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**To:** <TurkeyPointEIS@NRC.gov>  
**Date:** 9/6/01 2:59PM  
**Subject:** Comments on the Draft GEIS for Turkey Point by Joette Lorion

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Attached please find my comments on the Draft GEIS for Turkey Point Units 3 and 4.  
Please advise if there is a problem with this transmission.

Thank You,

Joette Lorion

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September 6, 2001

U.S. Nuclear Regulatory Commission  
Division of Administrative Services  
Office of Administration  
Mailstop T-6D 59  
Washington, DC 20555-0001

Via e-mail and regular mail

**Re: Objections and Comments on the Draft Generic Environmental Impact Statement (GEIS) for the License Renewal of the Turkey Point Nuclear Power Plant Units 3 and 4.**

#### INTRODUCTION

I am resident of South Florida and an environmentalist who has dedicated many years of my life working to protect and preserve the Florida Everglades and the South Florida ecosystem. The effect that the failure to adequately assess the environmental impacts that the relicensing of Turkey Point will have on the South Florida ecosystem in the Turkey Point Draft Generic Environmental Impact Statement (GEIS) will directly impact me and my family and friends who use the South Florida ecosystem for hiking, boating, bird watching, fishing, contemplation and observation of the diverse plant and animal species that frequent this fragile ecosystem. The human environment could also be adversely impacted by the offsite consequences of the NRC's proposed action to operate these old nuclear power reactors for twenty years beyond the original license.

**A 1982 study (CRAC2) provided by the Congressional Subcommittee on Oversight and Investigations showed that in certain weather conditions, a meltdown at Turkey Point could cause 29,000 early deaths within a twenty mile radius of the plant, 4,000 delayed cancer deaths and 45,000 injuries within a seventy mile radius of the plant, and 43 billion dollars in property damage. Additionally, according to NUREG CR 4982, *Severe Accidents in Spent Fuel Pools in Support of Generic Issue 82*, a worst case accident in a spent fuel pool could result in an interdiction area (an area with such a high level of radiation that it is assumed that it can never be decontaminated) of 224 square miles.** The adverse impacts to my property in particular, and the ecosystem as a whole, that may be caused by the NRC's proposed action demonstrate that I have a particularized legally protected interest in the outcome of this proceeding that falls within the zone of interests protected by the National Environmental Policy Act (NEPA).

The operation of these aged and embrittled nuclear power reactors for twenty beyond the original license will cause more radioactive fission products to accumulate and could increase the

probability and consequences of a nuclear accident; thereby increasing the threat of harm to me, my family, our property and the South Florida ecosystem, which includes priceless Everglades and Biscayne National Parks. These cumulative impacts, which should have been analyzed in a site-specific SEIS, have not been adequately addressed in the Draft GEIS, as required by NEPA. Nor did the Draft GEIS undertake a fair and objective NEPA analysis of alternatives to the relicensing proposal, as evidenced by page 8-55 of the Draft GEIS which amazingly concludes that the environmental impacts of solar power are LARGE, while those of continued operation of the Turkey Point nuclear power reactors, which create large amounts of nuclear waste and radioactive fission products, are SMALL.

The Draft GEIS for the License Renewal of the Turkey Point Nuclear Power Plants appears to "rubber stamp" Florida Power & Light's (FPL or Licensee) license renewal request, rather than permit the full and objective evaluation required under the National Environmental Policy Act (NEPA). The NRC's failure to prepare a full and objective site-specific Environmental Impact Statement (EIS), or Supplemental EIS (SEIS), prior to conducting the license renewal process (reportedly estimated to cost between \$15 to \$19 million dollars), is an irretrievable commitment of resources designed to prejudice the process prior to a full environmental analysis, and does not comply with the spirit or intent of NEPA. While, this may be the Commission's protocol for relicensing, I contend that this type of "end run" proceeding, apparently designed to skirt NEPA, does not meet the spirit or intent of the Act.

The NRC appears to be blithely unaware that South Florida is the scene of the largest ecosystem restoration project in human history. This is evidenced by a few scant paragraphs and a line on page 2-52 of the Draft GEIS that states that "The Federal Government is also participating in the Comprehensive Everglades Restoration Plan." No analysis of potential impacts that the proposed action may have on the Everglades Restoration plan was conducted. In one short line, the Draft GEIS has glossed over the effort to restore the Florida Everglades that will take decades and cost at least \$8 billion dollars. As pioneer conservationist Marjory Stoneman Douglas reminded us, "There are no other Everglades in the world." Yet, the NRC, seemingly oblivious to the federal government's commitment to the South Florida ecosystem, has refused to analyze any impact that its major federal action may have on the major federal Everglades restoration effort that did not exist when Turkey Point was licensed. This failure to address and analyze the impacts that the relicensing could have on the restoration effort does not meet the requirements of NEPA.

Turkey Point was licensed in the early 1970's, shortly after NEPA became our national charter for environmental protection. 40 CFR 1500.1(a). The original environmental review on Turkey Point was very limited and failed to consider substantial environmental issues. Even more important, changed circumstances and significant new information concerning the South Florida ecosystem in which Turkey Point is located, require the NRC to conduct a site specific SEIS prior to any major investment of resources into the relicensing assessment under 10 C.F.R. Part 54 of the relicensing process. Despite the fact, that these substantial environmental issues and significant information has been brought to the NRC's attention, the NRC refused to adequately analyze these issues in the requisite SEIS or the woefully inadequate Draft GEIS that

they performed.

I hereby incorporate by reference all of the written comments that I have provided to the NRC by letters dated November 22, 2000 and December 21, 2000, and comments made at the two public meetings and prehearing conference that were held by the NRC in Homestead, Florida. I ask that these letters and comments, along with this letter, be made an official part of the record on the GEIS proceedings.

## I. NRC RELICENSING PROCESS MUST COMPLY WITH NEPA

### A. NEPA Requirements

The National Environmental Policy Act of 1969 (NEPA), 42 U.S.C. 4321 et seq., "is our basic national charter for the protection of the environment. NEPA was enacted in 1969 to create and carry out a national policy designed to encourage productive and enjoyable harmony between man and his environment . . . [and] promote efforts which will prevent or eliminate damage to the environment and biosphere and stimulate the health and welfare of man." 42 U.S.C.A. § 4321 (1994). NEPA aims to achieve these goals by focusing the attention of the federal government decision-makers and the public on the likely environmental consequences of a proposed federal action so that the environmental effects can be identified and understood before the action is implemented and potential negative environmental impacts can thus be avoided. Marsh v. Oregon Natural resources Council, 490 U.S. 360, 371 (1989). (Emphasis supplied.)

NEPA requires all federal agencies to prepared a detailed statement known as an Environmental Impact Statement (EIS) for any major federal action which will significantly affect the quality of the human environment. The EIS must detail I) the environmental impact of the proposed action; ii) any adverse environmental effects which cannot be avoided should the proposal be implemented; iii) alternatives to the proposed action; iv) the relationship between local short-term uses of man's environment and the maintenance and enhancement of long term productivity; and (v) any irreversible and irretrievable commitments of resources which would be involved in the proposed action should it be implemented. See, 42 U.S.C. 4332 (C); 40 C.F.R. 1501.4, 1502.

NEPA does not set out substantive environmental standards, but instead establishes "action-forcing" procedures that require agencies to take a "hard look" at environmental consequences. See Robertson v. Methow Valley Citizens Council, 490 U.S. 332, 348, 104 L. Ed. 2d 351, 109 S. Ct. 1835 (1989); Kleppe v. Sierra Club, 427 U.S. 390, 409, 49 L. Ed. 2d 576, 96 S. Ct. 2718 (1976); ("NEPA does not mandate particular results, but simply provides the necessary process to ensure that federal agencies take a hard look at the environmental consequences of their actions.") Muckleshoot Indian Tribe v. United States Forest Serv., 177 F.3d 800, 814 (9th Cir. 1999).

NEPA's goals are to place upon agencies "the obligation to consider every significant aspect of the environmental impact of a *proposed* action," and to "ensure that the agency will *inform the public* that it has indeed considered environmental concerns in its decision-making process."

**Baltimore Gas**, 462 U.S. at 97. "[T]he comprehensive "hard look" mandated by Congress and required by the statute must be timely, and it must be taken objectively and in good faith, not as an exercise in form over substance, and not as a subterfuge designed to rationalize a decision already made." **Metcalf v. Daley**, 214 F.3d 1135, 2000 WL 732909, (9th Cir. 2000). (Emphasis supplied).

NEPA assumes as inevitable an institutional bias within an agency proposing a project and erects the procedural requirements of §102 to insure that "*there is no way* [the decision-maker] can fail to note the facts and understand the very serious arguments advanced by [a] plaintiff.." **Environmental Defense Fund v. Corps of Eng'rs of the U.S. Army**, 470 F.2d 289, 295 (8th Cir. 1972). This comprehensive hard look mandated by Congress and required by the statute *must be timely*, and it must be taken *objectively and in good faith*. The statute is "primarily procedural," and courts have held that "**agency action taken without observance of the procedure required by law will be set aside.**" **Save the Yaak**, 840 F.2d at 717. (Emphasis supplied.)

Like all federal agencies, the NRC is required to implement the policies of NEPA in its decision making. See 42 U.S.C. § 4332; 40 C.F.R. § 1507.1. NEPA requires the NRC to prepare a detailed statement, known as an Environmental Impact Statement (EIS) prior to any "major federal action significantly affecting the quality of the human environment." 42 U.S.C. 4332(C). The NRC's failure to prepare a site-specific SEIS and take the requisite "hard look" necessary to evaluate the consequences of this major federal action prior to commencing the relicensing process under 10 C.F.R. Part 54 is designed to "rubber stamp" its predetermined decision and deprives me, and other similarly situated individuals, of my statutory rights under NEPA. Additionally, it raises the important question as to whether the relicensing of nuclear power plants beyond their design basis should continue, since Congress has never resolved the important public policy issue of whether it is in the national and public interest to run old nuclear power plants beyond their original license

#### **B. NRC'S First-the-Verdict then the Trial Relicensing Process Fails to Comply with NEPA**

Renewal of an operating license for the Turkey Point Nuclear Power plants is identified under 10 C.F.R. Part 51 of the Commission's regulations as a major federal action significantly affecting the quality of the human environment, within the meaning and provisions of the National Environmental Policy Act ("NEPA"), 42 U.S.C. § 4332(2)(C). As such, the NRC has a statutory obligation under NEPA to take certain procedural steps to assess the environmental damage that renewing operating licenses for up to 20 years beyond the 40 year term of the initial license could inflict.

The NRC avers to meet its NEPA requirements by improperly conducting a bifurcated process in which it purports to analyze environmental impacts in a generic process under 10 C.F.R. Parts 51, while simultaneously conducting relicensing activities under 10 C.F.R. Part 54. The NRC has conducted a Generic Environmental Impact statement (GEIS), rather than a site-specific SEIS that should have reviewed the original Turkey Point Environmental Statement. In my opinion, under NEPA the NRC was required to prepare, publish, and seek public comment on a site-specific SEIS on Turkey Point prior to commencing other costly activities in the relicensing process. It appears that the process conducted by the NRC was an attempt to evade any meaningful review of its actions

under NEPA by streamlining the process under 10 C.F.R. Part 51, so that it could conduct an environmental analysis concurrent with a relicensing process. The NRC NEPA process appears to be designed to "end run" NEPA and "rubber stamp" the relicensing decision, and does not allow a meaningful choice among alternatives.

The NRC's Draft GEIS process, which was conducted concurrent with the relicensing process, fails to meet NEPA requirements that an environmental impact assessment must be **"prepared early by such an agency...so that it can serve practically as an important contribution to the decision-making process and will not be used to rationalize or justify decisions already made."** 40 C.F.R. § 1502.5. Finally, it continues to be my contention that this so-called "relicensing" proceeding should be treated as though it is a new request for an initial construction permit and operating license and that the range of alternatives, or their analysis, should not be limited.

Section 1502.2 states that, "agencies shall not commit resources prejudicing selection of alternatives before making a final decision (1506.1)." 40 C.F.R. 1502.2(f). The Commission's conducting of the relicensing review under 10 C.F.R Part 54, while at the same time averring to conduct an objective NEPA process under 10 C.F.R. Part 51, raises a serious question. Having already begun to invest substantial resources in the relicensing process, can the NRC be trusted to have taken the objective "hard look" at alternatives that is required by NEPA? Or will the Commission's EIS process, in the words of one Judge in another NEPA case, "be a classic Wonderland case of first-the-verdict, then the trial? See, Metcalf v Daley, 214 F.3d(9th Cir. 2000). It is my contention that the Draft GEIS is fatally defective and does not meet the requirements of the Act, because the Commission's evaluation of the environmental impact of the relicensing proposal has been tainted by the process.

**C. Site-specific SEIS on Turkey Point Should Have Been Conducted Before 10 C.F.R. Part 54 Relicensing Activities Were Undertaken**

NEPA requires an agency to prepare a supplemental EIS (SEIS) if "there are significant new circumstances or information relevant to environmental concerns and bearing on the proposed actions or its impacts." 40 C.F.R. 1502.9(c)(1). It is my contention that, as part of this process, the NRC should have conducted a site-specific Supplemental Environmental Impact Statement (SEIS), that should have included a review of the original Environmental Statement that was conducted on Turkey Point, before irretrievably committing resources on relicensing activities under 10 C.F.R Part 54. The original EIS on Turkey Point, that was issued only a short time after NEPA was passed in 1969, does not address "substantial environmental issues," such as the proposed project's impact on the 7.8 billion dollar Everglades restoration effort, the largest environmental repair job in human history. The Licensee's current Environmental Report does not even discuss the proposed action's impact on this important Congressionally authorized project and the Draft GEIS fails to adequately analyze any adverse impacts on the project that may occur.

Government support for Everglades restoration, and the clearly defined federal interest in the protection of Biscayne National Park, Everglades National Park, the Big Cypress National Preserve, and Miccosukee Indian Reservation, along with the endangered and threatened species

that inhabit these lands, changes the likely environmental harms by a "considerable magnitude" and could significantly alter the costs and benefits of the proposed project. The Comprehensive Everglades Restoration Plan (CERP) passed by Congress in WRDA 2000 discussed the environmental importance of the area surrounding the Homestead Airbase located in the vicinity of Turkey Point. In authorizing the restoration plan, Congress demonstrated the government's commitment to protection of the fragile environment in this area, including Everglades National Park located fifteen miles west of Turkey Point and Biscayne National Park located two miles from Turkey Point.

This significant new information, and the clear Congressional intent concerning the protection of the Everglades ecosystem, seriously alters the environmental picture and required that a site-specific SEIS on the impact that the proposed project may have on the human environment around Turkey Point nuclear power plant be conducted. This was not done. In fact, the Draft GEIS contains only a scant mention of the restoration plan. Moreover, in its Order dated February 26, 2001, the Atomic Safety and Licensing Board (ASLB) made the incredible ruling at page 29-30 that, "By seeking to have the NRC and the Applicant specifically consider the environmental impacts of license renewal on the restoration project for the Everglades, the contention goes beyond the information the applicant needs to provide in its environmental report pursuant to 10 C.F.R. 51.53© and the issues the NRC must consider in preparing the draft and final SEIS..." The ASLB cited no federal case law or NEPA statutory authority to support their conclusion on this important environmental issue and, in fact, also concluded that they were not authorized to determine whether the Commission's license renewal regulations violate NEPA. (See Board Order at page 17.) Thus, in one fell swoop, the ASLB swept a very important environmental issue that should be analyzed in a site-specific SEIS under the proverbial rug.

Moreover, there were other issues not adequately addressed, or not addressed at all, in the original EIS on Turkey Point, the Licensee's Environmental Report, and even the Draft GEIS that raise questions about the agency's proposal to relicense a nuclear power plant in this area. These issues include, but are not limited to the following: the intense population growth and ability to evacuate in the case of a or hurricane; the siting of Turkey Point in a hurricane zone in light of Hurricane Andrew, the redevelopment of the Homestead Air Base site within five miles of the plant, the siting of a school two miles from the plant. NEPA also requires the consideration of "cumulative impacts" in assessing the proposed action, such as the impact that radioactive emissions from the plant may have had, and may continue to have, on wildlife and the human environment. These issues should have been addressed in an SEIS and were not addressed, or not adequately analyzed or discussed in the Draft GEIS that was conducted.

The NRC's Draft GEIS did not conduct a full and objective study of alternatives to the proposed action prior to an irretrievable investment of resources. NEPA requires not merely a detailed statement of alternatives but also presentation of environmental risks incidental to reasonable alternative courses of action...and they should not be limited to measures which a particular agency or official can adopt. "NRDC v. Morton, 458 F.2d (1972). The environmental risks for the continued operation of the Turkey Point reactors, including the significant environmental effects that may result from offsite radiological impacts from the fuel cycle and

the storage of nuclear waste were not analyzed in the Draft GEIS on a site specific basis, which resulted in a skewed analysis of alternatives that caused things like solar power to be rated more environmentally harmful than nuclear power. (See Draft GEIS at 9-7 and 8-55.) Clearly, a fair and objective analysis, which was not the case in the Draft GEIS, would have identified alternatives that are more environmentally friendly than the continued operation of this aged nuclear power plant located in one of the most environmentally sensitive areas in the world.

## **II. DRAFT GEIS IMPROPERLY NARROWED THE SCOPE UNDER THE ESA**

Over 64 threatened and endangered species inhabit the South Florida Ecosystem, more than any state except California. The proposed action could adversely impact many of these species and subspecies. The NEPA process requires compliance with the Endangered Species Act (ESA), 16, U.S.C. 1531 et seq. The ESA dictates that federal agencies shall "utilize their authorities in furtherance of the purposes of the ESA...by carrying out programs for the conservation of endangered and threatened species listed." 16 U.S.C. 1536 (a). In particular, all federal agencies that plan, undertake, or authorize actions that "may affect" listed species or critical habitat must consult with the U.S. Fish and Wildlife Service, or other relevant agency, to insure that any action authorized, funded, or carried out by such any agency...is not likely to jeopardize the continued existence of any endangered or threatened species, or result in the destruction or adverse modification of habitat of such species...." 16 U.S.C. 1536 (a) (2).

The ultimate responsibility for Section 7 obligations remains with the federal action agency. The NRC did not properly define the scope for interagency section 7 consultation for the project. The NRC failed to ask the FWS to study the impact that offsite consequences from a radiological accident could have on at least a fifty mile radius of the plant; and instead allowed the review to be limited to the area directly surrounding the plant. There are a myriad of threatened and endangered species that inhabit this vast ecosystem, and that could be adversely affected by the proposed action. Also, due to the environmental importance of this area and the vast ecosystem restoration effort being undertaken here, I asked the NRC to request that the Fish and Wildlife Service, Everglades National Park, Biscayne National Park, the Environmental Protection Agency, and the Army Corps of Engineers become cooperating agencies on the Draft GEIS. The NRC, again ignoring the Everglades restoration plan, determined that there were no federal project activities that would make that desirable. See Draft GEIS at 2-53.

## **III. ISSUES THAT SHOULD BE SUBJECT THE SUBJECT OF A SITE-SPECIFIC SEIS AND THAT WERE NOT ADEQUATELY ADDRESSED IN THE DRAFT GEIS**

The following issues should be analyzed in a site-specific SEIS process and were not adequately addressed in the Draft GEIS:

***PRESSURE VESSEL INTEGRITY AND OTHER AGE-RELATED CONCERNS SHOULD HAVE BEEN ANALYZED IN A SITE SPECIFIC SEIS***

An analysis of the aging reactor pressure vessels at Turkey Point and any impacts that such aging could have on the human environment were not analyzed in the Draft GEIS. Such an analysis was necessary, not only to ensure the public health and safety, but also for the cost benefit analysis of alternatives required by NEPA. The replacement cost of the reactor pressure vessels at Turkey Point could be prohibitive and annealing would create further environmental issues that should have been addressed. It is my understanding that no nuclear power plant has ever replaced its vessel.

Additionally, the Draft GEIS did not analyze in a site specific fashion whether the age-related degradation of multiple components at Turkey Point could increase the chance that several components will fail simultaneously, thereby decreasing the safety margin of the plant and increasing the probability of an age-related accident and resultant radiological emergency that would have an extremely adverse impact on the human environment.

***THE DRAFT GEIS DID NOT ANALYZE WHETHER HURRICANES AND AGING EQUIPMENT COULD INCREASE THE RISK, PROBABILITY, AND MAGNITUDE OF A RADIOLOGICAL ACCIDENT WITH ITS ASSOCIATED ENVIRONMENTAL IMPACTS***

The fact that the Turkey Point reactors are located in a hurricane region presents "special circumstances" in that the radiological threat from such an accident would be potentially greater than for another plant because of the inability to evacuate. In the case of a maximum hurricane, it is essential to ensure that critical components do not lose the ability to perform their intended safety function. Age related stress, corrosion and metal fatigue of both safety related and non-safety related equipment could make Turkey Point more susceptible to hurricane induced damage and make the risk, probability, and magnitude of a radiological accident more severe than other plants.

It is my contention that the operation of the aged Turkey Point beyond its original license could increase the risk that a hurricane could cause an age-related accident and radiological emergency and complicate emergency response, thereby making an accident more likely and the results more catastrophic. Turkey Point is located in an area of high hurricane activity. In 1992, a direct hit by Hurricane Andrew caused extensive damage to the plant and the surrounding area was unable to evacuate if it had become necessary. Hurricanes are "frequently occurring natural phenomena" in our area that has a long hurricane season, thus accidents that could be caused by them, or occur contemporaneously with them, are not remote or highly speculative. Neither is the already proven possibility that such an event could disrupt offsite emergency response, thereby causing potentially serious consequences to public health and safety. Thus, impacts of hurricanes on the proposed project should have been analyzed, but they were not among the external phenomena that were analyzed in either the Draft GEIS or NUREG-1437. See Draft GEIS at 4-43 and NUREG-1437.

***DRAFT GEIS DID NOT ADEQUATELY ANALYZE POTENTIAL IMPACTS OF THE PROPOSED ACTION ON THE GROWING SOUTH FLORIDA POPULATION***

The South Florida population, including the Miami Area, has increased dramatically since Turkey Point was built. According to the Licensee's application, there is a high population of 2,572,526 people presently living within 50 miles of the Turkey Point plants. According to a chart entitled "Regional Population Distribution Year 2025," there will be 3,952,697 people living in a fifty mile radius of the plant during the license renewal period. This figure appears to be much lower than other figures that have been cited for estimated population growth in South Florida. Additionally, the current proposal to rebuild the Homestead Air Base site would greatly increase the population in the vicinity of the plant and could stress the evacuation capability of the surrounding community. The Draft GEIS did not adequately analyze the impacts that the proposed action may have on the rapidly growing population in the South Florida area.

The Generic Environmental Impact Statement for License Renewal of Nuclear Plants, NUREG 1437, Vol. 1, Page 5-11 states that as "the population around the plant increases, the potential risk and the increase in risk must be specifically examined. The NRC should have adequately analyzed whether the population in the rapidly growing South Florida area that is in the path of the highest frequency wind direction could safely evacuate in the event of a nuclear accident during the extended twenty year operation before relicensing this plant as required by 10 C.F.R.50.4(a)(1). Such an analysis should include an accident analysis in which a hurricane (an external event) effectively eliminates or prolongs emergency response. According to NUREG-1437, Volume 1, page 5-17, success of evacuation depends on the warning time available and the time it takes to carry out the evacuation. The Draft GEIS did not adequately analyze this site-specific issue and did not address evacuation in a hurricane at all.

Moreover, the NRC is aware that Turkey Point is a coastal/ocean plant with shoreline, aquatic and drinking water pathways, and that contaminants from an accident would be deposited on an open body of water that could increase the dose to the population after the accident. According to NUREG-0769, Addendum I; NUREG-0440, interdiction has the potential to reduce the dose by factors of from 2 to 10. Interdiction, which according to NUREG-1437, page 5-63, could consist of "preventing use of the water or making contaminated food difficult to obtain" may be difficult at this site on Biscayne Bay. NUREG-1437 page 5-94 states that ocean and estuarine sites would be the hardest to effect interdiction because of the food pathway." The Draft GEIS did not adequately address this coastal/ocean plant issue, nor the potential impacts that the proposed action that the permeable Biscayne Aquifer is an EPA designated sole source of drinking water for millions of people in South Florida.

The Draft GEIS on Turkey Point should also analyze whether the dose from an accident at Turkey Point could exceed those in Section 5 of NUREG 1437, Volume 1 in a site-specific SEIS. For instance, Section 5.3.3.4.5 entitled "Ocean Sites" says that Seabrook has the "potential for producing a larger maximum individual dose than that of the LPGS generic ocean site" because of the high shoreline user rates and large annual seafood catch. It further states that "the uninterdicted total population dose estimate for Seabrook is 6 times that of the LPGS generic ocean site. Page 5-85 of NUREG 1437 says that based on certain site specific assumptions, "it can be concluded that Seabrook represents the largest uninterdicted population dose at ocean sites other than Turkey Point." It does not appear that Turkey Point was part of the "Current

ocean site severe liquid pathway analyses compared with Liquid Pathway Generic Study (LPGS) results" contained in Table 5.24 and, thus, these issues should have been analyzed in the Draft GEIS supplement or in a site-specific SEIS. Turkey Point does appear in Table 5.25 of NUREG-1437 entitled, "Earlier ocean sites without severe accident liquid analyses compared to Seabrook." This table identifies the location and groundwater pathway for Turkey Point as permeable limestone to a barge canal and the Atlantic Ocean. Indeed, this would also contradict the statement on page 4-8 in the Draft GEIS that the cooling canal system at Turkey Point, which is dug into porous limestone rock, is a closed system that does not discharge water to Biscayne Bay. The failure to recognize that water does migrate to Biscayne Bay caused the Draft EIS to improperly narrow the scope of its analysis on fish and shellfish only to the cooling canal system itself which would skew the analysis of environmental impacts. Id at 4-8.

Additionally, page 5-95 of NUREG-1437 states that "the Seabrook analysis provides a larger groundwater population dose than all but Turkey Point," but concludes that "the population dose from Turkey Point at MYR would not be expected to exceed Seabrook." NEPA requires that the NRC take a "hard look" at this unsupported conclusion by analyzing it in a site-specific SEIS and/or the Draft GEIS. It is unclear to me why Turkey Point, a coastal plant subject to hurricanes, was not included in the current severe accident liquid pathway analyses. Especially since it appears that including it may have altered the generic conclusions in NUREG-1437, Volume 1, concerning radiation exposure risk in the event of a severe reactor accident in which radioactive contaminants are released into the atmosphere and deposited on large bodies of water. I could find no adequate analysis in the Draft GEIS of the environmental impacts of a severe accident at Turkey Point on the aquatic food, shoreline, swimming, air, and surface and groundwater pathways.

***DRAFT GEIS DID NOT ADEQUATELY ANALYZE THE ENVIRONMENTAL JUSTICE IMPACTS OF THE PROPOSED ACTION ON THE MICCOSUKEE TRIBE AND OTHERS***

Section 4.4.6 of the Draft GEIS does not adequately analyze the environmental justice impacts of the proposed action. For instance, it does not address the significant environmental and cultural impacts that could be caused to the Miccosukee Tribe of Indians who live in the Florida Everglades. A radiological accident at Turkey Point has the potential to adversely impact the Miccosukee Tribe's culture and way of life, which depends on a healthy Everglades ecosystem. Because it fails to address the Miccosukee Tribe and other Native Americans, it incorrectly concludes that "no unusual resource dependencies or practices, such as subsistence agriculture, hunting or fishing through which the populations could be disproportionately high and adversely affected." It is clear that the Tribe's centuries old culture and way of life could be adversely impacted by the proposed action.

Additionally, there is no analysis of the minority populations that live around the plant's dependence on fishing and agriculture for food through which they could be adversely affected by the proposed action. These issues must be analyzed before the NRC can make a conclusion as to the level of impact from an environmental justice perspective.

***DRAFT GEIS PROCESS FAILS TO ADEQUATELY ANALYZE THE PROPOSED ACTION'S NUCLEAR WASTE AND RADIOACTIVE BY- PRODUCTS THAT COULD ADVERSELY IMPACT THE HUMAN ENVIRONMENT***

**Nuclear Waste:**

According to an FPL response to a Sierra Club Miami Group member, there are presently about 1700 spent fuel assemblies being stored at Turkey Point, and they will run out of space for spent fuel in 2010 for Unit 3 and 2011 for Unit 4. According to the Licensee's application, the license for Unit 3 will expire on July 19, 2012 and the Unit 4 license on April 10, 2013. This shows that the Licensee barely has enough room to store the high-level wastes created from the original forty year operation of these plants, let alone the wastes from an additional twenty years operation being contemplated by the proposed action. According to this same response, Barnwell reportedly could be closed to low-level waste from FPL in the next few years.

The proposed action which would increase both the amount and toxicity of the high-level and low-level nuclear waste that will be created by at least half and will exceed the plant's original storage capacity for the high-level waste that must be isolated from the environment for at least ten of thousand of years. Wherever these wastes are stored will have a profound long term affect on the environment. The fact that after over forty years of nuclear power operation, the government still has not found a place to safely and permanently dispose of nuclear waste, means that, in all likelihood, the high-level waste will remain stored permanently on site at Turkey Point. And, if the Licensee is no longer able to send low-level waste to Barnwell, and another site is not found, low-level waste could also be stored on site. The fact that this is an area of high hurricane frequency could increase the risk and probability that nuclear wastes stored on site could contaminate the human environment and would increase the consequences if they did.

As was stated in the above discussion of hurricanes, the Turkey Point site presents special circumstances in that these spent fuel rods being stored on site, and not in the reactor containment building, could be distributed to the environment by a hurricane and age related accident that disrupts emergency response. Such an accident could cause severe and irreversible contamination of the surrounding environment and disrupt emergency response. The Licensee's Turkey Point site is probably the most unsafe site to store nuclear wastes in the country, and the NRC should have analyzed the impact that the relicensing of this plant will have on the South Florida environment as it pertains to both the high level and low level nuclear waste that will be created. The special circumstances that occur at Turkey Point are far too important to be dismissed generically and should have been addressed in a site-specific SEIS and even the Draft GEIS that was conducted.

**Draft GEIS Did Not Adequately Analyze the Cumulative Impacts of Radiation in the Surrounding Environment:**

The Draft GEIS did not adequately analyze and foreclose the impact that the current operation of Turkey Point is having on the cooling canals and the aquatic and human environment surrounding the plant and assess the cumulative impacts of past, present and future

operations as is required by NEPA. Relicensing of the Turkey Point reactors will mean that adverse impacts to the human environment (if occurring) will continue for an additional twenty years beyond the current license period. The impacts that the accumulation and biological magnification of radiation may be having on plant, animal and marine life and the immune system, as well as human health, and the potential cumulative impacts that may occur during the twenty years extended operation must be analyzed under NEPA.

The impact of radionuclides and any bioaccumulation or biomagnification that may be occurring in the food chain, marine life, plant, and humans from plant emissions and the coastal disposition and dispersion should have been analyzed in the Draft GEIS. This analysis should have included research on any build-up of strontium-90 and cesium-137 in the surrounding environment, including Biscayne Bay. The sediments of the Turkey Point cooling canals should have also been analyzed for any build-up of tritium and other fission products. The potential radiation exposure through the sand, soil, dust, air, food chain, and marine life may increase as the plant ages and its life is extended by the relicensing. Analysis of any current impact that may exist, as well as the cumulative impacts that could result from the extended operation, were not adequately analyzed on a site specific basis in the Draft GEIS.

***THE DRAFT GEIS DID NOT ADEQUATELY ANALYZE WHETHER THE PROPOSED RELICENSING POSES UNIQUE THREATS THAT MAY BE INCOMPATIBLE WITH, THE RESTORATION OF THE EVERGLADES AND SOUTH FLORIDA ECOSYSTEM***

The power that we get from Turkey Point can easily be replaced by more environmentally benign sources of energy that do not contain the uncertain risks associated with the operation of these nuclear reactors beyond their original lives, and longer than any nuclear power plants have ever operated in this country. It is my contention that the NRC's Draft GEIS process failed to adequately analyze the impacts of this major federal action on the fragile South Florida environment, because the NRC failed to take the "hard look" required by NEPA. "General statements about "possible" effects and "some risk" do not constitute a "hard look" absent justification regarding why more definitive information could not be provided." Neighbors of Cuddy Mountain v. United States Forest Service, 137 F.3d 1372,1380 (9th Cir. 1998.)

In closing, it is my contention that the NRC's Draft GEIS does not support the premature conclusion that "the adverse impacts of continued operation are considered to be of SMALL significance." It appears to me that it is more a case of "No look = No harm." The people of South Florida, and the beautiful Everglades ecosystem where they live, deserve to know the potential environmental impacts that may be caused by the proposed relicensing action...environmental impacts that can only be known through legally sufficient NEPA process that takes the "hard look" required by NEPA. In my opinion, the NRC has not taken the requisite "hard look" at the Turkey Point relicensing process and should do so.

Sincerely,

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