

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION  
ATOMIC SAFETY AND LICENSING BOARD

Before Administrative Judges:

Alex S. Karlin, Chairman  
Dr. Anthony J. Baratta  
Dr. William M. Murphy

In the Matter of

PROGRESS ENERGY FLORIDA, INC.

(Combined License Application for Levy County  
Nuclear Power Plant, Units 1 and 2)

Docket No. 52-029-COL, 52-030-COL

November 15, 2010

Intervener's Motion For Leave to File a New Contention and Contention 12

I. Introduction

The Ecology Party of Florida, The Green Party of Florida and Nuclear Information and Resource Service (Co-Interveners, or Interveners) hereby submit this timely motion focusing upon the potential for LARGE hydro-ecology and public interest impacts if the proposed Levy County Units 1 & 2 are approved in the above captioned licensing action.

II. Legal History

July 2008 Progress Energy Florida (PEF) sent an application to the US Nuclear Regulatory Commission (NRC) for two Combined Operating Licenses (COLs) for two AP1000 reactors, proposed for a site in Levy County FL, about ten miles inland from the Gulf Coast. December of 2009 the NRC issued a notice of opportunity to intervene, and on February 2, 2009 Co-Interveners filed a Petition to Intervene bringing eleven contentions. This Board issued a Ruling LBP-09-10 on July 8, 2009 granting standing and the admission of 3 contentions (in part),

including Contention 4, a very broad prosecution of the hydro ecological damages that would result from the construction of the proposed nuclear power reactors. In August 2010 the NRC Staff published the Draft Environmental Impact Statement (DEIS), NUREG 1942. Interveners now bring a new contention 12, also in the hydro ecological sphere.

List of Attachments:

- 1 – Map of Barge Canal
- 2 -- Florida Water Basin Boards & Wildlife 2060
- 3 -- Citrus County Memo
- 4 – FDEP Site Specific Information Wacassassa Bay 2010
- 5 – Watershed Analysis -- Janicki
- 6 – Alternatives Study
- 7 -- NRWP-SWFWMD
- 8 – Area Map
- 9 – Rainbow Springs
- 10 – WAR comments to NRC
- 11 – minutes of WRRWSA meeting of October 20, 2010
- 12 – WAR proposal for impoundment of CFBC

## **Contention 12**

A key feature of the Levy site is the use of the Cross Florida Barge Canal (CFBC) as a conduit for cooling water. The CFBC is an artificial, man-made basin that links the artificially created Lake Rousseau and the Gulf of Mexico. Other portions of the original “cross” the state canal have been constructed, but key linking portions have not been completed, leaving the section in Levy and Citrus counties a very “local” structure. (See attachment 1 map of the Barge Canal).

### **C-12 Levy County site is not “obviously superior” to alternatives and two key impacts have not been considered in the choice of site**

The Draft Environmental Impact Statement (DEIS) consideration of alternatives to the proposal to build 2 Ap1000 nuclear power reactors on the Levy County site, under Section 102(2)(c)(iii) of the National Environmental Policy Act of 1969, as amended (NEPA, 42 USC 4321) fails to factor two key issues that are associated with the Levy site only, not the four alternate sites. The Levy site would necessitate construction of a Cooling Water Intake Structure (CWIS) in the Cross Florida Barge Canal which is incompatible with 1) the restoration of the severed upper and lower Withlacoochee River and also with 2) the option of creating an impoundment in the Cross Florida Barge Canal for freshwater to augment and support municipal water supply.

1) The Levy site is not the “least environmentally damaging practicable alternative” (LEDPA) since the construction of the CWIS would delay the restoration of the hydraulic flow between the upper and lower Withlacoochee River segments until the CWIS is decommissioned in a minimum of 40 – 80 years. This is a LARGE environmental impact not considered by the DEIS that could impact the outcome of the alternate site analysis.

2) Fresh water flows in the Cross Florida Barge Canal (CFBC) represent a LARGE publicly beneficial resource that is not considered when the alternative sites were weighed. A new (October 20, 2010) proposal before the Withlacoochee River Regional Water Supply Authority (WRWSA's) would create an impoundment in the CFBC that could supply significant quantities of fresh water to local residents weekly for public beneficial use. The consumption of this freshwater resource by Levy County Units 1 & 2, via the CWIS is an impact not considered or factored in the relative merits of the alternative sites. Billions of gallons of freshwater would leave the area, either as blow-down that would be discharged to the Gulf of Mexico, or alternately as steam issuing from the mechanical cooling towers. This loss of freshwater is an enormous waste that is not in the public interest.

These impacts of the Levy County site are not considered when appraising the relative merits of the 5 sites for the new nuclear reactors. When the CFBC issues are considered, the Levy County site is “obviously inferior” both for the environment and the public compared to the other site options or the no-action alternative.

Note: items one and two are both incompatible with the construction of two AP1000 nuclear reactors on the proposed Levy site – however, the two initiatives are mutually viable.

## **Discussion**

### Withlacoochee River Restoration

The proposed Levy County site is an “obviously inferior” site for the proposed project compared to alternative sites due to the plan to use the Cross Florida Barge Canal (CFBC) as a conduit for cooling water, which would prevent implementation of the Withlacoochee Basin Board’s mandate (from the Florida State Legislature) to restore a protected, Outstanding Florida water, the Withlacoochee river (See attachment 2). Restoration plans of the Board include restoring the hydraulic connection between the upper and lower river segments, currently transected by the CFBC. Selecting the Levy site for the construction and operation of two AP1000 reactors would delay restoration of the protected river through the period of operation (40 – 80 years) until the Cooling Water Intake Structure (CWIS) would be decommissioned. This LARGE impact to the ecological health of the protected, Withlacoochee River which is an Outstanding

Florida water is tied exclusively to the selection of the Levy County site and would not be associated with construction at any of the alternative sites.

River restoration has been a priority of a number of bodies, including the Southwest Florida Water Management District which on August 4, 2009 included the following in a memo to the Department of Community Affairs (See Attachment 3, pages 24 - 26 )

Goal 2  
(Protect Natural Flow Ways and Water Quality)

A major hydrologic system in the CFG corridor is the Withlacoochee River despite the canal's western terminus which severs the river. The dredging resulted in severely disrupted areas between the Inglis Bypass Spillway and Lake Rousseau. An optimum pool elevation is maintained by operation of the Bypass Spillway in joint cooperation with FDEP and the District. Freshwater is discharged at the west end of Lake Rousseau into the lower Withlacoochee River in sufficient quantities to sustain the prevailing environment, prevent saltwater intrusion, maintain the level of the lake, and to accommodate navigation interests.

The District is conducting a multi-year project to evaluate restoration alternatives to mitigate some of the environmental impacts created by the canal's construction. In 2011 the District plans to adopt Minimum Flows and Levels (MFL) for this section of the river pursuant to Chapter 373.04, Florida Statutes, and Chapter 40-D8, Florida Administrative Code (F.A.C.). An MFL is the limit at which further water withdrawals will cause significant harm to the water resources of the area and the related natural environment. Additional information on MFLs is available from Marty Kelly, Minimum Flows & Levels Director, at (800) 423-1476, extension #4235.

(image from Attachment B page 25 of the pdf)

The DEIS fails to consider the likely LARGE impacts resulting from the indefinite postponement of the restoration of the Withlacoochee River including:

1. Progressive degradation of the Lower Withlacoochee River due to reduced system flows
2. Inshore movement of current isohaline gradients in the Withlacoochee River which will result from diversion of freshwater supplies to coastal waters and attendant increases of salinity and sulfate concentrations.

The importance of the Withlacoochee River to the biodiversity and ecological integrity of the biome of the Levy County area cannot be overstated. (For instance see Attachment 4 page 14 and Bacchus)

The Environment Report (ER) produced by PEF as part of its COL filing in 2008 considers four alternate sites and the proposed Levy County site to construct and operate two AP1000 nuclear reactors. The ER introduction of the alternative sites takes about 40 pages. The Draft Environmental Impact Statement (DEIS) includes a much expanded discussion of the alternative sites, taking over 200 pages. NRC Staff conclude their discussion:

#### **9.3.6.3 Obviously Superior Sites**

None of the alternative sites was determined to be environmentally preferable to the proposed LNP site. Therefore, the NRC staff concludes that none of the alternative sites would be obviously superior to the LNP site. As discussed in Section 9.0, the USACE will conclude its analysis of both offsite and onsite alternatives in its Record of Decision. (DEIS Vol 2 page 9-245)

However the analysis did not include the restoration of the river, even though Section 9.4.2.4 of the DEIS states in part:

**“The Withlacoochee River is designated as an Outstanding Florida Water and therefore has regulatory protection (Fla. Admin. Code 62-302). In addition, the Withlacoochee River Basin Board has made the restoration of Lake Rousseau and the Lower Withlacoochee River a priority in its Fiscal Year 2006 Basin Priorities Statement. Both of these surface waters contribute to a major groundwater recharge area (PEF 2009e).”**

However there is no reference to the NRC staff considering the implications of this priority of the Board when considering the impact of the Levy site decision. In making restoration of Lake Rousseau and the Lower Withlacoochee River a Priority, the Withlacoochee Basin Board examined several issues that adversely impacted the System. On the point of the Lower River, a primary cause of degradation is reduced system flows caused by construction of the CFBC. Reduced flows have contributed greatly to inshore dislocation of historic isohaline values and the river has lost historic scouring action once caused by higher system flows. Discussion of this and alterations of System water chemistry is discussed in Attachment 5 Janicki.

As part of the examination of how to address these deficiencies a two volume study was commissioned by the SWFWMD and performed by URS Corp (Attachment 6 Alternatives Study) which details 3 alternatives for restoration and a no action alternative. It is noteworthy that the three restoration alternatives involved restoring the hydraulic connection between the severed segments of the river resulting from the CFBC construction. Location of the Applicant's CWIS at the proposed site will prevent such action by the State.

In certification of the application by the State under provisions of FS403, a certain condition was attached (Condition J) which implies at some point in the future the State may move to modify structures in the CFBC and after public hearing the Applicant may be required to relocate the CWIS or other architecture as necessary. Should the State does so for purposes of restoration or impoundment of fresh water resources for public beneficial use, rate payers will fund both initial and subsequent construction costs of the CWIS if relocation is required.

DEIS Section 7.2.1.1 states in part:

In a preliminary study conducted by the Withlacoochee Regional Water Supply Authority in cooperation with the SWFWMD, the agencies concluded that **an additional 93 Mgd of surface water supply may potentially be available from the river. (Attachment 7 NRWP-SWFWMD)**

Due to containment structure design for Lake Rousseau, consumptive water use described in the foregoing statement will result in corresponding reduction of flows to the Lower River via the Inglis Bypass Channel and Spillway. (Attachment 8) This volume of flow will result in a 143+CFS reduction in System component flow and in conjunction with the Applicant's consumption of fresh water from the CFBC will result in a loss of fresh water contribution to the estuary ranging from 47.8-60.5% during low flow scenarios in the System. It is not clear that the such a level of impact is consistent with the Clean Water Act; therefore it may be required to revert to ground water use which will cause adverse impacts to regional first magnitude springs

such as Rainbow Springs and Silver Springs, both of which are powerful economic forces in local economies. (See attachment 9 FL State Park Rainbow Springs webpage)

Much of the foregoing reflects comments made by Dan Hilliard to the US Nuclear Regulatory Commission on its Draft Environmental Impact Statement (the comments are provided in full as Attachment 10). Mr Hilliard also represents the Withlacoochee Area Residents (WAR), Inc.

### **Freshwater Impoundment Development**

Use of the Levy site for 2 AP1000 power reactors cooled by water channeled through the CFBC is also incompatible with the Withlacoochee Regional Water Supply Authority's (WRWSA's) action of October 20, 2010 (see Attachment 11) unanimously approving a motion:

...to accept the Withlacoochee Area Residents, Inc. proposal [to use the CFBC] as a potential alternative water supply (AWS) project for consideration as a long-term water supply project along with the other AWS projects approved in the WRWSA's Water Supply Master Plan.

Such a proposal is completely incompatible with the construction of the Cooling Water Intake Structure (CWIS) in the CFBC with water withdrawals as high as 84,780 gallons per minute (DEIS \_\_\_\_). The DEIS asserts that water from the Gulf of Mexico would be used to cool the two AP1000 reactors (DEIS\_\_\_\_) if sited at the Levy site, and this is true, however there would also be significant quantities of fresh water that originates from water over and under the dam at Lake Rousseau, from the upper Withlacoochee and from springs along the length of the Canal.

The plan before (and supported by) Withlacoochee River Regional Water Supply Authority (WRWSA's) would install a second lock on the canal at the western distal end of the body to create an impoundment with a two-foot head between the existing lock, near Lake Rousseau and the new lock, near to the Gulf. The constraint of the water along with the modest head in the Barge Canal impoundment would result in a stable supply of freshwater from the lake and

from springs. Since this resource has not be adequately assessed in this process, it is not clear how much freshwater is available, however there is reasonable grounds to conclude that there is a minimum and constant 120 CFS fresh water supply in the CFBC because the DEIS says as much (See figure 5-4, vol 1 DEIS).

Further “back of the envelope” estimates from the WAR submission (Attachment 12):

Forming a closed impoundment, the CFBC would hold this water and the estimated volume of this “tank” is well over 1 billion gallons. This would be a significant source for use in the regional freshwater supply.

- CFBC Springs and leakage at the Inglis Dam is assumed to be 120 CFS = 77.5 Million Gallons per Day (MGD). This is available 24 hours/day.
- The average flow over the dam on an annual basis is 423 CFS, or 273.4 MGD. This is available on a daily average computed from annual measured flow rates, but the flow is intermittent and usually much greater in volume.
- These two numbers together are an annual average of 350.95 MGD. This is a theoretical average daily supply. A point of reference is the Tampa Bay Water Authority uses about 150 MGD total.

The loss of the beneficial use of this freshwater for the public is a LARGE impact, particularly considering the projections for growth in the area, upon which the justification for the PEF proposal rests.

The “size” of an impact according to the NRC, is described in footnotes to Table B-1 of 10 CFR Part 51, Subpart A, Appendix B. The term “LARGE” is defined: “For the issue, environmental effects are clearly noticeable and are sufficient to destabilize important attributes of the

resource.” In both the matter of restoring the Withlacoochee River, and the issue of the use of the fresh water for Regional Water Supply, the choice of the Levy site, compared to all others will be destabilizing. We dispute the DEIS finding that the Levy site is preferred.

The recent vote by WRWSA is part of the occasion to bring this contention.

### **Admissibility Requirements**

We have stated the issue, briefly with clarity as to the scope of the proceeding; the environmental issues brought are material to the licensing action under NEPA, and will also be brought to the attention of the Army Corps of Engineers for its Public Interest determination; we have provided facts and official documents to support them. We dispute the finding that the chosen site is preferable or even, given these impacts, acceptable.

### **Timeliness**

It is clear that other Parties to this licensing process will agree with each other that this contention is not timely. We will speak to the late-filing criteria below, but first:

- 1) The development of the “alternatives” section of the ER is only about 40 pages, where the DEIS devotes more than 200 pages to this exercise;
- 2) The interveners were unaware of the plan of the Withlacoochee River Basin Board to restore the Withlacoochee River until the publication of the DEIS, which does not cure the timeliness factor, however:
- 3) The action of the by the Withlacoochee Regional Water Supply Authority on October 20, 2010 with respect to the impoundment of fresh water in the CFBC brought these issues into focus.

Intervenors understand that something as basic as the location of the proposal is not “new” information – however to assume that the DEIS would confirm the site in all cases would be to make a mockery of the NRC’s regulatory authority, and would also call to question its application of and responsibilities under the NEPA. Intervenors will not “go there.” Therefore we bring what we see as enormously important points – both to the environment of the Nature Coast of Florida, to the prospects for sustained and sustainable development in the area, and for a fundamental resource – municipal water supply.

Intervenors had 60 days from the publication of the DEIS for the timely filing of new contentions based on the DEIS. In October an extension was granted for any additional hydroecological contentions. This new contention is offered within that extension.

### **We meet the Criteria for a Non-Timely Filing as well**

10 C.F.R. § 2.309(c) requires:

- (i) Good cause, if any, for the failure to file on time;
- (ii) The nature of the requestor’s/petitioner’s right under the Act to be made a party to the proceeding;
- (iii) The nature and extent of the requestor’s/ petitioner’s property, financial or other interest in the proceeding;
- (iv) The possible effect of any order that may be entered in the proceeding on the requestor’s/petitioner’s interest;
- (v) The availability of other means whereby the requestor’s/petitioner’s interest will be protected;
- (vi) The extent to which the requestor’s/ petitioner’s interests will be represented by existing parties;
- (vii) The extent to which the requestor’s/ petitioner’s participation will broaden the issues or delay the proceeding;
- And (viii) The extent to which the requestor’s/ petitioner’s participation may reasonably be expected to assist in developing a sound record.

- i) Intervenors view this filing as timely. The good cause for bringing issues that others will attack as late is action within the local community in the area of the proposed Levy site that is incompatible with the proposed project, the implementation of which more clearly meet the criteria of “providing reasonable assurance of adequate

protection of the public health and safety” than proceeding with the project on the proposed site. A reconsideration of the alternate sites, which is not impossible, could cure this matter.

- ii) Interveners are Parties to this proceeding now,
- iii) The interests of the combined members of the Green Party of Florida, the Ecology Party of Florida and Nuclear Information and Resource Service who live in the Nature Coast are of Florida will be directly impacted by the health of the Withlacoochee River, its water shed and the Coastal waters that it feeds. The designation of the waters as “Outstanding” and the protected status afforded many of the coastal areas that would also be impacted speak for themselves in terms of the priorities involved. The statement has been made that “water is the new oil” – the Levy site with the CWIS in the CFBC would result in large amounts of drinking water being used to cool reactors. A different location such as CREC would ensure that it would be Gulf water used.
- iv) The Board can rule to admit this contention. The litigation of this contention could result in the determination that one of the other sites would be “obviously superior” to the proposed site. Another site would not result in the placement of the CWIS in the CFBC.
- v) The issue is the construction and operation of the CWIS in the CFBC. This decision is wholly in the hands of the US NRC and PEF.
- vi) We trust that the NRC and PEF will care about these issues once they understand them. The narrative on alternative sites, the rating and the endorsement of the proposed site reveal that they do not (yet) understand what is at stake and so therefore have not represented the restoration of the river, or the regional water supply issues at this time.

- vii) Thanks to the determination by NRC staff that there should be no major construction on the Levy site prior to the COL determination, there has not been large, irretrievable investment in the Levy site to date. Given that one of the alternative sites is the Crystal River Energy Center, currently owned and operated by Progress Energy it is not a foregone conclusion that litigation of these issues, even were they to result in the movement of the project to another site would have to create toxic or deadly delay.
- viii) We believe that our participation in this proceeding has, and will continue to create a very important record and precedent for this and any other AP1000 or COL to come after.

For these and many other reasons which we hope to develop in a full hearing of this contention, we ask that the Board admit the contention in full.

Respectfully Submitted

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Mary Olson  
Southeast Regional Coordinator,  
on behalf of the Co-Intervenors

Asheville, North Carolina  
November 15, 2010

UNITED STATES OF AMERICA  
 NUCLEAR REGULATORY COMMISSION  
 ATOMIC SAFETY AND LICENSING BOARD

Before Administrative Judges:  
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Certificate of Service

I hereby certify that copies of the Motion for Leave to File and New Contention 12 have been served on the following persons by Electronic Information Exchange on this 15<sup>th</sup> Day of November, 2010.

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**/Signed (electronically) by/**

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