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11/9/00

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Mailstop T 6 D 59
U.S. Nuclear Regulatory Commission,
Washington, D.C. 20555-0001

Dec. 10th, 2000

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 (seventy 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~~ meteorological data only covered 3 years - but NRC 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 concerning 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

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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.**

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 Southerns request. It's hard to read whilst jumping.
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 radioactivly 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 decietful, but puts the environment and public at grave risk.

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.

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.

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.

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 bomb s 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 meltdown, 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 heatcoming 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 302,808 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 poolis 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,an 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 releeases 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 coremelt 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~~ risk perspective 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 metereology, instead of 30 year wind roses offsite,onsite metereology since startup, precipitation and temperature from Georgia records going back a miniumum of 180 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

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 containement 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 contimuous 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 reactors 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 thirty 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 Sur-Veillance 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 forseeable future." The purpose of NRC Regulations, is ONLY to make sure the standards for protection NRC came up with in their Part 20 Regulations are not exceeded 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 irreversable according to the best medical specialists in the world specializing in radiation, and I do not mean the appalling ICRP who set pe-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 aberation 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,

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
ent 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 380pCi/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 whch Georgia Power admited to me of course comes from the reactor and it goesuap and own 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
, the 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 noblegases 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" chilren 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 cáácium 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 pituatary 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 consumtive 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 radioactve 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 6300pCi/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 240pCi/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 beneath the site, for, among other things "process use" such as demineralized water, which is of course using a huge amount of water when calculated over just one year monthly . 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 pollutter 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.A 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 particularily 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 -ir , 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 head-
quarters 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 out 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.
) 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
954 is involved, they do not cover so called "source, byproduct or
pecial Nuclear Materials, nor radium or accelerator produced-iso-
opes as examples. However, "heat " is covered. 2) They did not seem
o explain in the attached documents, that the radioactive decay heat
s part of what causes the "THERMAL PLUME" . Did they tell the
tate Water people they dump radioactive water, or that the sediment in
he river contains man-mades ? Did they tell National Marine Fisheries
r State Fish and Wildlife about this or about the radioactive air
missions when they asked them by letter to evaluate Endangered
pecies and fish entrainment and similar ? The answer is "NO",
ne cannot even find the word "radioactive" . I called some of them,
hey had not been told. Now, the Sturgeon is a bottom feeder, it
s Endangered, ingesting a Cobalt-60 particle with its damage to
lood and the central nervous system alone is not a nice way for any
iving being to die. Nor is slow death from constant irradiation
rom Cesium-137 in its muscles. The fish entrainement study dates
ack to 1980. Interestingly it noted among the 22 species of fish
n unknown egg and an unknown larvae. What was it ? Were there more ?
alk about loss of biodiversity. Extinction is forever.
hey speak of reforesting areas with the longleaf pine - we know that
ines retain radioactive contaminants due to uptake from radioactve
ir emissions and deposition falling in rain, just like other trees, I did
ot have time to look up how long the longleafs hold their "needles"
f you will, obviously the longer the uptake from soil and water etc.
he more contaminated they'd become and when the needles drop thelitter
ould be that much more radioactive for all ground-dwelling species in
ontact with them, plus re-contaminate the ground at higher levels.
ver tested the Gopher tortoises burrowing on the contaminated site ?
f the turtles contaminated on and offsite of the monstrous Death of the
arth (DOE) squad site on the Savannah River are any indicator, the
opher tortoises are probably also contaminated, though probably to a
esser extent.
ith regard to transmission lines , the testimoney of the eminent
r. W. Ross Adey , before Congress in 1987 on the issue of electromagnetic
as oppossed to ionizing radiations sent shivers down the spines
f the collective electric power industry, partly because of his
redentials. The effects on cell membranes and foetal development
n animals for example was ghastly and included information on statistic-
ly significant increases in leukemia and lymphoma in studies of
hildren exposed to power distribution systems, high voltage power lines

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

Copy

May 29th,2000

From: Pamela Blockey-O'Brien

To: U.S. Nuclear Regulatory Commission
License Renewal Application Section
Chief of Rules and Directives,
Div. of Administrative Services,
Office of Administrator,
Mailstop T-6
D-59, U.S. N.R.C.,
Washington, D.C.

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 shoud 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, C obb 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 wetlnds/swamp near Hatch; plus there is a Lake called Big Pond. All of these areas recieve radioactive fallout from Plant Hatch's air/noble gas releases. Wildlife,birds (and people) will recieve 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 recieves massive rain systems . Speaking of which, Hatch's own FSAR under the section on floods, cites USGS dta 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 particularily vulnerable to effects of pesticides and radiation - in"Silent Spring" by Rachel Carson so many years ago, she pointed out the synergystic 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

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 intto 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 it's 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 induces 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

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 accurring 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 continous 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.

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".

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 repetative, which willl recurr 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 1500 pCi/kg for Cs-137 The City of Baxley's groundwater showed alpha at 7 ± 4 pCi/l . How much 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 222pCi/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 <u>unconcious</u> 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 electromagnitic 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 ofthe 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 ~~XXXXXX~~ 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 coremelt 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 is 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

plantsx 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 Commitee (Congressional Joint Commitee) 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 aquired 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 develkoping bodies,bones,brain, reproductive organs etc. are more vulnerable than adult males to the medical d 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 th Hatch type, according to NUREG-1079, and they have no containment DOME over the reactor, fast evacuation would be impossible. 3) First responder 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 MSIVally had continued to fail, the RCIC system had not even operated manully and the recirculation pumps continued to fail etc. etc.and of course an RHRSW vent line cracked and leaked eight hours. 6) Because passing the

the children and surrounding population via the DIVS ,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 to 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 cases, denial of this 2.206 would constitute MALFEASANCE AND NEGLIGENCE in particular in event of serious accident.

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.

From: Pamela Blockey-O'Brien

copy

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

June 7th, 2000

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 or 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, sterility, 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 nor 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 pol 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 anual reports they fudge the issue, but the EPD says 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 which 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 INDEPENDENT, 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.

All the crab, clams, mussels, 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.

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 xxxxxx 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 Blackey-O'Brien.

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

June 15th,2000

Dear Executive Director,

Further to NRC's telephone conference with me today concerning my 2.206 Petition against Southern/Georgia P0er'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 supprt 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. Arinchin and L.A. Ospennikova, Research Clinical Institute of Radiation Medicine and Endicronology, 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, F.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 Lising 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 SST1 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 unitwas 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 beléeve)- 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 metses 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 dowen into the river and groundwater, it would have reached the Black Sea ultimately and from there the worlds oceans.Some contamina -ants 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 its 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, its smaller and cuter. The emergency rescue in in a sort of converted gas station by the look of it. These people will die if they have to go and try and confron t 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.

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 crance 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 posess - 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, heatr fallout, radiation induced vomiting, is just NOT acceptable.Neither are children going blind or will 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

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

copy

The Executive Director for Operations,
U.S. NRC
Washington, D.C.

June 18th,2000

Dear Executive Director,

Re: Supplemental information to my 2.206 against Southern/Georgia Power's etc. Plant Hatch I and II for Permanent License Revocation and Permanent Shutdown, please note that I attach my June 4th statement refered to for consideration in my phone conference June 15th with NRC which Madam Black the Chairwoman said would be considered/read in case you have a problem tracking it, and I have marked the relevant section in red along the page edges. Please note it also contains a correction to what was listed under my bases also (i.e. the word "ALSO" was left out and should have been included) The general License renewal process needs the information, however it is of greatest importance under my 2.206 Petition, in part because it shows that 1.6 million children recieved damaging doses that were worrying. The children of Appling Co and adjacent counties and those all in a radius of an accident and along its plume pathways (there were two main plumes at Chernobyl - the plutoniums settling out more first due to gravity and their being heavier - plus there was the fact that weather deposited and moved this radioactive garbage all over the place then round the world in a macabre radioactively contaminating meteorological dance, would likewise be affected. I also hope your office and the Project Manager has now recieved the addition from me of Dr. John Gofman's statement on ...."By any reasonable standard of biomedical proof,there is no safe dose, which means that just one decaying radioactive atom can produce permanent mutation in a cell's genetic molecules." etc. etc. etc. which was mailed certified mail on June 15th and is also to be included , which was discussed by phone and also requested, and is to be included in the petition as it applies under the bases, particularily concerning the children.- And here I would add, that female children are born with all the eggs in their ovaries they will ever produce, which when fertilized form the new baby/child , and damage caused by radiation/radioactive chemicals etc. is forever and forever unto all succeeding generations. This serious issue has been raised in a Sept. 3, 1999 letter to the National Academy of Sciences sent by the Institute for Energy and Environmental Research and signed by no less than seventy- one persons ,many representing large groups of people, a and includes doctors,physicists, engineers,professors with major universities and epidemiologists from the US and elsewhere. I myself have raised this issue in the past, as have others, in various writings,it is not a new concern, it is an issue that gets shoved under the proverbial rug by so-called standard setters. The letter to the Academy's BEIR VII Committee is, I imagine, an attempt to get that partly Death of the Earth squad (DOE) funded outfit to drag itself kicking and screaming into the 20th century, let alone the 21st ! The NRC is remiss on that issue also.

All this should of course be included in my petition. The 2.206 Petition I have submitted is of great importance, because

whilst statements have been submitted concerning the Hatch re-licensing by myself and others under that forum, I firmly believe (as do others) that not only are we walking along the edge of a precipice where Hatch is concerned (how long to the next spent fuel pool disaster like the one they had, or the other where the massive bolt dropped into it and punctured the liner, ? How long to the next contamination or worker contamination event, NRC has been chastizing them over that for years- and one day it'll be contamination of South Georgia) there is no time to wait for a license renewal process, that dump could meltdown or have a massive accident with major offsite contamination of people and the environment, hence the need to shut it down and revoke the license faster and the reason for the 2.206 - time is of the essence. Aging of the facility is a reality due to radiation degradation and theage of the dump itself. It's dangerous, a terrible design and every time one turns around something seems to be failing, leaking , not working etc. If it's not snutdown, and soon, one of these days we'll turn on the TV and South Georgia will be trying to run for its life. With bad luck during a major, typical South Georgia tornadic weather system, at the height of tourist season to top it off, and the Boy Scout camp nearby (how stupid can they get ?) packed full of children. Having a visitors center there, a school near,a Boy Scout camp, defies belief. If the Vidalia Onion Festival (in one of the wind paths) were in full swing that would add to the panic - a 20 mile an hour wind would cause a plume to dump on them about the time the local Sheriff's Departments were trying to get to warn them.

They couldn't even tunnel underneath that dump to install a flat heat exchanger like at Chernobyl a) the groundwater is too high, b) Georgia doesn't have massive amounts of people used to working in mines in Siberia and working on the massive Moscow subway system it can press-gang into submission to go get killed doing it, like they did in the old USSR. Besides,no one in their right mind would go anywhere near it.

Please grant my petition. It really is a disaster waiting to happen,to allow it to keep operating really would be negligent.

Pamela Blockey-O'Brien.

Copy to Rita Kilpatrick + Sara Barczak, C.P.G.

copy

From: Pamela Blockey-O'Brien

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

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 accidently 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 torndoes. There are many other examples of serious weather, damaging storms, etc. across South Georgia yearafter 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) . Futhermore, 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

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. assumtions regarding fatal doses, may be subject to question as, they stated, the model assumes that "supportive treatment" is available of special sterile proceedures, 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 ant 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 only 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. 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. Sohtepin that in the course of the last day 2,703 more persons have been hospitalized generally in Byelorussia,678 prasons discharged from hospitals,10198 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 (page down) calculations

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 permissable level of nuclear contamination in soil,espescially 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.