER (AFB)
A KUGLER (OSKI)



Specific Comments:

Pages 2-22 through 23, Section 2.2.5. This section discusses potential impingement and entrainment of fish. Data used to support the analysis include five (5) years of sampling data that were collected between 1975-1980. The data indicate that low levels of impingement and entrainment of diadromous species life stages occurred during this period. While this may accurately reflect previous and even current conditions, it does not consider the effect of ongoing and future restoration of fish populations. Therefore, this section should be expanded in the final document to address population changes that could occur during the new license term if larger numbers of fish eggs and larvae are present due to restoration efforts.

Page 4-7, Section 4.1, Paragraph 3. This section discusses the environmental impacts of the plant's cooling water system on entrainment of subadult fish. The paragraph refers to the NRC Generic EIS which states: "Entrainment of fish has not been found to be a problem at operating nuclear power plants with this type of cooling system and is not expected to be a problem during the license renewal term." It is further stated that: "The staff has not identified any significant new information during its ...site visit, the scoping process, or its evaluation of other available information. Therefore, the staff concludes that there are no impacts of entrainment of fish and shellfish in early life stages with this type cooling system during the renewal term beyond those discussed in the GEIS." This view does not sufficiently consider that significant elevation in entrainment of eggs and larvae of anadromous species, particularly American shad, blueback herring, striped bass, and Atlantic and shortnose sturgeons, is possible as a result of population increases during the license renewal period. Based on experience in other southeastern rivers where diadromous fish restoration efforts have been implemented, it is possible that restoration goals (upstream migration past the Hatch Plant) for anadromous fish species such as American shad could produce more than 250,000 spawners during the license renewal term. The current size of spawners in the Altamaha is not known, but it is likely to increase as management efforts are implemented and changes in water column density of eggs and larvae could be significant. Accordingly, a detailed explanation of these impacts, including mitigative measures that could be implemented, should be provided in the final environmental document for the project.

M02

Summary Comments:

Considering that ongoing and future fishery restoration efforts in the Altamaha River could significantly affect the environmental consequences of operating the power plant, those consequences need to be addressed. The NMFS also believes that the NRC should establish a process for ensuring effective and timely coordination between the NRC, the Licensee, and resource agencies regarding fish impingement and entrainment since further coordination will be needed during the license renewal process. More specifically, the process should address initiation of agency coordination in response to expected changes in fish populations and elevated effects of impingement and entrainment at the Hatch Plant; monitoring and other studies that may be needed; and possible modification of final license conditions as may be needed to restore and sustain fish populations.

M03

Finally, in accordance with the Endangered Species Act of 1973, as amended, it is the responsibility of the appropriate Federal regulatory agency to review its activities and programs and to identify any activity or program that may affect endangered or threatened species and their habitat. If it is determined that these activities may adversely affect any species listed as endangered or threatened, formal consultation with our Protected Resources Division must be initiated. That office may be contacted at the letterhead address, or at (727) 570-5312.

The NMFS looks forward to further coordination with NRC, the Licensee, the Georgia Department of Natural Resources, and the U.S. Fish and Wildlife Service in this matter. Related questions or comments should be directed to the attention of Mr. Prescott Brownell at our Charleston Area Office. He may be reached at 219 Fort Johnson Road, Charleston, South Carolina 29412-9110, or at (843) 762-8591.

Sincerely,

A handwritten signature in black ink, appearing to read "Andreas Mager, Jr.", with a long, sweeping horizontal line extending to the right.

Andreas Mager, Jr.
Assistant Regional Administrator
Habitat Conservation Division

LETTER N

Given at Scoping Meeting

May 10th, 2000

Statement and Testimony of Pamela Blockey-O'Brien, on behalf of the F.O.R./I.F.O.R (National and International Fellowship of Reconciliation) to the U.S. Nuclear Regulatory Commission, AGAINST the request of Southern Nuclear Operating Company - a subsidiary of The Southern Company - - on behalf of itself and co-owner licensees, namely : Georgia Power Company, Oglethorpe Power Corporation, Municipal Electric Authority of Georgia and the City of Dalton - for a License Renewal under the Atomic Energy Act of 1954 as Amended for Renewed Operating Licenses for Nuclear Power Plants Edwin I. Hatch Units I and II, Dockets Number 50-321 and 50-366, located on the banks of the Altamaha River, in Appling County, Georgia, with the Application for License Renewal dated February 2000. The Application is 1200 pages according to NRC, the pages are divided in sections and numbered according to section. After some difficulty I recieved a copy last week. Since then every waking moment (and in my nightmares) I have been going over this Application - an Application, by the way, that reminds one of a crooked used car salesman trying to sell a junk vehicle without disclosing too much about the bombs on board, the ingredients in the bombs, that some of the ingredients are released to the environment as the vehicle travels and that the engine block is more or less held together with baling wire and spit balls .

It saddens me to have to come to a community held hostage by the fact that around 70% of its tax base comes from a radioactive hulk which threatens their existance by its mere presence, with a high level radioactive waste dump inside it and another one being created outside it, the contents of which will be radioactive essentially for eternity. When the Georgia Power Company teamed up with the Georgia Institute of Technology and the forerunner of the Nuclear Regulatory Commission and forerunner of the Department of Energy, namely the Atomic Energy Commission and brought a research reactor to Georgia Tech on which to train reactor operators so the South could be nuclearized with power plants, you can bet your stock options that few were told the ultimate consequences, just like today. So let us examine the truth :

Just as in a nuclear bomb, inside a nuclear power reactor such as Hatch, the atom is split, or "fissioned" releasing incredible energy, but inside a reactor, with luck, the nuclear reaction is "controlled" and can be stopped. Water is hauled out of the Altamaha River, forced between the hundreds and hundreds of fuel rods containing enriched uranium, the rods grouped in bundles called assemblies, as the atom is split, the water is simulataneously cooling the rods so they don't melt-down, and generating steam to power turbines for generators for electricity. In the process, more than eighty different possible radioactive "split" products, called "fission products" are formed, capable of releasing ionizing radiation, X-Rays, alpha and beta particles, gamma rays or neutrons. For example, Xenon-137 is created which gives off (negative) beta radiation which becomes cesium-137, which gives off gamma radiation. "Activation products" are also created, the violence of the nuclear chain reaction causes existing chemicals in air, water, nearby materials etc. to absorb energy change structure and become radioactive. Approx. 300 different radioactive chemicals created, must then go through many half-lives as they decay back to their natural stable state, all the while emitting radiation. Radioactive particles created decay into other radioactive so-called "daughter products". During the process plutonium is also created in the fuel rods, along with other radioactive "goodies" like Cobalt-60, Cesium-137 and Strontium-90. When there are insufficient atoms left inside the uranium in the fuel to split to maintain a steady power state, rods are said to be "used", or called "spent fuel", The

rods in their assemblies are now the most radioactive thing on the face of the earth more or less, besides an atomic bomb explosion. They are removed from the reactor core underwater for shielding against the incredible radioactive decay heat coming off them and stuck in a pool of water, which is an inside radioactive dump, to sit there forever and forever until someone, somewhere goes one better than The Creator and changes the laws of physics, energy, matter etc. and can render nuclear waste safe. According to information provided me, as of last Nov. Hatch had approximately 302,008 radioactive rods in the pool and 69,440 in the combined cores of Hatch I and II. The Brookhaven Study done for NRC in 1997 regarding radioactive spent fuel estimated a worst case scenario, full pool at a BWR, of 138,000 dead after one year in a 500 mile radius and 2,170 square miles of contaminated land in event of accident, in the pool. The pool is located between the fourth and fifth floor level approx. It is patched because they already dropped a bolt weighing hundreds of pounds into it, ruptured the liner and contaminated the hell out of the place, and have had leaking fuel in reports, yet Southern does not seem to mention this or discuss it under Severe Accident Mitigation Alternatives or under Aging Effects regarding the pool, except to discuss water chemistry, when it is known that radiation degrades the cement, steel etc. alloys etc. and causes all types of corrosion, irradiation embrittlement, pitting, and a host of problems they even admit to in the application, for everything at the plants from the reactor to the fuel, pool, and everything involved from the ground up. The CRAC-2 Report to congress back in the early 1980's concerning a core melt at Hatch and releases would cause hundreds of dead per Unit, thousands of injuries and up to \$56 Billion in damages causing radiation injury over a 70 mile radius. It would be the death of middle and south Georgia, due to high groundwater the core melt would hit the Altamaha faster than Southern's executives could leave the State. If it happened at a time when the Altamaha's flow was high, as in 1993/94/95, when in some months it ranged between around 45,000 cubic feet a second to around 70,000 cubic feet a second at the Doctortown gauge south of the plant by some miles according to USGS documents, or the December 1948 flood in the applicants own documents of 130,000 cubic feet a second north of the site, it wouldn't take too long to reach Georgia's prime fishing and tourism area, the Golden Isles and the Atlantic. Yet Southern has the absolute gall to state that the offsite economic cost would be \$99,659, and the offsite exposure cost \$72,565 and also that quote: "As the environmental impacts of potential severe accidents are of small significance and because additional measures to reduce such impacts would not be justified from a public ~~health~~ perspective risk

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Southern Nuclear Company concludes that no additional severe accident mitigation alternative measures beyond those already implemented during the current license term are warranted for HNP." Southern modelled all releases, except one only, at ground level, buoyant plume rise was not modelled, They used ONE years worth of site meteorology, instead of 30 year wind roses offsite, onsite meteorology since startup, precipitation and temperature from Georgia records going back a minimum of 100 years, because this information is vital under accident conditions as NRC well knows and needed for daily use - but hey, Georgia Powers Annual Report on Plant Radioactive Effluent Releases for 1996, a report that must be submitted because all nuclear power plants constantly release radioactive contaminants to the environment in order to operate, with subsequent uptake to crops, water, fish, sediment, children, people in general for miles I'll get to later on, Georgia Power told the NRC in writing that they were not submitting it they had it on file and would supply it on NRC request

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Hatch is A General Electric Mark I , its a lemon. the 1975 GE so-called "Reed Report" detailed major safety and economic problems with their reactors. Even earlier when the NRC was still the Atomic Energy Commission, your own top staff wanted to ban reactors of the Hatch type becaUSE THEY HAVE NO PROPER CONTAINMENT DOME AT ALL and their pressure -suppression system using a Torus and a piddling containment chamber could lead to disaster, and as late as 1987 NRC confirmed, their pathetic system was virtually certain to fail in a major accident. Hatch has known drywell leakage and you better read all the PNO's and Licensee Event Report on the Torus since startup all about leaking valves, torus water temperature reaching 97 degrees caused (they Docket says) by continuous hot weather increasing the temperature around the reactor building, faulty wiring and a crack in the vent header and the like. To top it off, the reactor for Unit I has a cracked core shroud held together by metal braces which could fail due to embrittlement and vibration.

But I want to get to serious environmental issues, concerning the active contamination of the environment around Hatch and the contaminated sediment in the Altamaha down to the coast at Darien thanks to this dump. As NRC knows, A Curie is a measurement of radiation standardized to radium. One Curie gives off thifty seven billion macroscopic nuclear explosions a second, euphemistically called "disintegrations" or "transformations" , for comparison, radioactive contamination in the environment is measured in microCurie and Pico Curie levels, usually in the last. It is also measured in milliRems. The State of Georgia maintained until very recently in their Environmental Radiation Surveillance Reports, that average so-called background radiation in Georgia was 40-42 millirem a year- we all know that fallout from past nuclear tests now contributes only one millirem a year, though DOE and NRC (and now the State by the look of it) have been increasing it for years to suit their purposes, saying its "background" when most of it comes from the nuclear fuel cycle and related activities such as emissions from nuclear facilities. Allowable release levels were set, historically, in order to allow quote "reasonable latitude for the expansion of atomic energy programs in the foreseeable future." The purpose of NRC Regulations, is ONLY to make sure the standards for protection NRC came up with in their Part 20 Regulations ^{as the regulation says} as the regulation says. NRC (and DOE) set the standard to operate, industry must not go above those standards. It has nothing to do with health or environmental protection or worker protection, Neither NRC nor DOE gives a fig about the workers. Because radiation can't be seen, smelled, etc. tortured mathematical formulas were invented to try and figure out the cell damaging effects , which are immediate and essentially irreversible according to the best medical specialists in the world specializing in radiation, and I do not mean the appalling ICRP who set permissible genetic doses to sperm and ovum. According to the governments own documents, radiation damages the genetic material in reproductive cells and results in mutations transmitted from generation to generation. There is no "safe" dose below which there is no damage, this has now been conclusively proven for the umteenth time. In the environment the effects are cumulative. It bioaccumulates up the food chain. Emissions from reactors, such as Hatch, are poured out the stacks as "Noble gases" seep out of myriad minute openings in the system, and are dumped back to water. For this reason measurements are taken - yet the true effects measureable in blood tests to the population and the animals, and assessment of individual mutations and chromosomal abefation is not done, and it should be. For Southern to be saying that there are no water quality issues in the vicinity of Hatch with the river, that the quality of the groundwater in the vicinity of Hatch is good,

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is disgusting, but predictable. Among other things, they contaminated the groundwater at Hatch beginning in 1979, the aquifer to be precise, then in 1982 150,000 gallons of riverwater flooded the turbine and radioactive waste buildings which will have also seeped into the ground water which discharges ultimately to the Altamaha, or could also seep into the other aquifers, In 1986 there was a spent fuel pool accident where 141,500 gallons of water highly contaminated with Cobalt-60, Zinc-65, Manganese 54, Cesium-134, Cesium-137, Tritium. Back in 1979, Cs-137 was still below 20 pCi/kg in sediment, it has since hit 67,000 pCi/kg, - fish, a year after the '86 spill contained Cs-137 up to 750 pCi/kg. In 1999 river sediment in published reports still hit 380 pCi/kg dry, the cobalt-60 in sediment in 1998 still hit 190 pCi/kg 4 miles downstream and the K-40 14,000 pCi/kg. The Beryllium-7 which Georgia Power admitted to me of course comes from the reactor and it goes up and down like yo-yo in vegetation -10,600 pCi/kg in '97, as does the Cesium-137 for example in '97 it hit 473 pCi/kg vegetation 10 miles south of the plant which even though its one of the wind State calls it background - but then, as I explained to the Atomic Safety and Licensing Board Judges how the State operates back in '96 that's no huge surprise either. You need to impound and read every test ever done at the Georgia Tech Lab for the State, the State files and the Utilities records since startup. Not to mention every inspection report the NRC wrote since start-up and violation and so-called non-cited violation, for starters to begin to get the picture, bearing in mind that the Hatch offsite Dose Calculation Manual and Final Safety Analysis Report were written in the stone Age and are outrageous. For example, the ODCM says gaseous radioactive releases at and beyond the site boundary can go to 500 millirems a year to the body and 3,000 mRems a year to the skin for noble gases, and then say they have no limits on the noble gases they can release, and that, for radioactive iodine -131 and 133, tritium (radioactive hydrogen) and all radionuclides in particulate form with half-lives greater than 8 days, up to 1500 millirem to ANY organ, all of the aforementioned as dose rate limits, this is worse than absurd. They say (under ODCM Methodology in their 96 report) that the percent of the ODCM limits are not applicable because they have no Curie limits for gaseous releases. This is the outfit that uses what they term "hypothetical" children as their controlling receptor for the releases, in actuality their own words was "a child in the NW quadrant" if I remember correctly - This is the outfit busy dosing the children and adults at the Roadside Park, the Camping Area, the Recreation Area and the Visitors Center. This is the outfit dosing the Boy Scouts in that camping area according to their own manual. I don't care how low a dose they maintain the kids are getting from the noble gases or particulates, if the Strontium 90, being a calcium displacer lodges in the kids bone and gives it bone cancer, both child and parent don't ask how little did it get. Strontium-90 decays to Yttrium-90. which is known to concentrate in the hormone producing soft-tissue organs such as the ovaries, testes and pituitary gland, and, according to published reports by the radiation medicine community is a powerful hormone disrupting radioactive chemical not just a powerful carcinogen.. Southern is permitted by Georgia to withdraw a monthly average of 72 Million gallons of water a day with a maximum rate of 103.6 mgd. Georgia must have lost its mind to permit this. The annual average is 57.18 million gallons a day they say consumptive losses approximate 46%. Translated into "people-speak" that includes the evaporating radioactive steam etc. "losses to the atmosphere"

as they so cutely put it. They say their withdrawal to the alluvial

aquifer recharge is small in impact. That the recharge is also provided by the minor confined aquifer of the Hawthorn Formation to which the alluvium is interconnected. First the Hawthorn is not minor, Hatch sits on top of it as well as the alluvium which is under and on both sides of the Altamaha and the Hawthorn continues on the other side according to the DOE survey of the site and as it is all interconnected and they contaminated the aquifer onsite and so forth the extent of the effects could be massive. Furthermore, a comparison of the DOE survey of soil sample data in the area from long ago, with what has been measured since regarding K-40 and Cesium-137 data, -even though the DOE lies and says Cesium-137 is natural, when its man-made, and the plant had been operating a short while and releasing radioactive crud, -shows that the area has been contaminated. For example, most K-40 was zero, and the Cesium-137 never went over 310 pCi/kg in soil. K-40 was at 16000 pCi/kg in soil in '99 in one measurement and 6300 pCi/kg in an '88 measurement for comparison, and 3,500 pCi/kg in 84. Cs-137 in soil in '98 in State data provided (which may not be all data-knowing them) reached 240 pCi/kg, in '88 640 pCi/kg and in '84 920 pCi/kg. NRC's attitude has been :oh well, it's lower now. Site geology is actually extremely complex, and, as Hatch also withdraws 1.1 million gallons a day average from the Floridan aquifer also

monthly
beneath the site, for, among other things "process use" such as demineralized water, which is of course ~~using~~ using a huge amount of water when calculated over just one year. Georgia, Alabama and Florida are currently engaged in what is termed "water wars" over their water needs, and those needs do not only cover river withdrawals, I don't think. Water issues are among the biggest issues environmentally worldwide and nationwide and are becoming critical, due to the type of pollution from facilities like Hatch, not only other pollution sources. Farmers also rely on this system. At least their needs should take precedence over the needs of a local polluter that could and should have utilized alternative energy years ago.

The Applicant's go into rhapsodies about the ecology of the site, including the wetlands that they contaminated with the spent-fuel pool spill disaster. They neglect to mention that it has been documented for over 40 years that mammals and birds waterfowl etc. are contaminated via ingestion of contaminated seeds, berries and other foods contaminated by nuclear emissions and direct radiation from the facilities and that contamination affects their reproduction, health and is also accumulated in their bones. Migratory species carry the contamination with them. When they die, if ingested by something else, that also becomes contaminated and so it continues. The radioactive iodine from Hatch is measured in the milk in the Tattnall Co dairy, as is the Cs-137 and tritium and strontiums due to uptake via the grass/cow/milk/child pathway. It used to be measured at Appling and Toombs dairies also, which it should be, maybe it still is and I don't have the data. According to NRC and the State, both partly funded by the licensee, the nuclear industry, the attitude is all this is Ok, within the levels, remember. A '94 milk sample of Hatch's showed 500 pCi/L tritium. Although it has been established since decades that tritium at very low levels is particularly hazardous to the developing foetus EPA set a helpful allowable level in water of 20,000 pCi/l. Tritium irradiates as it passes through the body, continued ingestion means continued irradiation and continued damage. One thing is that I believe the Tattnall Co. Dairy is the massive State Prison dairy, which brings me to another issue: Southern has figured out that everyone is going to do the "radiation stumble" namely, that they are all going to evacuate in case of a severe accident - you know, a meltdown and massive release

to air , going at 2.5 Meters - about 7 feet a second_ in a radial distance. The evac. Zone is only 10 miles under the law, but CRAC-2 says the kill-zone is 20 miles. First responders are of course the local fire department and little, cute Appling CO. Emergency headquarters people. Anybody told them that if they try and go in under such circumstances they'll die ? Is Southern/Georgia Power going to evacuate the workers, schoolchildren, shut-ins, prison guards and prisoners from the various area prisons, hospitals, nursery school children ~~at~~ 7 feet a second ? That dump has had three serious events in the last year, the February event could have led to a meltdown. How many times can you get lucky ?

I did not even bother to look at the General Electric data submitted - why should they be trusted ?

Regarding their NPDES Discharge Permit issued by the State of Georgia under the Clean Water Act to Allow discharges to the Altamaha, and also the other Water Quality Certification letter from 1972 by the State.

1) According to the EPA Definitions for NPDES Discharges the NRC provided, they have absolutely no say-so whatsoever over the dumping of most radioactive contaminants, because the Atomic Energy Act of 1954 is involved, they do not cover so called "source, byproduct or Special Nuclear Materials, nor radium or accelerator produced-isotopes as examples. However, "heat " is covered. 2) They did not seem to explain in the ~~attached~~ documents, that the radioactive decay heat is part of what causes the "THERMAL PLUME" . Did they tell the State Water people they dump radioactive water, or that the sediment in the river contains man-mades ? Did they tell National Marine Fisheries or State Fish and Wildlife about this or about the radioactive air emissions when they asked them by letter to evaluate Endangered Species and fish entrainment and similar ? The answer is "NO", one cannot even find the word "radioactive" . I called some of them, they had not been told. Now, the Sturgeon is a bottom feeder, it is Endangered, ingesting a Cobalt-60 particle with its damage to blood and the central nervous system alone is not a nice way for any living being to die. Nor is slow death from constant irradiation from Cesium-137 in its muscles. The fish entrainment study dates back to 1980. Interestingly it noted among the 22 species of fish an unknown egg and an unknown larvae. What was it ? Were there more ? Talk about loss of biodiversity. Extinction is forever.

They speak of reforesting areas with the longleaf pine - we know that pines retain radioactive contaminants due to uptake from radioactive air emissions and deposition falling in rain, just like other trees, I did not have time to look up how long the longleafs hold their "needles" if you will, obviously the longer the uptake from soil and water etc. the more contaminated they'd become and when the needles drop the litter would be that much more radioactive for all ground-dwelling species in contact with them, plus re-contaminate the ground at higher levels. Ever tested the Gopher tortoises burrowing on the contaminated site ? If the turtles contaminated on and offsite of the monstrous Death of the Earth (DOE) squad site on the Savannah River are any indicator, the gopher tortoises are probably also contaminated, though probably to a lesser extent.

With regard to transmission lines , the testimony of the eminent Dr. W. Ross Adey ,before Congress in 1987 on the issue of electromagnetic (as opposed to ionizing) radiations, sent shivers down the spines of the collective electric power industry, partly because of his credentials. The effects on cell membranes and foetal development in animals for example was ghastly and included information on statistically significant increases in leukemia and lymphoma in studies of children exposed to power distribution systems, high voltage power lines

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and the like. These effects must be addressed. His testimony needs to be considered by NRC as he is one of the worlds experts on this issue. Southern has not considered it. Further studies since then agree.

I feel particularly sorry for the workers in the area whose jobs would be impacted. However, the NRC has repeatedly cited the facility over the years for its terrible personnel contamination record among other things, which is why NRC needs to read EVERY Inspection Report ever done. NRC has taken little concrete action, except to repeat that they are "concerned" for the past decades. It should be remembered there are no medical doctors on staff who specialize in health effects of radiation, some of the reports on what has gone on are a nightmare. Like the workers trapped in the drywell. NRC said they had no way of knowing whether or not they died. If I remember correctly, somewhere on the Docket it said they forgot to test them appropriately afterwards. The workers should be compensated, the community should be compensated, and Southern, with its considerable financial and political clout could easily help get replacement work located outside the kill-zone and pay for job retraining and transportation to work. A problem I see always is the worker frustration over potential job loss, which is totally understandable, is sometimes directed at those who explain the dangers, when it should be directed at those who brought the equivalent of a nuclear bomb with a slow leak into their community to begin with. The ultimate tragedy, is that Southern or Georgia Power, has ~~not~~ probably not explained to them that due to them getting contaminated inside the plant, even their bodily excreta can become radioactive, and that is the essence of what ~~was~~ behind the NRC taking Hatch to task over the spreading of sewage sludges from the site under the power lines. ~~It~~ It is doubtful they were told that as soon as they enter the site, under NRC Regulations, they are no longer considered "members of the public". If they were to die inside the plant due to contamination - in theory industry and NRC can state ~~No~~ member of the public died that day as a result of radiation exposure.

The Applicant's documents only touch on the terrible, dangerous high-level radioactive waste dump they have prepared outside to put deadly radioactive spent fuel ⁱⁿ inside casks that have never been tested in the real world, and simulated tests involved Hatch sticking a hot water pad inside one to simulate radioactive fuel rods, which the NRC gently pointed out - oh, so politely - that it "did not accurately simulate the temperatures." The casks - space for 48 is created - will stream gamma radiation into the environment and workers on the pad at a weekly rate of 21,000 millirem off the sides alone, next to the casks, each cask. A former military nuclear scientist has assured me that terrorists could blow the top off the cask in a twinkling of an eye from considerable distance, other research shows a few rounds from a Milan anti-tank weapon could blast it to smithereens from 6000 feet with catastrophic results. People are being told it is temporary storage and that it will either be sent to Yucca Mountain or to a site on the Goshute Indian Reservation in Utah being prepared by a consortium that includes Southern, and the company, PFS that has prepared the site in Georgia. One of the leaders of the Goshute opposition to this wanted me to remind everyone, that their tribal chair does not speak for them all, and they do not intend to be at the receiving end of 4,000 casks from across the country into their valley where they already must endure myriad hazardous industries and military weapons test sites on their borders. In the end, in all probability, South Georgia is going to be left with a nuclear dump inside the plant and one outside, forever. The outside one would be eliminated if the plant is shutdown quite soon and no more nuclear waste is generated.

5000 more assemblies at sixty rods a bundle will be generated without shut

down. This insanity must stop. Yucca Mountain is also basically dead in the water, literally.

This is the South. If a Sheriff found out that someone had a decrepit junk car, with a cracked engine block wrapped with baling wire, that not only couldn't pass emissions tests, not only leaked gasoline into the local creek, but carried a deadly cargo locked in the trunk capable of killing an entire county, and a second deadly cargo strapped inside in a patched bucket, and the exhaust leaked into the car and gassed passengers periodically, plus sprayed neighbors crops, kids and livestock with a fine gasoline mist as a bonus, not only would the offender be jailed for reckless endangerment and a lot more besides, but both the sheriff and the judge would laugh in the face of any such a car owner, if they told the judge and sheriff, having such a car kept mechanics employed, that the people in the car were paid to be gassed periodically or that misting neighbors crops and kids was OK, because the owners manual and the people that wrote the owners manual said it was. That's more or less the situation - only the sheriff and the judge got written out of the loop by the Atomic Energy Act and the NRC and a lot more besides. The NRC is in the loop and holds the power. For the love of God, at least prevent a meltdown and shut this dump down. When the spent fuel pool goes, NRC can watch it on TV from Washington - until the plume hits it. But don't worry about that, I'm sure there's a regulation that says the dose won't damage you all, that NRC wrote. Just remember this, we are all accountable to the Almighty for our actions and I doubt the Creator is pleased with the despoilers of life on earth. Thank you.

Pamela Blockey-O'Brien

LETTER P

1.

May 29th, 2000

From: Pamela Blockey-O'Brien

To: U.S. Nuclear Regulatory Commission
License Renewal Application Section
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65FR#19797
12 Apr 2000
③

copy to - Herb Berkow
8 June 2000

Re: License Renewal application by Southern Nuclear Operating Co. and others for Nuclear Plant Hatch I and II, Georgia. Supplemental statement and Testimony to my May 10th statement and Testimony, on behalf of F.O.R./I.F.O.R. AGAINST the License Renewal Application, to be attached to and made part of the May 10th document and considered by NRC.

First, a correction : page 5 of the May 10th paper, line 16, a zero was left off from the K-40 figure, it should read "K-40 was at 16,000 pCi/kg" NOT 1600.

Also, on page 4. at the end of line 8, it should have been stated that the contamination went to the wetlands and river, among other areas.

The May 10th, 2000 hearing was meant to focus on the environmental aspects in particular according to NRC. The Applicant(s) are being deceptive when they only consider the Altamaha as being the area of watershed that covers where the Altamaha is named "Altamaha". The Altamaha is one of the two most important river systems in Georgia. It is called the "MIGHTY Altamaha" for a reason, because it is formed by two huge rivers that have their heads far to the north, namely the Oconee and Ocmulgee, and the State of Georgia considers the Oconee-Ocmulgee-Altamaha system one of Georgias five river basin groups for River Basin Management Planning and are based on "river basin location, contributing drainage, physiographic features, and related water resource issues " according to the State. The Oconees reach extends to the Atlanta area. The Altamaha's floodplains are three miles to twelve miles wide. The tidal influence extends some 40 miles inland according to publication. Two thirds of the State's shad come from the river. It contains river islands and cypress swamps. Lewis Island ,part of the vast State Waterfowl Management Area and areas of significant wildlife resources has a 300 acre stand of virgin cypress over 1,000 years old. The Big Hammock Wildlife Management Area near Hatch (and in the windpath) covers around 6,400 acres. The Big Hammock Natural Area is adjacent to it. On the other side of Hatch (again in one of the windpaths) is Bullard Creek Wildlife Management Area. The Big Hammock Natural Area stretches eleven miles along the river and Watermelon Creek. Nearby creeks that drain into the Altamaha (from all windpaths and rainfall deposition/radioactive contaminant deposition areas) include : Bells Mill Creek, Cobb Creek, an unnamed creek near English Eddy (village) , Milligan Creek, Alligator Creek, Little Alligator Creek, Bullard Creek, Ten Mile Creek and Little Ten Mile Creek, also an un-named creek that enters wetlands/swamp near Hatch; plus there is a Lake called Big Pond. All of these areas receive radioactive fallout from Plant Hatch's air/noble gas releases. Wildlife, birds (and people) will receive radioactive

iodine, tritium and the decay products of Cesium-137 and Strontium-90 among others to their thyroid, muscle, bone etc. etc.

All the aforementioned surface waters will have this radioactive garbage dumped in them, in particular when it rains and deposition increases. The area receives massive rain systems. Speaking of which, Hatch's own FSAR under the section on floods, cites USGS data on a Jan. 22nd 1925 historical record flood at the plant site of 200,000 cubic feet a second PLUS there was a calculation of a peak discharge of 612,000 cubic feet a second corresponding to a stage at el 105 feet based on a 1916 storm. Why did Southern not include these figures in the application?

Southern has basically refused to discuss all the so-called Class I issues. This is really an outrage, and done a toss-out of SAMAS. They have said the population is sparse and it's mainly forested or agricultural. This is a prime farming area. Vidalia Onions are a major crop not too far away - they are considered the best type of onions in the world by chefs and sell all over, yet they are in Hatch's windpath also. This is a disgrace.. Class one issues should cover effects to pollinators, including effects on their reproduction pollinators like bees and butterflies. Herman Müller won the Nobel Prize in 1943 for his work on the genetic effects of radiation, and showed through his work on Drosophila, a fruit fly, that ionizing radiation affects not only the biological organism exposed but the seed within the body from which future generations are formed, and one of the effects is of course sterility. Bees are particularly vulnerable to effects of pesticides and radiation - in "Silent Spring" by Rachel Carson so many years ago, she pointed out the synergistic effects of Strontium-90 combined with toxic chemicals/pesticides. There is a crisis with pollinators. Bees are literally being physically brought in in hives, by truck, back and forth across farming areas in the entire South, with hives set up for some days to co-incide with blossoms for pollination. It is an insane situation that threatens the nations food supply. Biologist Carson was ridiculed and vilified by the industry who produced the pesticides etc. - of course she was right, and is now on a postage stamp. NRC simply cannot allow Plant Hatch to continue to operate in an area vital to agricultures. Between Soperton and Vidalia there is a sizable goat farm. The milk (Or perhaps cheese) they produce should be tested also, as well as the grass. In one of Hatch's Annual Reports the months they listed that they did the garden census on, were actually going into winter when everything would be dead or dying off. Typical. The bioaccumulation factors up the food chain are of great importance. The area is generally a low income area. Many people hunt, fish and have gardens - it's all a matter of survival. When all pathways are considered together the effects are serious.

Shutdown of Hatch would eliminate a large portion of the air discharges and dumping to the Altamaha. The radioactive spent fuel pool issue and need for recirculating water for it etc. would of course remain, With the reactors shutdown, the danger of the cracked core shroud and braces blowing would also be more or less taken care of. The fuel in the core should be immediately removed to the pool. The outdoor radioactive spent fuel storage must NOT HAPPEN. IT IS A MAJOR ENVIRONMENTAL ISSUE and as the pool is almost full the relicensing is interwoven with the storage of the spent fuel. It cannot be ignored or shoved under the rug. To pretend that sticking the DEATH of the Earth outside in an untested cask - even a tested

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one - is not a major environmental issue and is not part and parcel of the relicensing is obscene. The workers are at grave risk as well. Both Southern and Private Fuel Storage are "HOG's", i.e. HOLTEC OWNERS OWNERS GROUP members. HOLTEC makes the cask to be used. Private Fuel Storage is trying to set up the site in Utah that many of the Goshute Indians do not want on their land. The State of Utah doesn't want the stuff in Utah either. The cumulative consequences of the incredible amount of gamma radiation streaming off those casks (and a few neutrons) to workers, the surrounding population, the environment etc. will be terrible. The slab they sit on becomes radioactive as NRC knows, the water from rainstorms running over them will also be radioactive and will enter groundwater and/or the Altamaha. Southern has been putting out PR on the casks saying ridiculous things like what will the casks look like, instead of telling the public they contain death, and the explosion of such a cask would have horrendous consequences. A high level radioactive waste dump is being created outside next to the Altamaha and that community is going to get stuck with it, along with the existing indoor one, and neither NRC nor Southern is telling that community that it'll be a cold day in hell when that all gets moved out of there. To add insult to injury NRC doesn't want to include the issue nor does Southern. Well, we demand it be included. This is an environmental and an economic justice issue and so is the entire relicensing. Southern does not want to address the environmental and economic justice issues, although it is a low income community. Of course they don't, that's why that poor, rural community got stuck with this monster to begin with. Why it wasn't put next to the Governors Mansion. It's a classic case - the Applicants own documents show that there is a disproportionate number of low income households in the 50 mile radius. Appling County itself has 22.35 % of its households below the poverty level. Other counties have even higher numbers in many instances. As stated earlier, many people rely on the land to help them survive, some also supplement their diet that way even though they may not technically fall into the poverty level classification. They will be disproportionately affected from a health perspective. Two Appling Co. census tracts have a higher percentage of households below the poverty level namely 29.1 % and 26.2%. Adjacent Toombs co. has two census tracts with over 32% of households in poverty. Compare that to the given Georgia total of 14.85%. The continued operation of Hatch has environmental consequences due to its discharges on the environment on which the poor also depend in order to sustain themselves, this affects their health. It is a major issue. Looks like the boasted tax revenues from Hatch didn't do much for the poor...makes one wonder who benefitted.

Another key issue is the fact that many large prisons are located in the area, including the massive State prison at Reidsville IN THE WIND PATH across the river. Is Southern going to get that evacuated at seven ft. a second during a meltdown? In particular if its visiting day? Is NRC aware that countless families travel hundreds of miles in some cases down to those prisons, and the State prison in particular, to visit the incarcerated relatives. Anyone who thinks they could evacuate that sort of scenario in a hurry has lost touch with reality.

The area prisons were not addressed. They should be.

Regarding the sewage being dumped to the Altamaha after some treatment: because contamination is also rinsed off in showers and workers can have contaminated excreta, it will be radioactive. In E.Coli, radiation induce an error-prone DNA repair system which leads to mutations that would otherwise occur only rarely according to the National Academy of Science. Someone swimming in the Altamaha downstream, unaware of sewage discharges, could ingest

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could ingest water contaminated with E.Coli if the system is not functioning as it should, and this E.Coli could be a mutated version. This could have serious consequences, including cancer in the infected individual perhaps, at the very least a form of E.coli infection that is hard to treat. - The Applicant mentions that pathogenic microorganisms are ubiquitous in nature occurring in the digestive tracts of wild mammals and birds and thus in natural waters, but are usually only a problem when the host is immunologically compromised. Radiation is a powerful suppressor of the immune system response. Women and children are more vulnerable to its effects as NRC well knows (or should), the continuous low level radiation exposure to the surrounding populations in an at least fifty mile to 100 mile radius will have compromised the immune systems of the most vulnerable in particular to some extent, this will make them more vulnerable to infection if they drink water containing pathogenic microorganisms.

P06

There are enough species on or adjacent to Hatch that are listed as Endangered or Threatened or Rare/Unusual, such as the Wood Stork Bald Eagle, American Alligator and Shortnose Sturgeon to warrant permanent shutdown on that issue alone. Gassing woodstorks in the wetlands east of the "cooling towers" with noble gases while they forage in radioactive leftovers from the spent fuel pool spill makes a sorry picture. The listing could shift to "extinct".

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It is imperative that NRC read every single DETAILED inspection report and all the violations, indeed the entire Docket since start-up, that way the environmental and other impacts can be better assessed. That way NRC gets to see things like the fission particulate monitor and noble gas monitor being inoperable. The reason what has happened over the years is important is that it shows a pattern of serious problems and events, in some cases repetitive, which will recur or become worse due to aging etc. In the May 10th Testimony, I spoke of the pine needles and contamination. In the past, pine needles at the Baxley Health Dept. contained 220 pCi/kg Cesium-137, 730 pCi/kg Cerium-144 and 4300 pCi/kg of Beryllium-7 (no, it comes from the plant, not the cosmic ray song and dance gone through ad nauseum) Spanish moss at the Roadside Park contained 460 pCi/kg of Cesium-137, 500 pCi/kg Ce-144 and corn husks west at 0.75 miles Cesium-137 at 56 pCi/kg. Grass yo-yo'd up to 1600 pCi/kg for Cs-137 The City of Baxley's groundwater showed alpha at 7 ± 4 . How much pCi/l

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higher is all this now? Its hard to tell from published reports, not only because experience showed data was being left out, but locations get changed etc. however, as one example, in 1999 Beta radiation in groundwater was 7 pCi/l 1.6 miles NNW and Beta at 5 pCi/l at the roadside park in groundwater in 1997. Isn't Beta meant to be separated out above 4 under EPA? Beta deposition in rain was 253 pCi per square meter, at 0.5 miles west south west, and 222 pCi/M2 at 1.8 miles north east near the river in 1997, so Hatch is spreading its radioactive poisons around nicely-aren't the local people lucky? Radioactive rain, pitty patting down on their children, crops and those Endangered and Threatened Species - but hey, why should Southern and Georgia Power care - money is rolling in. Any company that is as environmentally unconscious as to spray herbicides in wetland areas (p C-37) and under transmission lines

and thinks they are helping the flatwoods salamander , and spews radioactive gases into the air etc. as well, should be ~~xxxxxx~~ distributing bumper stickers to their stockholders saying " The Environment ? Who cares ? We don't." Glyphosate (in Accord) IS toxic and IS an irritant (EPA) . They should hire extra people (for the price of the herbicides is not cheap) instead, to remove unwanted vegetation - vegetation that of course may support other species - after warning the people about the electromagnetic radiation off the transmission lines and breathing in Hatch's radioactive noble gases.....

To get some idea of how things go at Hatch, both the public and the NRC should review Inspection Report Nos: 50-321/95-01 and 50-366/95-01 (Public can get this from NRC Washington Public Document Room Tel 1800- 397-4209 access the PDR by pressing "0" - it will cost under five dollars, ask the PDR for cost.) this is not even one of the worst reports, just a report. Then remember one of Hatch's recent events , the Loss of Coolant Accident, could ultimately have led to a meltdown and that one of the systems, The High Pressure Core Injection (HPCI) kept messing up, just as it has done since years and no one knows the cause (its kind of an important issue since its part of the Emergency Core Cooling Systems) and then add to that, that Hatch has a cute little gizmo called the DIRECT TORUS ~~XXXXXXXX~~ VENT SYSTEM - in plain English, what this does in the event of a certain set of accident criteria, is that in order to gain time and avoid core melt somewhat, and assuming that either all core cooling sprays keep the core doused with water and there is no Loss of Coolant Accident, or, in event of a LOCA they can avoid the drywell blowing one way or another -while its melting down - they intend to VENT THE RADIOACTIVE BUILDUP, BYPASSING THE STANDBY GAS TREATMENT SYTEM, OUT THE STACK OVER THE POPULATION OF SOUTH GEORGIA BIGTIME. THIS WOULD BE AN ATTEMPT TO RELEASE THE PRESSURE. Under normal conditions, the Standby Gas Treatment System filters particulates and radioactive iodines in order to REDUCE - NOT ELIMINATE, REDUCE- the level of airborne radiation contamination released to the environs via the main stack and can filter (again it cannot eliminate everything) exhaust air from the drywell and the torus/pressure suppression pool. They hope stack filters may trap some particulates (which assumes that operates, in the past documents it is not clear whether or not they actually have an in stack filter, that needs ascertaining, also whether they have the Post Accident Sampling System in the stack or if they got out of having that -(did they ?) - since they kept getting extensions on PASS.. Furthermore, if and when they decide to radioactively gas south Georgia with the stuff going out under high pressure, the entire gaseous piping system could be massively degraded due to aging, pitting, corrosion, from radioactive decay heat/steam etc. and its anyones guess what the consequences could be ,yet for some reason it does not appear that is not going to be considered, and it should all be examined, etc.

NRC better understand that radioactively gassing South Georgia in NOT an option. Neither is continuing to allow the operation of this disaster waiting to happen NRC's own staff said was in need of being banned (the Mark I, which Hatch is)..

Samuel W. Jensch, Former Chief Administrative Law Judge, U.S. Atomic Energy Commission, said in his foreward to "Meltdown - the Secret Papers of the Atomic Energy Commission" : As citizens you will also have to decide what to do about the one hundred nuclear

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plants that are now operating- WITHOUT BENEFIT OF THE IMPARTIAL SAFETY REVIEW REQUIRED BY LAW - around the United States."

And further :

" For what was the Joint Committee (Congressional Joint Committee) on Atomic Energy doing as the Atomic Energy Commission and the Nuclear Regulatory Commission HID data about potential nuclear plant hazards ? And what has the White House been doing - except looking the other way - as official bodies, such as the President's Commission on Three Mile Island Accident, warned of the gross mismanagement that has occurred in the commercial nuclear power program ?"

("Meltdown - the secret papers of the Atomic Energy Commission," 1986 by Daniel Ford, former Executive Director of the Union of Concerned Scientists, is based on tens of thousands of pages of US A.E.C. internal documents he acquired using the Freedom of Information Act and Ford began his research in 1971 according to Ford.)

One example of how little things have changed, is that it was found out that in many turbine situations for nuclear power plants, one was oriented rotating towards the reactor, the other away. If the turbine shaft snapped, the one oriented towards the reactor would go barrelling towards it. This is the case at Plant Hatch, Plant Farley AND at Plant Vogtle built AFTER this issue was known and it still was allowed. Degradation of Hatch's turbine shaft (or blades)

due to aging etc. is a very real possibility, and if this is not included in the review (I may have missed it, but I couldn't find it) there should be a Rule to include it as well as anything else left out. The consequences of a huge turbine rotating on the loose would be horrible, the environmental (and human) damage would be profound.

Last, but most important, on the map Altamaha School is near Hatch. Children, with their developing bodies, bones, brain, reproductive organs etc. are more vulnerable than adult males to the medical and biological consequences of radiation exposure. For the school children to be subjected to breathing in the radioactive noble gases emitted up the road is a disgrace. 1) In event of a meltdown/explosion/air release catastrophic accident those children may well die of radiation sickness or be damaged for life, with shortened lifespans and myriad health problems. 2) Because such an event can happen so quickly with reactors of the Hatch type, according to NUREG-1079, and they have no containment DOME over the reactor, fast evacuation would be impossible. 3) First responders are local. Appling County Emergency Rescue and the local fire dept. are totally ill-equipped to deal with such an emergency and evacuation and it is outrageous to expect them to. 4) the recent LOCA is an example of the beginning of what could occur as documented in the AIT report and should serve as a warning. 5) The July 20th 1999 NRC Special Team Inspection Report conducted June 16 to June 25th, 1999 is further proof of the potential for catastrophe on the horizon if the MSIV had continued to fail, the RCIC system had not even operated manually and the recirculation pumps continued to fail etc. etc. and of course an RHRSW vent line cracked and leaked eight hours. 6) Because gassing the

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7,

the children and surrounding population via the DTVS ,bypassing the SGTS, trying to avoid overpressurization of the pathetic, inadequate existing form of so-called containment trying to avoid early meltdown is a) outrageous b) doesn't solve the meltdown problem .7) Because NRC's own staff wanted to ban pressure suppression "containments" like at Hatch , plus said there was a 90% probability of that containment failing, and 8) because neither Southern, Georgia Power, GE, the NRC can prove beyond a shadow of a doubt that an accident resulting in meltdown and/or major radioactive release to the air and/or water will not happen at this aged dump of a reactor nor can they prove beyond a shadow of doubt or even reasonable doubt that children at the school, as well as Appling County and surrounding county children will not die or be damaged due toTHE radiation exposure, and children in utero likewise (no matter how low the dose, or high the dose) and the risk to the children is simply too great to allow continued operation, I THEREFORE SUBMIT THIS LAST PARAGRAPH AS A FORMAL REQUEST UNDER SECTION 2.206 OF 10 CFR Ch. 20 FOR PERMANENT SHUTDOWN OF PLANT HATCH UNITS I and II, AND PERMANENT LICENSE REVOCATION, THE BASES BEING THE ENTIRE PARAGRAPH AND POINTS ONE THROUGH EIGHT, Considering the children whose lives are at risk and the health damage and the bases, denial of this 2.206 would constitute MALFEASANCE AND NEGLIGENCE in particular in event of serious accident.

Pamela Blockey - O'Brien .

Pamela Blockey-O'Brien

Copy to : The Executive Director, US NRC, Washington, D.C.

(i.e. Executive Director for Operations,U.S. NRC,Wash.DC 20555)

Ms. Rita Kilpatrick,Executive Director,CPG, Atlanta, GA.

LETTER Q

From: Pamela Blockey-O'Brien



PAMELA BLOCKEY-O'BRIEN, D23 Golden Valley
7631 Dallas Hwy, Douglasville, GA 30134 USA

To: US NRC
License Renewal Application Section
Chief of Rules and Directives,
Division of Administrative Services
Office of Administrator, Mailstop T-6,
D-59, US NRC
Washington DC 20555

Received 13 June 2000
9:30am

June 7th, 2000

65FR#19797
12 APR 00
④

Re: License Renewal Application by Southern Nuclear Operating Co
and others for Nuclear Plant Hatch I and II, Georgia.
Extra ADDITIONAL supplemental statement and testimony to be
attached to and made part of my May 10th, May 29th, and June
4th statements and testimony and considered by NRC.
THIS IS THE THIRD SUPPLEMENT TO MY MAY 10th 2000 TESTIMONY.

Last weekend, on T.V. fishermen who fish the Altamaha and coastal
area, who were complaining about the state of part of their catch
HELD UP DEFORMED, MUTATED CRAB AND ULCERATED SORE-COVERED FISH
protesting Altamaha pollution. While there are undoubtedly other
sources of pollution more easy to control, as NRC well knows,
effects of radioactive contamination from ionizing radiation include
deformed offspring, mutations, reduced fertility, cancers, leukemia,
massive suppression of the immune system response making vulnerability
to other diseases and illness increase, spontaneous abortion, ster-
ility, abnormal larvae (in fish), mutations in insects, skin burns
from "hot" particles, and on and on. Over the years the following
radioactive contaminants have been found in sediment which the
applicant itself does not rule out came from Hatch ;or admits to doing:
Cobalt-60 (admits) Cobalt-58 (admits), zn-65 (admits), Ce-141 (not
ruled out), Ce-144 (not ruled out), Cs-134 (not ruled out), Cs-137 (fudges
the issue) Ru-103 (does not rule out), Zr-95 (does not rule out)
Here are some surface water samples collected by Georgia Power Co
and one by Georgia EPD after the radioactive spent fuel pool spill
at a location known as Deans Landing : Tritium 109,000 pCi/l, 88,000 pCi
118,000 pCi/l, 77,000 pCi/l - all by GPC, 208,000 pCi/l (EPD).
Co-60 140 pCi/l GPC, 1600 pCi/L EPD.

Cs-134 2200 pCi/l, 420 pCi/l GPC. 2,100 pCi/l EPD.
CS-137 3,400 pCi.l, 570 pCi/l, 550 pCi/l GPC. 3000 pCi/L EPD
RIVERS TRANSPORT SEDIMENT DOWNSTREAM.

Some sediment samples taken by GPC MONTHS after the spent fuel pool
release and designated by EPD as "From Plant Hatch Spent Fuel Pool
release" ; Picocuries per dry kilogram-pCi/kg

Cobalt 60 : 35,000 pCi/kg (thirty five thousand) Deans Landing
290 pCi/kg Estuary and US 17 Darien (at coast)

Zn-65 : 12,000 pCi/kg , down at the estuary it was 170 pCi/kg

Cs-134 : 36,000 pCi/kg - then down at estuary 2200 pCi/kg

Cs-137 67,000 pCi/kg , then down at the estuary 4,700 pCi/kg

Mn-54 7,300 pCi/kg - down at estuary 61 pCi/kg

It should be noted that of course this radioactive contamination
could have been more extensive, as that is only what got published.
It is interesting that on the Cesium-137 from Hatch in sediment,
In one of their annual reports they fudge the issue, but the EPD sys
in one of Their reports it came from Hatch, and in another that
is more recent that it may or may not have come from Hatch now.

Due to the almost incestuous relationships which exist down here when it comes to nuclear issues - some of which I detailed to the Atomic Safety and Licensing Board Judges during the matter of the relicensing attempt of the Georgia Tech Nuclear Reactor by Tech whch Georgia Power and the Atomic Energy Commission helped Tech bring here to begin with, and my attempts to get the staggering CURIE quantity of Cobalt-60 stuck in the Tech Reactor spent fuel pool out of downtown Atlanta which threatens the campus and downtown, to no avail - (I must admit, I didn't realize that the former Governor I appealed to for help sits on Georgia Powers board in the Applicants submission - though Tech reactor staff did tell me since then that Georgia Power still needs the Cobalt to do testing to see if co-60 degrades cement.....though I did know that the former NRC Regional Head, O'Reilly, went to Georgia Power.)- anyway, as I was saying, the contorted relationships make it imperative that INDEPENDANT, non-industry, non-government affiliated testing be done on all these issues I have raised, and others have, and by companies which have never held government contracts or nuclear industry contracts or their subsidiaries, affiliates, brothers, cousins, dogs or cats . That would eliminate companies like Death Of the Earth Squad (DOE) contract folk such as NUS, and SAIC, and Chem-Nuclear etc. And of course Law.

Q01

All the crab, clams, musselks, etc. and fish - including sturgeon and eggs if possible, and turtles, tortoises, (land) frogs, aquatic plants etc. need to be tested. And those tests must PROHIBIT doing the sort of thing that sometimes goes on, like mixing up contaminated and non-contaminated stuff/fish, or hanging onto samples until some of the short lived contaminants decay before testing and similar.

Q02

It needs to be found out if everything is more contaminated than we already know - and that includes the groundwater, sediment and so forth.

It should also be noted, that the ODCM, which I already said was written in the Stone Age previously - allows things like Reporting Levels like 300 pCi/l for Co-60 in water and 10,000 pci/kg wet in fish for crying out loud, or Iodine 131 of 20 pCi/l if no drinking water pathway exists.... the thing should be thrown in the trash.

It's a wonder restaurants aren't asking customers if they'd like their cobalt-60 pan fried or just plain grilled, with a little radioactive iodine sauce on the side.

The Applicant has stated that in reference to the Georgia Coastal Zone Management Act that "Based on the distance to the coastal zone, past HNP performance with ~~regard~~ respect to discharges and releases, and the fact that no major changes in operations are expected during the license renewal term, SNC believes that direct impacts to the coastal zone from HNP operations during the license renewal term are unlikely," and they believe certification is inapplicable. Oh, really. What's the encore to the spent fuel pool spill, or loss of coolant? A meltdown? Due to the long full radioactive lives of the radioactive contaminants, the spill-and the other spills- are significant and cannot be disregarded. Deformed, mutated crab cannot be disregarded, neither can fish covered in sores. And how about that chlorine spill? discharge? And the chemicals used to dissolve radioactive crud buildup? Combined with radioactive contaminants no wonder that dump of a plant is a blight, a plague on the land.

Pamela Blockey-O'Brien

Pamela Blockey-O'Brien.

LETTER R

From: Pamela Blockey-O'Brien



PAMELA BLOCKEY-O'BRIEN, D23 Golden Valley
7631 Dallas Hwy, Douglasville, GA 30134 USA

To: US NRC
License Renewal Application Section
Chief of Rules and Directives,
Div. of Administrative Services,
Office of Administrator, Mailstop T-6,
D-59, US NRC,
Washington, D.C. 20555

June 4th 2000

50-321/366

Re: License Renewal Application by Southern Nuclear Operating Co. and others for Nuclear Plant Hatch I and II, Georgia. Additional supplemental statement, and correction to my May 29th, 2000 supplement AGAINST the License Renewal, to be attached to and made part of the May 10th, May 29th statements and testimony and considered by NRC.

- 1) Correction : May 29th Supplemental Testimony, the word "ALSO" was accidentally left out between the words "paragraph" and "as" on page seven, 16 lines from the page top - I meant that NRC consider it as part of the License Renewal testimonies and ALSO as a 2.206. Further, the word "not" on page 5, ten lines up from the bottom, second word from the right, should be left out and the word next to it, "is", changed to "it's" - so that it reads "does not appear that it's going to be considered,..etc."

- 2) Additional supplemental statement : Another reason site meteorology should be assessed as outlined in my May 10th testimony on page 2, if not better, and one years worth is as good as useless, is, for example, that in 1999 Savannah recieved 11 inches of rain in 12 hours in that area and went underwater and the system could easily have moved across the Hatch area under other circumstances, and it must be borne in mind that a region is considered to have a 100 year flood when 10 inches of rain falls in 24 hours - it does not mean it is a flood that only happens every 100 years. In 1984 tornadoes and high winds caused \$14 million in damages across an area including Toombs and Tatnall Counties next to Appling Co where Hatch is. In 1986 tornadoes struck south Georgia and one touched down in Baxley, Appling Co. injuring four and destroying five homes. In other counties that year others were injured in tornádoes. There are many other examples of serious weather, damaging storms, etc. across South Georgia year after year, including hurricanes crossing the area bringing drenching rains if one goes back even 50 years. Georgia is known for its volatile weather - ice storms can cause freezes almost to the coast on occassions (ice storms to the north) . Puthermore, updated earthquake data is now available for the South, including Georgia , and it must not be forgotten that the Charlston earthquake caused chimneys to fall in Atlanta, shattered windows and knocked down a house there, and according to a 1996 news report, experts predict a 25% chance of a Charlston magnitude earthquake that will hit SOMEWHERE in the east in 25 years. In its comments on the CRAC-2 report, the Subcommittee on Oversight and Investigations report to Congress, noted that "Peak" does not necessarily mean worst case results because the CRAC-2 model considers only one years worth of data and does not model precipitation frequency beyond a distance of 30 miles from a reactor, may not adequately characterize the frequency of precipitation events and this was significant as

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as highest consequences from accidents are predicted to occur when a radioactive plume encounters rain over a densely populated area. Furthermore, that assuming fatal doses i.e. assumptions regarding fatal doses, may be subject to question as, they stated, the model assumes that "supportive treatment" is available of special sterile procedures, massive use of transfusions and antibiotics, and considerable medical attention, and that the Reactor Safety Study concluded that such a level of attention would be available to only 2,500 to 5,000 people EVEN IF THE TOTALITY OF SUCH RESOURCES IN THE ENTIRE U.S. WERE USED.

I would add to that, that the level of knowledge required to treat patients suffering radiation exposure in most hospitals here and abroad is sorely lacking. One of the best hospitals in the world for this being in Japan (as a result of the nuclear destruction of Hiroshima and Nagasaki.) The psychological trauma of medical staff faced with trying to deal with persons dying from radiation exposure of the worst type - with the blood pouring from every orifice in the body as the body literally "melts down" because the molecular internal structure of living cells is breaking down (or, to quote the essentially government funded (including DOE etc) National Research Council of the National Academy of Sciences Biological Effects of Ionizing Radiations Report No. 5, on effects of low level radiation (which left much to be desired although the nuclear club hated it) "Ionizing radiation is energetic enough to displace atomic electrons and thus break the bonds that hold a molecule together,"-that sort of trauma could lead to staff meant to be helping unable to. How many lead lined coffins does Georgia possess in which to bury radioactive remains? Southern should answer that. The attempts of international bodies including the notorious International Atomic Energy Agency and the awful International Commission on Radiological Protection (who do not recognize direct medical experience with Atomic Bomb victims, Chernobyl or other radiation victims as being relevant, according to the Permanent People's Tribunal Session on Chernobyl, Vienna, 1996) to cover up the true effects of Chernobyl is relevant in connection with attempts to project effects of major nuclear accidents, because people labor under the delusion few died, and accidents elsewhere may be similar. Chernobyl obly lost between 4 % and 10% (estimates differ) of its radioactive core inventory. There was no full meltdown - in part due to the heroic efforts of the workers - 800,000 of them drafted to assist in emergency response, thousands of whom are now dead. The Russian so-called "Secret Protocols", serious scientists from across Eastern Europe and others, come up with more than 25,000 killed immediately in the course of the disaster. A Russian nuclear physicist from Kiev stated in the year following Chernobyl, "over 20,000 pregnancies have been aborted due to the Chernobyl catastrophe only in Kiev". When the amount of hospitalized passed 10,000 during the catastrophe, it was solved by increasing the levels of "accepted" radiation levels to people by fifty, i.e. ^{they} were automatically healthy and dischargeable, so they presumably died at home - or somewhere. A few days after the Ministry of Health Care put out the edict, the number of hospitalized (incoming) decreased, and the discharges increased. An Excerpt of the Protocol of May 12th, 1986 states: "It is reported by Mr. Schtepin that in the course of the last day 2,703 more persons have been hospitalized generally in Byelorussia, 678 persons discharged from hospitals, 10,198 persons are undergoing treatment and medical examinations in hospitals". In parliamentary hearings in the Supreme Council in 1990, it was admitted that 1.6 million children recieved "irradiation doses that are worrying us" and if they lowered the dose limits (back down) relocation

of "1.6 million people would have to be considered." (i.e. off what is really contaminated land) . The research in what used to be the former Soviet Union on Chernobyl is massive, the results are horrendous. So bad is the contamination, that one proposal was to raise the permissible level of nuclear contamination in soil, especially in unoccupied areas, relocate the population on to that land, and relax contamination standards in food and water. According to the aforementioned Tribunal Session on Chernobyl, comprised of experts from all over the world and across Russia, they may have got the idea from a new policy of the notorious ICRP stating after a nuclear accident the principle of applying ALARA (a terrible policy in itself which states that radiation doses etc. should only be kept "as low as reasonably achievable" [alara) depending on technology, how much money industry etc. wants to spend on it etc. which is how nuclear industry and plants operate worldwide, and has nothing to do much with health) simply NO LONGER EXISTS, that it requires risk/benefit studies to justify evacuation, restricted land use or consumption of food and similar criminal attitudes. Is this what people can look forward to if Hatch or any other plant blows ? Will people be told to eat their radioactively contaminated food while watching their children die of cancer or their wives aborting, and told to shut up and be thankful because ICRP and IAEA has decided so ? And besides, NRC is agreeing to new generations of nuclear power plants so industry can continue to generate nuclear waste and create their beloved plutonium-uranium economy worldwide ? Is this why Southern put the severe accident dollar figures so low ? In the interests of protecting public health and the environment, NRC must pass a Rule forbidding this from happening. (If a plant near Washington blows NRC will be glad it did.) It is also unclear whether Southern took into consideration the colleges that could be in the windpath of a nuclear release from Hatch, such as in Statesboro, or the huge Army base at Fort Stewart - the military would be about as pleased as a disturbed rattlesnake if Southern/Georgia Power radioactively gassed its troops - who knows, they might even consider returning the favor and wipe out north Georgia in the process.

You know, Mutually Assured Destruction, that old standby. Better shutdown Plant Hatch before that happens.

Pamela Blockey-O'Brien.

Pamela Blockey-O'Brien.

LETTER S

The Executive Director for Operations,
U.S. N.R.C.,
Washington, D.C. 20555



PAMELA BLOCKEY-O'BRIEN, D23 Golden Valley
7631 Dallas Hwy, Douglasville, GA 30134 USA

To Collins, NRR
Ref. G 20000282

cys: EDO
DEDMRS
DEDR
DEDM
AO

June 15th, 2000

OGC Goldberg, OGC
Rii
Subbarathnam, NRR

Dear Executive Director,

Further to NRC's telephone conference with me today concerning my 2.206 Petition against Southern/Georgia PWR's Plant Hatch I and II, Baxley, Georgia, next to the mighty Altamaha River, the sources of some of my bases should be better clarified, so I hereby submit some additional source information to support the following bases to be included as part of my 2.206 Petition for permanent license revocation and permanent shutdown of Hatch I and II, for consideration:

Under bases 1) and 8) on effects to children etc. :

"Lens Opacities of Children of Belarus Affected by the Chernobyl Accident" by A.N. Arinich and L.A. Ospennikova, Research Clinical Institute of Radiation Medicine and Endocrinology, Ministry of Health, Republic of Belarus, Aksakovschina, 223032, Minsk, Belarus.

"Monitoring of Cytogenetic Damages in Peripheral Lymphocytes of Children Living in Radiocontaminated Areas of Belarus" by Ludmilla S. Mikhalevich, Institute of Genetics and Cytology, Academy of Sciences of Belarus, P.Skorina st., 27, 220072, Minsk, Republic of Belarus (Fax: (0172) 68-49-17 this fax is in a 1998 document), and by the same author: "Study of Genetic Effects in Somatic Cells of Children Living on the Contaminated Territories in Belarus".

Relevant excerpts from Nov. 1, 1982 Committee on Interior and Insular Affairs, U.S. House of Representatives, Washington, DC, Subcommittee on Oversight and Investigations, "Calculation of Reactor Accident Consequences (CRAC2) for U.S. Nuclear Power Plants (Health Effects and Costs) Conditional on an SST Release"

This document is enclosed. It should be noted that the Peak Fatal Radius is 20 miles (when evacuations only go ten miles) and Peak Injury Radius is 70 Miles, for Hatch. Even taking into consideration a 50 mile ingestion pathway (current) it is all inadequate. The seven hundred dead per unit was based on the population data back then of course. The explanatory text which is part of the report is of great importance. PLEASE PROVIDE A COPY OF THIS TO THE HATCH RELICENSING STAFF AS I FORGOT TO INCLUDE IT WITH MY JUNE 4th Submittal referred to in our conversation today. (i.e. to be made part of that also) It is obvious that children would be among the dead.

Base 2) Chernobyl had a 1,000 ton steel and cement coverneutron shield over the reactor (and one below) which shot up in the air and came crashing back down at an angle on it. It has been stated that this was one of the reasons Chernobyl only lost between 4% and 10% of its radioactive core inventory. Hatch reactors have only the metal building roof above them according to NRC Inspector Skinner (now retired I believe) - and of course have no, repeat NO - huge containment dome. Chernobyl also had a "pressure suppression pond" below it, and a (due to the accident) flooded basement below that. To avoid a truly massive meltdown and explosion happening with the core breaking through into the water, while airiel runs

were being made to drop the more than five thousand tonnes of mixture of lead, boron carbide, clay and sand on the reactor, a group of three workers in wet suits struggled through dark, flooded corridors to reach the pools slide valves and prise them open; and then another five volunteer firemen split in a group of three and two, the first three got a pump truck and an armoured car, drove the pump truck into a tunnel under the reactor got to the edge of the water pool, attached hoses primed the pump and got out in the armoured car in five minutes flat, two others went in later to make sure the pump worked, and two of the first group had to go in again and restart it later. Other workers were pumping liquid nitrogen (forcing it) through lower reactor piping into spaces around the reactor vault. as soon as the water was out of the pool and basement the thousands of workers (in relays) began to tunnel under the reactor and start installing a flat heat exchanger mounted on a massive concrete platform 900 metres (about 2700 ft) square and 2.4 metres thick - the last line of defense against possible meltdown of the (main bulk of) the reactor core. These people gave their lives to save the world. Had the core melted and exploded also down into the river and groundwater, it would have reached the Black Sea ultimately and from there the worlds oceans. Some contaminants HAVE already shown up in Black Sea sediment. Obviously Hatch is smaller, however it is on the banks of the Altamaha which empties into the Atlantic and the Altamaha Sound at Darien, two counties downstream at Georgia's magnificent Golden Isles area, with its fishing fleets, thousands of tourists, incredible wildlife and birds and endangered species and areas vital to migratory birds coming from South America the West Indies etc. Hatch has already contaminated the sediment down to the coast - in part from the massive Spent fuel pool accident in 1986 - documented that the sediment is contaminated by both State and Georgia Power. Cobalt-60 is NOT a natural constituent of sediment, nor is Cesium 137, Cobalt-58, Zn-65, Mn-54, Cs-134 but now it's in there thanks to Hatch. Not to mention they contaminated onsite groundwater back in 1979, and a lot more besides. Area people are on wells. The huge Ft. Stewart Army Reservation falls in the Peak Injury radius and in the fifty mile ingestion pathway. The State Prison in the radius also. And of course the school's in the 20 mile kill zone. As is the town of Baxley and some other towns. Nureg-1079 shows under certain criteria, the core (Mark I as Hatch is) can begin to uncover in 33 minutes. Notification is 45 minutes. There is no way fast evacuation could occur - which brings me to :

Base 3) Enclosed is a June 1999 photo of the Appling Co Emergency Rescue HQ, to show the size. The painted school bus is on the right. There are two ambulances and two other emergency vehicles. The fire station is not on here, it's smaller and cuter. The emergency rescue is in a sort of converted gas station by the look of it. These people will die if they have to go and try and confront a nuclear disaster. It is cruel to expect them to. Of course, considering Hatch has a cracked core shroud held together with braces that could fail due to aging and vibration anyway, a serious accident would probably guarantee that. At Chernobyl the refueling platform etc. above the reactor (just like at Hatch) fell down into it of course. That would likely happen at Hatch. Any workers or rescue personell on it would die. In event of an explosion, the spent fuel pool at Hatch is shared by both Units and is UP at around fourth floor level so fuel can be moved to it, there would likely be the end of the spent fuel pool too. THAT would be the ultimate catastrophe. CRAC2 doesn't consider the spent fuel pool going too. It only has the building roof as protection.

S01

S02

3.

The pool is packed. An indoor high level waste dump.

There is absolutely no way emergency response from the entire State of Georgia could deal with such an accident, let alone the poor little Appling County Fire and Rescue units. Picture it for a moment : reactor melting down, deadly hot radioactive steam everywhere, overhead crane and refueling platform crashing down onto reactor with explosions going on, spent fuel pool going, water streaming from the spent fuel pool, spent fuel rods later becoming a molten, melting blob from hell, people dying everywhere, sirens going off, panicked parents, screaming terrified children, packed dirt side roads and blacktops, an uneducated -radiologically speaking -press corps trying to fly over it for pictures , and, as people in the south in rural areas use CB radios and cell phones, the entire coast trying to leave, plus most of middle Georgia - don't forget Ft. Stewart, and at the Prison probably a riot breaking out as they try to escape too. Washington would be wringing its hands, NRC Atlanta and the State of Georgia would be looking for a Chernobyl type radiation suit none of them possess - maybe they'd ask NRC in DC for one, and they don't have one either. And the children and everything else we love would die. Then the plume would probably head up the eastern seaboard or elsewhere depending on meteorology at the time. More panic, more death, more damage. That aged dump of a facility must be shutdown, soon, forever.

Please put all this also in the Federal Register when you do publish it as people need to understand that children dying from radiation sickness with its bleeding from every orifice, hair fallout, radiation induced vomiting, is just NOT acceptable. Neither are children going blind or with genetic damage. That's what would happen.

The only way the public can be somewhat protected is to shutdown Hatch I and II. Southern should compensate the community of Appling County.

As should the co-owners Georgia Power, Oglethorpe Power and MEAG and the City of Dalton.

Please make the right decision and grant the 2.206, for the sake of the children in particular.

Thank-you.

Pamela Blockey-O'Brien

Pamela Blockey-O'Brien

Copy to : Rita Kilpatrick, CPG, Atlanta, Sara Barczak, CPG, Savannah.

2 Enclosures: photo and CRAC-2 / Subcommittee Report

LETTER T

License Renewal Division
Chief of Rules and Directives
Div. of Administrative Services
Office of Administrator
Mail Stop T-6, D59
U.S Nuclear Regulatory Commission
Washington, D.C. 20555

June 9, 2000
sent via certified mail

Received
12 June 2000

①

65FR# 19797
12 Apr 2000

RE: Environmental Impact Statement for the License Renewal Application for Edwin I. Hatch Nuclear Reactors I and II by the Southern Nuclear Operating Company and others.

COMMENTS OF CAMPAIGN FOR A PROSPEROUS GEORGIA

The following comments are filed by Campaign for a Prosperous Georgia (CPG) as part of the Environmental Impact Statement process for the License Renewal Application for Edwin I. Hatch Nuclear Reactors I and II by the Southern Nuclear Operating Company and others. The comments herein are a supplement to oral comments made by Rita Kilpatrick, May 10, 2000, before the NRC in Vidalia, Georgia.

CPG is a non-profit conservation and energy consumer organization headquartered in Atlanta with a field office located in Savannah. We are a statewide organization with members throughout Georgia and have focused on energy and nuclear concerns for 17 years.

Area of Vital Ecological Significance

The area where the Hatch nuclear plant is located in Appling County along the banks of the Altamaha River is an area of vital ecological significance to Georgia and the region. The livelihood of hundreds of thousands of people depends on this river and billions of dollars of resources from fisheries, agriculture, tourism, and other coastal activities are at stake here.

Earthquake Zone

One major concern is that Plant Hatch is located in an earthquake zone that threatens the public and the surrounding environment. On Jan. 18, 2000 there was an earthquake with a magnitude of 2.5-4 with the epicenter at Lake Sinclair. According to specialists at the Georgia Institute of Technology, there was no fault but rather a zone of weakness and these shifts occur regularly every 2-4 years. These shifts, in addition to the Charleston earthquake zone, would further threaten the operational integrity of the plant.

T01

Template: ADM-013

E-RIDS = ADM-03
Add: Stacy Hytton (EGH)

Vulnerability to Hurricanes and Wildfires

A major concern is that every decade in the 50's, 60's, 70's and 80's, a hurricane has crossed South Georgia. The NRC report "Effects of Hurricane Andrew on Turkey Point Nuclear Generating Station (August 20-30, 1992)" shows serious consequences. Also, the severe gridlock that has occurred during hurricane evacuations in Florida is comparable to the type of gridlock that would occur in the event of a catastrophic event surrounding Hatch.

T01

In addition, wildfires pose a threat to the area. At present, there is a wildfire that firefighters are trying to contain near Waycross in South Georgia. As recently occurred at the nuclear facility in Los Alamos, wildfire forced the town and workers to evacuate the area. A similar or worse occurrence at Hatch would force worker evacuation and threaten plant and public safety.

Natural Deterioration of the Plant

The plant is decayed and contaminated at present. This will worsen with time due to the deteriorating effects that radiation has on a nuclear plant. The Hatch reactors have a cracked core shroud, held together by steel braces which become brittle and corroded due to exposure to radiation. These have the potential to snap due to vibration leading to severe problems.

T02

Continuous serious problems at Hatch that included automatic shutdowns (6-15-99, 6-28-99 and 1-26-00) are other examples of major problems, faulty equipment and aging machinery. The aging status of the plant and the lack of aging monitoring are of high concern to public safety.

Added concerns, which CPG supports, are identified in a May 3, 2000 petition filed by the Union of Concerned Scientists regarding aging effects due to radiation, specifically the degradation of liquid and gaseous radwaste systems.

Unacceptable Contamination of Air, Water, and Land

There has already been unacceptable damage and risk to the immediate environment. Extending plant operations will worsen the situation.

During the December 3-4, 1986 spill of 141,500 gallons of highly radioactive contaminated water from the spent fuel pool resulted in 44,000 gallons of that contaminated water released between the reactor buildings and contaminated on-site soils, equipment, asphalt, walls, turbine buildings, control building, hot machine shop, nitrogen storage area among other locations. This was in part due to leaking seals, lack of attention to documented problems, equipment failures, inadequate licensee action, and inoperable leak detection systems, all of which resulted in the highly contaminated water also contaminating the river, sediment, wetlands (swamp) and would have seeped into the groundwater adding to the existing groundwater contamination from numerous prior events. Prior events include the 1979 failure of a pump seal in the condenser tank system that contaminated the local aquifer or the release of radioactive RHR service water system containing Manganese 54, Cobalt 60, Zinc 65, and Xenon 135.

T03

State documents from 1999 confirm that Hatch has contaminated sediments in the Altamaha River. Radioactive contamination of sediments attributed to operations of Hatch have extended as far as Jesup and Darien.

T03

Hatch is situated over a major regional limestone aquifer system of groundwater resources and the surrounding community relies on underground wells; therefore water quality and health are of top concern. One of the local aquifers near the plant is an unconfined Miocene/Pliocene aquifer (Hydrologic Atlas 18).

A June 2, 1995 Inspection Report shows that leaking fuel caused increases in radioactivity in liquid effluent dumped into the Altamaha River in 1994 and increases in particulate forms of radioactivity as gaseous effluents released to the air, including Cobalt 58, Cobalt 60, Zinc 65, Cesium 134, Cesium 137.

T04

The absence of independent analysis on levels of radioactive contamination in the river and waterways is a high concern. Independent analysis is sorely needed. It should be noted that state analysis only involves cross-checking and cannot be considered independent analysis.

T05

The NRC Docket shows the site has become a radioactive dump inadequately held together; for example, the wall thinning and pitting of the piping systems is so bad (resulting from conditions such as but not limited to flow-assisted corrosion and microbiological corrosion and radioactive decay products) that the Southern Company has sought relief to use alternative repair techniques which would result in adding more metals around the pipes to restore wall thickness rather than replacing the pipes, requesting permission to use an ASME-approved code which has not been incorporated into NRC regulatory guide 1.147 and thus is not available for application at nuclear power plants as the Southern Company has stated in its third 10-year interval Request for Relief RR-25.

T06
T20

Detailed inspection reports from 1999 alone showed multiple equipment failures that could have had serious consequences, including meltdown.

The Hatch licensee dumped radioactive contaminated sludge on the land since 1982 without ever surveying the sludge until May 1992, which would have seeped into groundwater (Jan. 8, 1993 Inspection Report). The State of Georgia was negligent as an agreement state in issuing National Pollutant Discharge Elimination System (NPDES) permits for disposing of sludge, which did not address measurements for or content of radioactive material in the sludge.

T07

A practice existed for years of upending radioactive contaminated drums, so that the residue would drain onto the ground from the drums which held radioactive waste oil and water, contaminated the soil and an underground storage tank with Cobalt 60, Manganese 54, Zinc 65, and Cesium 137. Subsequently contaminated soil was removed, but it is unclear where it was taken. Although the contaminated underground storage tank was removed and stored on-site at Hatch, the groundwater and possibly workers would have been contaminated and this issue was never addressed (Special Report 1-sp-80-3 Contaminated Soil at Waste Oil Storage Area).

The dam on Lake Sinclair owned by the Southern Company was completed in 1953. This is an old dam and would not have been built to current specifications of a modern dam. A severe earthquake could break the dam, which would release a massive amount of water. The effect of dam breakage particularly in times of major flooding on the Oconee, Ocmulgee and Altamaha rivers could have catastrophic consequences not only to Hatch but to the Independent Spent Fuel Storage Installation (ISFSI) for high-level radioactive waste currently constructed next to the Altamaha River.

T08

The NRC has revealed that the ISFSI casks will give off 125 millirems/hr on the side of the cask over pack and 85 millirems/hr on the top. This will stream to the environment and will further add to the radiological burden to people in the area and to the environment, including wildlife and migrating birds, at levels over and above already existing contamination and above daily releases of radioactive contamination to water and air, due to current plant operations.

T09

Goat farms and families with goats located in and around Appling County face added risks because tritium has a high transfer factor (17 times higher for goat milk than for cow milk), according to study done for the U.S. Department of Energy.

T18

Worker Contamination

After years of operation the licensee has problems refueling without contaminating workers and the surrounding site; for example, Mar. 12, 1990 Inspection Report where the particulate airborne Cobalt releases were 5.2 times the already high maximum permissible concentration in air and 17 individuals were contaminated (14 contaminated internally), the contamination events actually started in Aug. 1989 and continued until Jan. 1990 and the contamination of personnel, equipment, and fuel water was significant. Over the years the NRC has repeatedly put concerns in writing due to "the continuing radiological and contamination control deficiencies" yet the NRC has been ineffective in bringing corrective change.

T10

Historic Preservation and Ecologically Significant Sites in the Wind Paths and Surrounding Area

The following, among other local historic and ecologically significant sites, would be lost forever in the event of a catastrophic accident:

T19

- J. Clayton Stephens Museum of Local History located in an adjacent county where local history is assembled;
- The Little Ocmulgee State Park on the Little Ocmulgee River in McRae;
- Horse Creek Wildlife Management Area in the Ocmulgee proper;

- The Gordonia-Altamaha State Park at Reidsville;
- Altamaha River Bioreserve.

Low-Income Population Impacts

There is not adequate attention to issues surrounding economic justice and the long-term, negative economic implications of Plant Hatch on the community. The area is being contaminated to the extent that the location is made undesirable for future economic development. This will only worsen with extended plant operations. T11

Unacceptable Fatalities and Injuries in the Event of Serious Accident

If there were a meltdown, there would be an unacceptable number of immediate fatalities and peak early injuries due to radiation and additional unacceptable fatalities and injuries from an accident and meltdown in the radioactive spent fuel pool.

Hatch's aging reactors, spent fuel pool and proposed ISFSI pose unacceptable risks to people, agriculture and fishing in the surrounding area. It would constitute malfeasance and negligence on the part of the NRC to re-license this plant and to allow the storage cask scheme to go forward.

The licensee's analysis of severe accident mitigation alternatives is grossly deficient.

The Brookhaven National Laboratory study done for the NRC in 1997 determined that spent fuel accidents with a full storage pool as exists at Hatch would cause 101 prompt fatalities within a 500-mile distance, 138,000 latent fatalities and 2,170 square miles of land that could never be de-contaminated. According to other government documents, reactors of the Hatch GE Mark I type can begin to melt down in as little as 40 minutes due to known design deficiencies. T12

The lack of a traditional containment dome at Hatch adds to public health and economic risks. T13

Increased Liability for Local and State Governments

The utility industry is undergoing dramatic change involving deregulation, plant sales, and company mergers that create an unstable and unsafe environment for nuclear plants and the surrounding communities. New companies that may purchase old facilities are often unaware of the historical record at nuclear plants. Southern Company, which operates the plant, is undergoing continual reorganization that heightens uncertainties. The company has encountered notable problems with risky investments in global expansion, as evident in reviewing the company's annual reports and filings with the U.S. Securities & Exchange Commission.

As nuclear companies close down and walk away from radioactively contaminated areas in the future, the liability for clean-up will fall on local governments to deal with the contamination at the site and in the surrounding area. There is no mechanism for remediation or responsibility for dealing with high levels of contamination that will only escalate with continued plant operations in the future and the site could fall to a "third party," most likely the state or municipality. Generation of more waste including the proposed 5000 additional assemblies will exacerbate growing liability to local governments.

T14

Handling of Generic Industry Problems

We have concern that the NRC frequently categorizes problems as generic industry problems. We request that the NRC treat all problems and areas of concern raised about Plant Hatch in this re-licensing proceeding and others as "site specific problems," not generic industry problems.

T15

Inadequate Analysis of Alternatives

The applicant's analysis of alternatives is inadequate and does not consider a viable set of alternatives. Also, the extent of economic analysis done on the alternatives is unclear in the application. Some alternatives are clearly not in the public interest nor the company's economic interest: (1) new coal, (2) new oil, and (3) new nuclear.

T16

The most recent long-range Integrated Resource Plan for Georgia Power Company, approved by the Georgia Public Service Commission, identifies ways that the company plans to secure power supplies in the long term based on future, projected demand. It should be noted that this PSC-approved plan assumes that Hatch reactors will retire according to Hatch's original license in 2014 and 2018.

The applicant has not properly assessed the following renewable energy options:

(1) Wind power options: The applicant states that there are not adequate wind/ land resources in Georgia, and that wind is not an option. Land use maps indicate that the northeast corner of Georgia has small but good sites. It is important to note that throughout the U.S., many good sites are not on any resource maps. When energy developers are asked to find a resource at a reasonable price they seem to find the wind resource. The applicant could also negotiate with other companies to wheel wind power from other states. Off shore is a growing resource.

(2) Solar: The applicant states that solar is too expensive, and that Georgia does not possess adequate resources. The most cost effective photovoltaic (pv) applications are roof top and building integrated where distribution and reliability issues are addressed. Roof top pv and building integrated pv installations have no environmental impact.

(3) Geothermal: Geothermal heat pumps are a viable option in Georgia, already under development, with potential to expand significantly.

(4) Wood energy and biomass: The upgrade of inefficiency of current biomass plants should be considered. Also, agricultural waste, urban wood waste, and methane gas recovery from landfills should be considered.

Renewable energy supplies in combination with energy efficiency and cleaner generation (fuel cells, cogeneration, micro turbines, high efficiency gas, bio-fuels, etc.) can make a major, low cost impact on the applicant's dirty and unsafe generation profile. The do-nothing approach presented in the application is inadequate. There is a clear need to ramp up renewables, efficiency and cleaner generation today if customers future needs are to be met.

Similar to Americans nation-wide, Georgians are asking for clean air and clean water. The applicant parties can make this happen if they use economic leverage to support clean power. Regarding renewable energy programs, CPG urges that the Southern Company and its partners begin participation in the Center for Resource Solutions, a voluntary certification program that requires utility participants to follow specific guidelines that promote renewable resources. The goal of this program is to help regulated utilities offer programs to its customers to meet a high standard of public accountability. The Tennessee Valley Authority, which serves part of Georgia, launched a Green Power Switch program in April 2000 which give its customers the choice of paying a small premium to ensure that some of their electricity comes from non-polluting, renewable energy sources. We believe the applicant can significantly surpass TVA in "green power" development.

Attached herein is an excerpt from the Integrated Resource Plan by Georgia Power Company, filed in the past at the Georgia Public Service Commission for consideration in the company's long-range planning. Several of these programs were never implemented. Although current policy at the Georgia PSC requires a "ratepayer impact measures" screening test for energy efficiency programs to be approved for rate-based customer service programs, the company has in the past and currently has the ability to develop programs that go beyond the screening test. The company has had ample opportunity to develop its own energy-efficient programs for customers outside of rate-based approved programs. Unfortunately, to date, such programs have been designed primarily to build customer electric load which encourage usage at times that bolster nuclear supplies. This load-building effort is detrimental and should be abandoned, along with the pursuit of extended operations at Hatch.

Georgia is exporting power equivalent to that generated by Hatch. No analysis was presented about the contract terms and the potential for retaining the power in the state.

T17

False Claims to be "Environmentally Clean"

The bravado with which the nuclear industry touts that nuclear power is "environmentally clean," including during the public hearings on Hatch re-licensing, requires that the record be set straight

about complaints raised to date. In 1998, the federal Better Business Bureau ruled that advertisements placed by the Nuclear Energy Institute on behalf of the nuclear industry were misleading and that the industry should “discontinue” its “inaccurate” statements. Last year, the Federal Trade Commission also agreed that the industry “failed to substantiate its general environmental benefit claims.” Attached herein is the Federal Trade Commission’s finding.

Conclusion

Building a safe, affordable and efficient energy supply that provides safe jobs to the area is a top priority.

In closing, we request the following:

- rejection of the licensee’s application to extend Hatch’s operating life;
- clean-up of the contaminated areas;
- pumping of the radioactively contaminated groundwater;
- retrieval of all particulate radiation, in particular Cobalt 60 in sediment, sub-surface soil, groundwater, and river water both on site and in the Altamaha River and in any adjacent creeks, tributaries, wetlands, and swamps within and without the licensee’s protected area;
- decontamination of all equipment, material and buildings on-site;
- adequate compensation of contaminated workers and any of the general public who may have been affected or whose well water may have been affected;
- and irreversible revocation of the plant license;
- a halt of the proposed Independent Spent Fuel Storage Installation.

Respectfully submitted,

Rita Kilpatrick
Executive Director

LETTER U



CAMPAIGN
FOR A
PROSPEROUS
GEORGIA

February 22, 2000
via facsimile 301-415-1759 &
301-415-1222

Director
Nuclear Regulatory Commission
U.S. Nuclear Regulatory Commission
Washington, DC 20555

RE: 2.206 Petition

Dear Director:

We are hereby submitting a petition under Section 2.206 of 10 C.F.R. regarding the Edwin I. Hatch nuclear power plant located near Baxley, Georgia in Appling County along the banks of the Altamaha River, an area of vital ecological significance upon which the livelihood of hundreds of thousands of people depend.

This petition is asking for shutdown of the facility, clean-up of the contaminated areas, pumping of the radioactively contaminated groundwater, retrieval of all particulate radiation, in particular Cobalt 60 in sediment, sub-surface soil, groundwater, and river water both on site and in the Altamaha River and in any adjacent creeks, tributaries, wetlands, and swamps within and without the licensee's protected area, decontamination of all equipment, material and buildings on-site, adequate compensation of contaminated workers, and any of the general public who may have been affected or whose wellwater may have been affected, and irreversible revocation of the plant license. Furthermore, the proposed Independent Spent Fuel Storage Installation should be halted for reasons which will be enumerated below.

U12

The bases for this request are as follows:

Poor Personnel Practices

(a) Since the operation of Plant Hatch and its neighbor Plant Vogtle by persons under the influence of cocaine, marijuana, or alcohol in the 1990's is appalling (Inspection Report 50-321/94-23, 50-366/94-23);

U01

Poor Facility Conditions, Maintenance, and Management

(b) Since the facility is decrepit, decayed and contaminated;

U02

- (c) Since start-up (see reports Nov. 1, 1974 and Feb. 1, 1977), Hatch has had problems with exceeding the technical specifications and lost pieces in the reactor and left them there (Dec. 15, 1975 Georgia Power to NRC);
- (d) Since, at start-up, Hatch personnel failed to document test steps and failed to calibrate radiation detectors and since there have been vibration problems (Sept. 19, 1975) and it is unclear if the vibration problems were ever fixed;
- (e) Since Hatch was exempted from reporting on the status of the facility 9 months after criticality (March 23, 1979);
- (f) Since the cracked core shroud (held together by steel braces) becomes brittle and corroded due to radiation exposure and could snap due to vibration leading to a disaster;
- (g) Since a reactor vessel feedwater nozzle inside radius and bore cracking (1974-1980) exacerbates the situation;
- (h) Since the Oct. 3, 1994 Inspection Report shows that the Southern Nuclear Company had ignored recommendations concerning looking for weld defects on the core shroud and even reduced inspection criteria; Since NRC inspectors only looked at videotapes of visual examinations of the reactor core shroud which is unacceptable as is the performance of General Electric examiners who wrongly positioned the scanning fixture on the core shroud wells (further problems are detailed in inspection conducted Mar. 25 - Apr. 1 1994);
- (i) Since the continuous serious problems at Hatch which included two automatic reactor shutdowns (6-15-99, 6-28-99 and 1-26-00) are other examples of major problems, faulty equipment and aging machinery at Hatch;

Unacceptable Damage and Risk to the Immediate Environment

- (j) Since during the December 3-4, 1986 spill of 141,500 gallons of highly radioactive contaminated water from the spent fuel pool resulted in 44,000 gallons of that contaminated water released between the reactor buildings and contaminated on-site soils, equipment, asphalt, walls, turbine buildings, control building, hot machine shop, nitrogen storage area among other locations, in part due to leaking seals, lack of attention to documented problems, equipment failures, inadequate licensee action, and inoperable leak detection systems, all of which resulted in the highly contaminated water also contaminating the river, sediment, wetlands (swamp) and would have seeped into the groundwater massively adding to the existing groundwater contamination from numerous prior events, such as the 1979 failure of a pump seal in the condenser tank system which

U03

U04

contaminated the local aquifer or the release of radioactive RHR service water system containing Manganese 54, Cobalt 60, Zinc 65, and Xenon 135;

(k) Since Hatch is situated over a major regional limestone aquifer system of groundwater resources and the surrounding community relies on underground wells and since one of the local aquifers near the plant is an unconfined miocene/pliocene aquifer (Hydrologic Atlas 18);

(l) Since the June 2, 1995 Inspection Report shows that leaking fuel caused increases in radioactivity in liquid effluent dumped into the Altamaha River in 1994 and increases in particulate forms of radioactivity as gaseous effluents released to the air, including Cobalt 58, Cobalt 60, Zinc 65, Cesium 134, Cesium 137;

U08

(m) Since, the Docket shows the site has become a radioactive dump inadequately held together; for example, the wall thinning and pitting of the piping systems is so bad (resulting from conditions such as but not limited to flow-assisted corrosion and microbiological corrosion and radioactive decay products) that the Southern Company is seeking relief to use alternative repair techniques which would result in adding more metals around the pipes to restore wall thickness rather than replacing the pipes, requesting permission to use an ASME-approved code which has not been incorporated into NRC regulatory guide 1.147 and thus is not available for application at nuclear power plants as the Southern Company has stated in its third 10-year interval Request for Relief RR-25;

(n) Since after years of operation the licensee has problems refueling without contaminating workers and the surrounding site; for example, Mar. 12, 1990 Inspection Report where the particulate airborne Cobalt releases were 5.2 times the already high maximum permissible concentration in air and 17 individuals were contaminated (14 contaminated internally), the contamination events actually started in Aug. 1989 and continued until Jan. 1990 and the contamination of personnel, equipment, and fuel water was significant, and over the years the NRC has repeatedly put concerns in writing due to "the continuing radiological and contamination control deficiencies" yet the NRC has been ineffective in bringing corrective change;

U06

(o) Since the Hatch licensee dumped radioactive contaminated sludge on the land since 1992 without ever surveying the sludge until May 1992 which would have seeped into groundwater (Jan. 8, 1993 Inspection Report) and the State of Georgia was negligent as an agreement state in issuing National Pollutant Discharge Elimination System (NPDES) permits for disposing of sludge which did not address measurements for or content of radioactive material in the sludge;

U05

(p) Since the practice that existed for years of upending radioactive contaminated drums, so that the residue would drain onto the ground from the drums which held radioactive waste oil and water, contaminated the soil and an underground storage tank with Cobalt 60, Manganese 54, Zinc 65, and Cesium 137; Since subsequently contaminated soil was removed, it is unclear where it was taken to, and although the contaminated underground storage tank was removed and stored on-site at Hatch, the groundwater and possibly workers would have been contaminated and this issue was never addressed (Special Report 1-sp-80-3 Contaminated Soil at Waste Oil Storage Area);

(q) Since Hatch is situated in an earthquake zone and on Jan. 18, 2000 there was an earthquake with a magnitude of 2.5-4 with the epicenter at Lake Sinclair and according to specialists at Georgia Tech, there was no fault but rather a zone of weakness and these shifts occur regularly every 2-4 years which, in addition to the Charleston earthquake zone, would further threaten the operational integrity of the plant;

U09

(r) Since the dam on Lake Sinclair is owned by the Southern Company and Lake Sinclair in pounds contains 15,330 acres of water (extending into 3 counties) and construction began in 1929, stopped during the depression, re-started and then stopped during WWII, and was only completed in 1953, it is therefore obvious that this is an old dam and is not being built to current specifications of a modern dam. Since a severe earthquake could break the dam which would release a massive amount of water, the effect of dam breakage in particular in times of major flooding in the Oconee, Ocmulgee and Altamaha rivers could have catastrophic consequences not only to Hatch but to the Independent Spent Fuel Storage Installation (ISFSI) for high-level radioactive waste currently constructed next to the Altamaha River;

U10

(s) Since the NRC's conversation Feb. 1, 2000 with Pamela Blockey O'Brien revealed that the ISFSI casks will give off 125 millirems/hr on the side of the cask overpack and 85 millirems/hr on the top which will stream to the environment and will further add to the radiological burden to people and the environment, wildlife and migrating birds at levels over and above already existing contamination and above daily releases of radioactive contamination to water and air due to current plant operations;

U11

(t) Since radioactive contamination of sediments attributed to operations of Hatch have extended to Jesup and Darien;

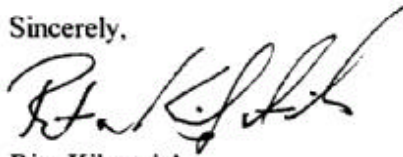
U07

(u) Since were there to be a meltdown there would be an unacceptable number of immediate fatalities and peak early injuries due to radiation and additional unacceptable fatalities and injuries from an accident and meltdown in the radioactive spent fuel pool;

We therefore pray and demand that this petition be granted because Hatch's aging reactors, spent fuel pool and proposed ISFSI pose unacceptable risk to people and agriculture and fishing in the surrounding area. We believe it would constitute malfeasance and negligence on the part of the NRC to deny this petition.

Had we been aware that our letter of February 3, 2000 would be taken up by the NRC Petition Review Board as a petition-initiating process, we would have accompanied it with this letter. We reserve the right to supplement the above materials as we deem necessary.

Sincerely,



Rita Kilpatrick
Executive Director, Campaign for a Prosperous Georgia

cc: Leonard Olshan, NRC Petition Review Board
NRC Director of Operations
NRC Docketing and Service Branch

1 to support relicensing of Plant Hatch for the future, for
2 our children and grandchildren.

3 We thank you for listening to us. We think it's
4 a good decision. Without any hesitation I recommend that
5 you relicense Plant Hatch.

6 MR. CAMERON: Thank you, Representative Byrd. I
7 thank all of you who have taken the time out of your
8 schedule to come down and attend this public meeting that
9 we're having today.

10 We're going to go to Rita Kilpatrick now, and
11 when Rita is done we're going to go to Sheriff Parker if
12 he's still here.

13 Rita.

14 MS. KILPATRICK: Good afternoon. I'll introduce
15 myself again. My name is Rita Kilpatrick. I'm the
16 Executive Director of Campaign for a Prosperous Georgia.
17 Our organization is a nonprofit conservation and energy
18 consumer organization. We are headquartered in Atlanta,
19 and we have a field office in Savannah.

20 We are a Statewide organization with members
21 throughout Georgia. And I want to say on a personal note
22 my mother was born in Georgia and the family has been for
23 many generations in the Washington County area in any
24 direction on either side, and this issue is of great
25 importance to me personally as well as professionally.

1 I have worked in the energy field for many years
2 and understand alternatives that are available and what
3 the issues are surrounding nuclear energy as a whole. We
4 have been focusing specifically on Plant Hatch.

5 I want to bring out the fact that this is an
6 area of vital economic significance, and with Plant Hatch
7 located in Appling County along the banks of the Altamaha
8 River, the livelihoods of hundreds of thousands of people
9 depend on the river and the ecology in the area, and
10 billions of dollars of resources from fisheries,
11 agricultural activities, forage, and other coastal
12 activities all are at stake here. Because of
13 the thrust of this hearing today, the environment -- and
14 we connect that to health concerns, and we do have quite a
15 few economic and security issues that we would like to be
16 raised later.

17 One major concern that we have is that Plant
18 Hatch is located in an earthquake zone that threatens the
19 public and the surrounding environment. There have been V15
20 earthquake activities in the area -- Lake Sinclair of
21 special note -- and I won't dwell on that, but that is a
22 concern to us, as well as earthquake activity in other
23 nearby areas in the region. So we would like for that
24 issue to be taken up and given very serious consideration
25 during this relicensing process.

1 We have some concerns about the natural
2 deterioration of the plant. We realize that there will be
3 additional hearings to look at technical issues, and
4 insofar as the condition of the plant in a fairly decayed
5 and contaminated state already, we believe that this is
6 only going to worsen with time and the deteriorating V16
7 effects that radiation is going to have on the plant of
8 course is a concern.

9 There are situations of forced automatic
10 shutdown that have occurred -- one in mid '99 and, of
11 course, one at the beginning of this year. These are
12 examples of faulty equipment problems, and these have an
13 impact on the environment whereas particular releases
14 occur as a result of the problems. These need to be
15 looked at within the environmental arena.

16 There are quite a few concerns here that I am
17 going to skip over we weren't sure how much time we would
18 be given here, so I want to be as brief as I can.

19 Our analysis of the situation so far tells us
20 that there have already been an unacceptable level of
21 damage and that there and that will worsen as the plant
22 continues operation over time. And I should note that
23 there is no plant anywhere in this country that has
24 operated anywhere near the way Plant Hatch is looking to
25 extend its license toward. There are several examples of V01

1 plants that have had to close down early before their
2 initial original license life span was expended. So that
3 is a concern that we have. It is not a good record that
4 we have to work with so far.

5 As mentioned in previous comments by other
6 people, there have been major spills and highly V02
7 radioactive contaminated water from the spent fuel pool
8 occurring back in 1986, due to a number of problems,
9 leakage seals, lack of attention to documented problems,
10 et cetera, and there are numerous examples that I won't go
11 into today that bring us to look at a level of
12 contamination that exists already and ask where we're
13 headed with this for the future.

14 We recognize that people living in the area need
15 to put on a fairly happy face. It is important for the
16 company itself to appear to be environmentally perfect in
17 some regard, and yet we urge that the actual record be
18 looked at very closely in this case.

19 The plant is situated over a major regional
20 limestone aquifer system that has groundwater resources
21 which we know the surrounding communities rely upon, and
22 therefore that water quality and the health associated
23 with that is a top concern to us. And the particular type
24 of aquifer that this is a special concern.

25 We are concerned also that the NRC frequently

1 categorizes problems as generic industry problems, and we
2 request that y'all treat all the problems and the areas of
3 concern that are raised in this process about Plant Hatch
4 as site-specific problems rather than generic and industry V03
5 problems. We have been very concerned about the way that
6 these generic problems have been handled and too often
7 cast aside as, "We can't do anything about it; it's a
8 generic problem."

9 I'm trying to not repeat some comments that were
10 made earlier by several people.

11 Issues surrounding the dumping of radioactively
12 contaminated sludge on the land for many years is
13 certainly something that we are not happy about and see as V04
14 a contamination clean-up issue.

15 The practice of upending the radioactively
16 contaminated drums so that the residue would drain onto
17 the ground from the drums and with drums holding
18 radioactive waste oil and water that were contaminated and
19 would have contaminated the soil and underground storage
20 tank, that is a very serious problem that again needs to
21 be looked at as part of the history here of performance.

22 The dam that is located on Lake Sinclair and its
23 potential impact if it were to break, to look at the
24 condition of that dam and the potential for earthquake
25 activity or other natural events to affect its ability to

1 keep water contained and avoid flooding, if there were a
2 dam breakage the height at time of flooding, that is V05
3 something that needs to be looked at and taken into
4 consideration.

5 Of course, the dry cast storage construction
6 underway to the level of radioactivity associated with is
7 that phenomenal and way out of range to what we understand
8 is even within some fairly new standards that fairly
9 exist. And that can be separated out. We can note that V06
10 was the storage issue that was wholly taken off the list
11 and not considered as an environmental association. In
12 our opinion it does.

13 And if you're looking at continuing to generate
14 high level radioactive waste on site with nowhere to put
15 it except in one of these dry cast storage containers,
16 that the problem with those casts can be multiplied as we
17 keep generating waste and keep moving it.

18 The fact that radioactive contamination of
19 sediment attributed to Plant Hatch operations extends as
20 far as Jesup and Darien. The extent to which
21 contamination has spread is something that clearly needs V08
22 to be looked at. We have some independent analysis on the
23 level of radioactive contamination which came out in
24 questioning over today. We are concerned about the amount
25 of money that is going into the license renewal process.

1 We were surprised by the request for waiver, and we felt
2 that it was probably not enough to get into an expensive
3 relicensing review which we feel is needed with the amount
4 of funds that are designated. We are very concerned that
5 with a low amount of funds they will be able to do
6 adequate analysis on the water contamination issue.

7 There are numerous concerns we have with worker
8 contamination which I won't get into. I will comment on
9 that separately at another time.

10 I want to say something -- I can't wrap up here
11 without mentioning -- and with all due respect to the
12 folks, the woman who represented the Institute here in
13 making a statement that the plant does not emit air
14 pollution, I would encourage her and others of you who
15 hold that viewpoint to turn to some information that came
16 out in the past year from the Better Business Bureau,
17 which is a Federal independent bureau, challenging the
18 nuclear industry as a whole on some advertising that it
19 was running. I will just quote very briefly here from the
20 New York Times dated 1998 end of year stated that the
21 nuclear industry changed an ad that the Bureau said
22 falsely claimed that nuclear reactors make power without
23 polluting the air and water or damaging the environment.
24 The Better Business Bureau's national advertising
25 division, which is based in New York, said in its decision

1 today that the industry should stop calling itself
2 environmentally clean and stop saying it makes power
3 without polluting the environment, indicating that these
4 claims are simply not supportable. And we certainly
5 understand that and appreciate the effort that the Better
6 Business Bureau has made to correct some
7 misrepresentations that shouldn't be provided in the first
8 place.

9 I just want to put in a quick note also to the
10 people concerned that there are no alternatives here. I
11 would encourage the company and other companies who co-own V10
12 this plant to pay attention to pay attention to what the
13 Tennessee Valley Authority is doing. They just unveiled a
14 three power program which is commendable. We would like
15 them to do much more and we believe they can. We know
16 that the Southern Company can surpass what TVA tries to
17 put out there. It's a publicly accountable program, and
18 they work very closely with local environmental
19 organizations to develop. We are eager to see that
20 program scaled up substantially.

21 Just a quick mention of what they are looking to
22 offer a power switch program to residential consumers in
23 blocks of power that are about 12 percent of a typical
24 household's monthly energy use. So that's something to
25 cast aside. We were very concerned when we looked over

1 the Southern Company licensee file on this relicensing
2 with the presentation that the alternatives, especially
3 environmentally clean energy are really not available to
4 us. We wholeheartedly disagree with that and would
5 encourage close attention to other companies that are
6 taking a very strong leadership role, not only in the
7 country but now starting in the Southeast, to develop
8 alternatives. We would like, of course, to see a
9 comprehensive approach to this question of whether it is
10 cost-effective and whether it is environmentally
11 beneficial for this relicensing of Plant Hatch to proceed,
12 in contrast with a comparison to alternatives that are
13 available.

14 And let me make one final comment here in
15 closing. We ask for there to be a look at what clean-up
16 of contaminated area really needs to be done now, and over
17 the future with any extension of the plant operation, what V11
18 added cost does that bring to clean-up? And what are the
19 situations that could occur down the road? As you know,
20 the electric industry is under deregulation mode, and we
21 have not seen deregulation occur here yet but it could
22 down the road. And the question of what liability this
23 leaves, there are very sweeping, dramatic changes
24 occurring in the industry across the country and across
25 the world in terms of who owns what plants. This plant

1 may not be owned by the same company that it is now, and
2 what does that mean in terms of liability to the local
3 community and a clean-up that is very much needed now and
4 will be increasingly necessary in the future?

5 We are fearful of particulate radiation that has
6 been released, in particular cobalt-60, which is in the
7 sediment in the river and adjacent creeks and tributary
8 areas, and decontamination of the equipment, material, and
9 buildings on site. And of course going with that,
10 adequate compensation of any contaminated workers, and
11 there have been some documented. And to the general
12 public who may be affected or whose well water has been
13 affected, and to look at the other problems associated
14 with internal spent fuel storage situation.

15 I thank you for the time you have given and we
16 appreciate the opportunity to file some more documents.

17 MR. CAMERON: Thank you, Rita.

18 Is Sheriff Parker here?

19 SHERIFF PARKER: Man, please. I thought I would
20 never get this far. Y'all like to run me off, but I had
21 to stay.

22 I've got my assistant. He's a deputy sheriff.
23 He's also a member of the board of education. I ain't got
24 a whole lot of notes because my daddy used to say if
25 you've got write it down, it's not worth saying most of

1 Next we will go to Rita Kilpatrick from Campaign
2 for a Prosperous Georgia.

3 MS. KILPATRICK: Good evening. I'll introduce our
4 organization. We are a nonprofit conservation and energy
5 consumer organization. We are headquartered in Atlanta,
6 and we have a field office in Savannah.

7 We are a Statewide organization with members
8 throughout Georgia. We have been in existence for 17
9 years now, working on energy issues, and have a wealth of
10 information and knowledge based on different energy
11 alternatives available to Georgia, some of which have been
12 tapped, some not.

13 We work hard in different areas -- the Public
14 Service Commission -- and occasionally participate in NRC
15 public hearings and proceedings -- and have been very
16 actively involved in the air quality issues that Georgia
17 faces and particularly involved in the clean-up of the
18 coal-fired power plants throughout the State.

19 And I want to say on a personal note my mother,
20 granddaddy, great granddaddy, great-great, and on back --
21 all grew up in South Georgia. This area is very special
22 to me for that reason. Not only in regard to the work
23 that I do but also from a family point of view, I care a
24 lot about what happens here.

25 My organization, I need to state, does not

1 support the license renewal of Plant Hatch, and we do not
2 agree with those who hold the belief that the plant is the
3 best option for supplying energy to the region. We
4 actually would be deceiving the public if I stood up here
5 and said that we believe this plant is operating safely
6 now and has historically operated in safe ways to the
7 public and would in a relicensed future.

8 In looking at energy choices, nuclear plants are
9 in our view the most dangerous and most threatening in
10 terms of risks, not only to the environment but to human
11 health, and, in the long run, to the economy itself.
12 Because this hearing is focused on environmental criteria,
13 environmental factors, we're going to steer clear as much
14 as we can from commenting on the economic and security
15 concerns that we have because we will have an opportunity
16 to raise those later.

17 I had elaborated this afternoon on some areas of
18 concern that we ask the NRC to please address in the
19 relicensing process, so I won't repeat those. They are
20 related to the earthquake zones, the spills that have
21 occurred over time at this plant, and the dumping on land
22 and in areas that should not have been dumped on and the
23 increasing contamination at the site, to be addressing
24 those as well as the natural deterioration of the plant
25 which is inevitable to occur with the aging of the plant

1 and the need for aging monitoring to be going on. We feel
2 that that is extremely important.

3 I ran short of time this afternoon, so I just
4 wanted to bring out a little more on the aquifer issue.
5 We are very concerned and hope that the NRC will assign
6 top priority to the environmental issues area of looking
7 at the fact that Hatch is situated over a major regional
8 limestone aquifer system containing groundwater resources
9 and that that does impact the surrounding community, which
10 relies on underground wells, and to pay attention to one
11 of the local aquifers near the plant, being an unconfined
12 meicene pleiocene aquifer.

V12

13 This afternoon people will standing up and
14 making claims and not referencing any evidence or
15 documents. We can certainly do that. We would be glad to
16 provide that kind of information if anyone feels that some
17 of the concerns we are raising are not substantiated in
18 the documents either provided by the company or by the NRC
19 or the State.

20 We wanted to mention a concern we do have about
21 the continuation of operation at Plant Hatch. Obviously
22 we're very concerned about the fact that the plant has
23 maximized its capacity for spent fuel on site and that it
24 is now being forced to look for other options. We don't
25 feel that the option chosen is a safe one, to set up a dry

1 cast storage system, including the one that has been
2 selected or which will, by the way, be the first
3 experiment of that in the country, if that goes forward.

4 NRC has revealed that these types of casts will
5 put off 125 millirems per hour on the site of the cast
6 over pack and 85 millirems per hour on the top. There is
7 nothing safe about that. Those levels are phenomenally
8 high, and they are very risky and dangerous to people who
9 are working in the area.

10 This radioactivity will stream into the
11 environment and will further add to the radiological V07
12 burden to people in the area, as well the environment and
13 wildlife and migrating birds at levels above already
14 existing contamination and above the daily routine
15 releases that occur of radioactive contamination to water
16 and air, due to the plant operation. I just want to
17 emphasize that it has been there is no air emissions here.
18 That's not true. There are, and they need to be looked at
19 and taken into consideration in the relicensing process.

20 Everyone was not here when the question was
21 asked if there would be any consideration given to the
22 local health effects of the radioactive emissions,
23 particularly at Hatch. That is extremely important in our
24 view, and it's a factor that we feel would be fairly
25 obvious to consider in looking at whether or not to grant

1 relicensing.

2 The other items -- I don't know if worker
3 contamination issues are considered a part of this. They
4 are not. We have a host of concerns in that arena, which
5 we will raise at another opportunity.

6 MR. GRIMES: We had earlier explained that all the
7 health effects issue we believe are adequately covered by
8 the ongoing process, and that's the way that they will be
9 reported in the draft of our impact statement. And you
10 will have another opportunity to raise that issue in the
11 draft of the environmental impact statement, the general
12 concern about worker contamination and public exposure.

13 MS. KILPATRICK: I wanted to make a general statement
14 about our concerns with public health and things that we
15 understand that NRC will do to set standards to protect
16 health. We don't believe that you can make a
17 determination that there is not a significant health
18 impact here or perhaps for any plant that is in your V13
19 jurisdiction. And that is based on a combination of
20 actors, including the fact that we don't see there to be a
21 health basis for the NRC. So that is a concern that we
22 can raise in various other ways.

23 And I want to point out for those of you who
24 were here earlier today who will know what I'm talking
25 about, there were quite a comments -- I was struck by the

1 number of people who came up here and said, "People are
2 healthy around here, and all we have to do is look at the
3 fact that there is a significant number of Georgia Power
4 employees who have worked at Plant Hatch who are now
5 retired and have chosen to stay in the area. So that's a
6 pretty strong indicator that things must be going fine."

7 And our understanding of the health issues is
8 that it takes time for health problems to really reveal
9 themselves when there is radioactivity in the environment
10 and that it's with ensuing generations where problems are
11 likely to arise, although some can occur in various ways.
12 So it depends on what people are talking about. If you're
13 talking about cancers or people keeling over dying, it's
14 not the situation we're facing in the way of health
15 problems.

16 And it's important to look at women and children
17 as well, and we'd like to see a process for that to be
18 taken up.

19 I want to say a few things about the options
20 here, and I should start out with a comment that was made
21 earlier today by the gentleman who is here with the
22 Nuclear Energy Institute, who had referenced an issue
23 brought up about the Better Business Bureau that has
24 challenged the nuclear industry nationwide as running
25 false advertisements that they are a clean industry,

1 environmentally clean. I have some information about that
2 and would be glad to share that if you all would like to
3 see it. But I felt that the reply to that from the
4 Nuclear Energy Institute attempted to lay out that the
5 Federal Trade Commission actually came back and said, "You
6 guys are clean. You've got clean air."

7 To get the record straight, I'd be glad to argue
8 or file in the record the FTC's decision, because I feel
9 that was presented in a somewhat slanted way for the
10 people at the hearing here. So we can put that together.
11 Our interpretation is that the FTC came out plainly and it
12 would be misleading for the industry to be presenting
13 itself as environmentally clean. The water contamination V09
14 is fairly obvious, but there are other areas of
15 contamination that don't mean clean at all.

16 And if we get into comparisons of which is
17 cleaner, coal or nuclear, thus or that, often when the
18 argument comes up, "Well, we can bring clean air and solve
19 the air quality problem here in Georgia with nuclear
20 plants and do that on a nationwide basis." An analogy
21 that is often made to that kind of scenario is that if
22 you're looking at moving to nuclear power as a solution to
23 air pollution that it's comparable to quitting smoking
24 cigarettes and taking up smoking crack. You need to get
25 the big picture to understand and to really present to the

1 public, this is what the health implications and the
2 environmental implications truly are.

3 We would like to also have it recognized that we
4 believe the options presented for alternative fuel
5 supplies in the company's filing, licensee's filing, and
6 by some commenters here today, do not necessarily reflect
7 the broader energy industry's analysis. There are quite a
8 few options that are becoming commercially feasible.
9 Renewable energy is becoming available in various ways,
10 and to cast it off as a wind issue that will take up a
11 tremendous amount of land or solar being a possibility,
12 this is just very shortsighted, and it's important to look
13 at the new technologies that are available not only from a
14 distributive generation vantage point but also from the
15 broader technology choices that becoming available
16 worldwide.

17 And added to that, energy efficiency has always
18 been a very important potential that Georgia has not
19 tapped. Electricity consumption, as many of you may know,
20 has skyrocketed. It has outpaced population growth in the
21 last couple of decades here in our State by over two and a
22 half times. We don't look good nationwide. It's not a
23 very commendable feature of our energy use and our energy
24 system. We have a lot to do in that area. There are some
25 fairly simple alternatives that may look like they're not

1 very important individually, but collectively they make a
2 big difference. And those always have to be kept in mind.

3
4 We've seen some fairly perverse load-building
5 initiatives proposed by the Southern Company to the Public
6 Service Commission. And by "perverse," I mean it attempts
7 to get people to buy more electricity, and it's not just
8 their competition against natural gas and other energy
9 supplies but really a need to build up the system so that
10 those off-peak kinds of usage can be more fully used, and
11 nuclear power plants play into that very significantly.
12 There, too, need to be more generation alternatives, and
13 it is very important to pay attention to the alternatives.

14
15 I want to wind down here by pointing out two
16 points regarding the dependency of Appling County and the
17 area on Plant Hatch as far as tax base. Between 60 and 70
18 percent of the revenue base for the County is fairly
19 alarming to us. We have been doing quite a bit of
20 research on that and have found reports coming out and
21 saying 17 percent reliance on a nuclear plant is too high,
22 and it's not a healthy dependency. Where we can assist in
23 helping diversity that base so that it's not as highly
24 dependent on nuclear in the energy arena, where a system
25 built up by other alternatives, we'd be happy to do that

V14

From: "Michael Mulligan" <stmshvl@together.net>
To: "HATCHEIS NRC" <HATCHEIS@nrc.gov>
Date: Thu, Nov 30, 2000 10:05 PM
Subject: Re: Plant hatch

Mr Kugler

I going to make a 2.206 related meteorology safety issue at another Southern Plant. The gist is; most analysis looks in some past worst historical record as the justification on heat sink or meteorology analysis. I'm asking you specially if Hatch uses-like the regional ; NATIONAL ASSESSMENT The Potential Consequences of Climate Variability and Change-estimation of temperature increase on climate.

The specific question is; Does Hatch plant license renewal use future meteorological estimations of worst case climate changes? Then I would need to know as a generic issue if the rest of the licence renewal would be looking at it this way; and does the NRC mandate that the renewal looks at it this way.

I'm sorry I initially ask you these question in such a confusing manner.

mike

----- Original Message -----

From: "HATCHEIS HATCHEIS" <HATCHEIS@nrc.gov>
To: <stmshvl@together.net>
Sent: Thursday, November 30, 2000 4:32 PM
Subject: Re: Plant hatch

> Mr. Mulligan,
>
> Generally speaking, these are the types of issues we consider during our
> review. But I will need to sit down with the technical area expert to
> discuss specifics. This will likely occur around the end of the comment
> period so that we can go over all comments received.
>
> Andy Kugler
> (301) 415-2828
>
> >>> "Michael Mulligan" <stmshvl@together.net> 11/28 7:01 PM >>>
> Mr Kugler
> Thank you for your responce. Could you tell me if these are new issues which
> I identified(within Hatch licence renewal program) or would they have been
> responded by the renewal program.
>
> Thanks
> mike
>
>
>

> ----- Original Message -----
> From: "HATCHEIS HATCHEIS" <HATCHEIS@nrc.gov>
> To: <stmshvl@together.net>
> Sent: Tuesday, November 28, 2000 3:05 PM
> Subject: Re: Plant hatch
>
>
>> Mr. Mulligan,
>>
>> We received your e-mail comments regarding the Hatch license renewal
>> environmental impact statement (EIS). Your comments will be addressed in
>> Appendix A to the final EIS and, as appropriate, in the text of the EIS.
>>
>> Andy Kugler
>> (301) 415-2828
>>
>>>> "Michael Mulligan" <stmshvl@together.net> 11/23 10:15 PM >>>
>> Has the license renewal taken into consideration the recent Global warming
>> projections? Does meteorology take into consideration the future worst
>> case environment effects like droughts, heavy rainfall-for the life of the
>> license. Typically the NRC looks at the worst rear view mirror weather
>> record. What have been the trends; air, water,heat sink- for the last
>> decade on the site, and out for life of the plant? Will the plant(s) have
>> adequate and plentiful plant cooling either-nuclear or non nuclear- and
>> will the heat sink be able to handle the heat addition capacity without
>> damaging the natural heat sink. Or will the river/ pond be
>> able to handle the water withdrawals during a drought, or will the
>> additional heat along with the sewage/ pollution load before or after the
>> plant lead to a reduction in oxygen, such that it damages the ecosystem.
>>
>>
>> mike mulligan
>> 16033367179

W01