DEPARTMENT OF THE ARMY
JACKSONVILLE DISTRICT CORPS OF ENGINEERS
PANAMA CITY REGULATORY OFFICE
1002 WEST 23rd STREET, SUITE 350
PANAMA CITY, FLORIDA 32405-3648

REPLY TO
ATTENTION OF

March 5, 2010

Regulatory Division
North Permits Branch
SAJ-2008-00490(IP-GAH)

Mr. John Elnitsky
Vice President
Nuclear Plant Development
Progress Energy Florida, Inc.
Post Office Box 14042
St. Petersburg, Florida 33733

Dear Mr. Elnitsky:

Reference is made to your letter dated December 14, 2009, which was sent to the U.S. Nuclear Regulatory Commission (NRC) with a copy provided to the U.S. Army Corps of Engineers (Corps). Your letter and its attachments were provided in response to supplemental requests for additional information (RAI) for the environmental review of Progress Energy, Florida's (PEF) proposed Levy Nuclear Plant, Units 1 & 2 project (LNP). This project is the subject of pending application review for a Department of the Army (DA) permit by the Corps. Also, the Corps is a cooperating agency with the NRC, as lead agency, in the development of an Environmental Impact Statement under NEPA for your project. The Corps' application file number for your proposed project is SAJ-2008-00490(IP-GAH). The supplemental RAIs sent to you from the NRC included requests for additional information in regard to the alternatives analyses under both the National Environmental Policy Act (NEPA) and the Clean Water Act (CWA).

The Corps has reviewed the new information in regard to the alternatives analyses under NEPA and the CWA, as found in three of the documents you provided with the above referenced letter: 1) Enclosure 1 to Serial : NPD-NRC-2009-242, 57 pages (*Enclosure 1*); 2) Attachment A to Enclosure 1, 16 pages; and 3) *Levy Nuclear Units 1 and 2 (LNP) Section 404(b)(1) Alternatives Analysis, Revision 3*, 229 pages (*Section 404 Alternatives Analysis*). After reviewing these documents, the Corps has various comments, concerns and requests for clarification and additional information, specifically in regard to the analysis of alternative sites, as presented in the *Section 404 Alternatives Analysis*.

Overall, the analysis, as provided in the *Section 404 Alternatives Analysis* to determine the Least Environmentally Damaging Practicable Alternative (LEDPA) does not appear to clearly satisfy the requirement in the 404(b)(1) Guidelines (Guidelines) at CFR Part 230.10(a)(3): "Where the activity associated with a discharge which is proposed for a special aquatic site (as defined in Subpart E) does not require access or proximity to or siting within the special aquatic site in question to fulfill its basic purpose (i.e., is not ``water dependent"), practicable alternatives that do not involve special aquatic sites are presumed to be available, unless clearly demonstrated otherwise. In addition, where a discharge is proposed for a special aquatic site, all practicable alternatives to the proposed discharge which do not involve a discharge into a special aquatic site are presumed to have less adverse impact on the aquatic ecosystem, unless clearly demonstrated otherwise."

In light of the above, and in regard to the *Section 404 Alternative Analysis* you provided, the Corps has seven general comments, which are provided below. Following these general comments, more detailed comments in regard to specific sections of the *Section 404 Alternative Analysis* are provided. The Corps' comments are predicated on the requirement that evaluation of a proposed project requiring a DA permit under the CWA must apply and comply with the criteria set forth in the Guidelines, as found in 40 CFR Part 230.

The Corps has seven general comments:

1) The analysis of the alternative sites, as presented in the *Section 404 Alternative Analysis*, has mixed review factors, which could possibly be used to determine practicability, with review factors to determine which of the "practicable" alternatives would have the least impact on the aquatic ecosystem. Ideally, using appropriate project specific criteria, the practicable alternative sites are identified first. Then the practicable alternative sites are analyzed from an environmental standpoint to determine which is the least damaging, specifically in terms of impacts on the aquatic ecosystem. It is possible for the suite of alternative sites reviewed under NEPA to be different from the suite of alternative sites analyzed under the Guidelines. The Guidelines state in regard to the determination of the LEPDA at 230.10(a): "Except as provided under section 404(b)(2), no discharge of dredged or fill material shall be permitted if there is a practicable alternative to the proposed discharge which would have less adverse impact on the aquatic ecosystem, so long as the alternative does not have other significant adverse environmental consequences."

2) All of the practicable alternative sites must be analyzed using the criteria found in the Guidelines to determine the LEDPA based on impacts to the aquatic ecosystem, unless an otherwise practicable alternative has other significant adverse environmental consequences. The environmental analysis of the practicable alternatives must focus on the aquatic ecosystem.

3) Wetlands are a component of the aquatic ecosystem, which are identified in the Guidelines as Waters of the United States, and as Special Aquatic Sites. The Guidelines are specifically focused, as the title for Part 230 states, for the specification for disposal sites for dredged and fill material. The Guidelines explicitly require evaluation of the potential impacts of the alternatives in regard to the Guidelines' factors on waters of the United States, including wetlands. Discussions in the *Section 404*

Alternatives Analysis for many review factors had no information or analyses regarding the large areas of wetlands to be impacted by the discharge of dredged and fill materials on the alternate plant sites and in their associated transmission corridors. The Corps considers the discharge of dredged and fill material into potentially hundreds of acres of wetlands, and thus the elimination of hundreds of acres of aquatic ecosystems, which would result from the construction of the proposed project using any one of the identified alternative sites, to constitute the greatest potential impact on the aquatic ecosystem associated with this project, as evaluated under the Guidelines. Wetland impacts are emphasized in the analysis under the Guidelines (See 230.1(d)). Rankings and weightings used in an analysis under the Guidelines should reflect this emphasis.

4) Many of the rankings used in the analysis need more explanation and/or stronger rationales. Also, in some cases ordinal rankings were used to rank the sites using quantitative measurements of impacts. This is inappropriate, since ordinal rankings are not measured on ratio or even intervals scales. That is, the difference between first and second has no quantitative relationship to the difference between second and third or any other pair-wise comparison. This can lead to misleading mathematical results in scoring the alternatives.

5) Several of the weightings used in the analysis need more explanation and/or stronger rationales; and may need adjustment.

6) The project, as currently proposed at the LNP, site includes impacts to salt marsh and tidal creeks for the installation of the blowdown pipeline. These important impacts to the aquatic ecosystem do not appear to be discussed nor accounted for as important detrimental impacts associated with LNP in the report. Also, the most up-to-date wetland information should be used for the LNP site.

7) The Corps accepts the rationale to use a weighting of 0 for those specific criteria, in which all of the sites rank the same. The Corps believes that this will help to more easily identify the LEDPA based on the relative difference among the practicable alternative sites in regard to impacts on the aquatic ecosystem.

Table 5.01 ("Site Selection Decision Matrix") in the *Section 404 Alternatives Analysis* lists thirty-five review factors. For each review factor there are one or more specific criteria. The table shows the ranking of the five alternative sites for each of the specific criteria, as well as how each of the specific criteria is weighted to calculate consolidated scores. These scores are then totaled in the table for each of the five alternatives. The review factors and specific criteria along with the determinations of rankings and weightings are discussed in pages 30 thru 50 of the *Section 404 Alternatives Analysis*, and in Tables 5.02 and 5.03. Below, in the form of a numbered list, are comments and/or concerns in regard to each of the thirty-five review factors and their specific criteria. The list names the review factor as identified in Table 5.01 plus any additional wording from the heading for that particular review factor, as found in the *Section 404 Alternatives Analysis*. The Corps has attempted to specifically identify review factors used in the *Section 404 Alternatives Analysis,* which could be used to assess practicability of a project alternative, versus those review factors, which could be used to assess impacts on the aquatic ecosystem by the application of factors explicitly identified in the Guidelines. The Corps has also attempted to match and identify the appropriate citation in the Guidelines for those review factors used in the *Section 404 Alternatives Analysis*, which could be used to assess impacts on the aquatic environment. Be advised that the identification of certain review factors that are not appropriate for review of the impacts of the alternative sites on the aquatic environment, but could possibly be used for an analysis of practicability, is not an endorsement by the Corps that the factor is appropriate for this project, but rather that it is conceivable that such a factor could be used for determination of practicability for some proposed projects. This is also true for any of the review factors the Corps believes are not appropriate for review of the impacts of the alternative sites on the aquatic environment, but which could be a factor in regard to the "other significant adverse environmental consequences" caveat in 230.10(a). As identified in the *Section 404 Alternatives Analysis,* many of the review factors you used, are those listed in 33 CFR Part 320.4(a) for the public interest review. These public interest review factors are used by the Corps in our evaluation to determine whether an alternative, identified as the LEDPA, is not contrary to the public interest.

The following is the list of the thirty-five review factors with the Corps' comments:

1. Substrate: a. Total impact Area & b. Geologic Conditions. 230.11(a) (Physical substrate determinations) and Subpart C, 230.20 (Substrate). This is an appropriate review factor in regard to impacts on the aquatic environment. However review as conducted does not appear appropriate. The review does not evaluate substrate in terms of the impact of the discharge of dredged or fill material into the aquatic environment, including wetlands. Instead, the specific criteria are total land surface impacted and geologic conditions in regard to nuclear plant siting. These specific criteria are not factors for determining the impact of the alternatives sites on the aquatic environment under the Guidelines. The Corps has no comment in regard to ranking and weighing, since inappropriate specific criteria were used. Geological conditions could be a factor in consideration of "practicability" of alternative sites for some projects.

2. Currents, Circulation, or Drainage Patterns: Subpart A, 230.11(b) (Water circulation, fluctuation, and salinity determinations), Subpart C, 230.23 (Current patterns and water circulation), and Subpart C, 230.24 (Normal water fluctuations): This is an appropriate review factor in regard to impacts on the aquatic environment. However, the review focused only on the physical effects of cooling water intake and discharge. No analysis was provided in regard to the effects on these factors, as they presently exist in the specific wetlands and waters, from the discharge of dredged or fill material, as proposed for the alternative sites, nor for the effects on the receiving waters of the directly filled wetlands and waters. Since the analysis is incomplete, the Corps has no comments in regard to ranking or weighting.

3. Suspended Particulates/Turbidity: Subpart A, 230.11(c) (Suspended particulates/turbidity determinations) and Subpart C, 230.21 (Suspended particulates/turbidity). This is an appropriate review factor in regard to impacts on the aquatic environment. The ranking appears appropriate, since there is a reasonable expectation for the requirement for controls at all five alternative sites to comply with water quality considerations.

4. Water Quality (Temperature, Salinity Patterns, and other Parameters): Subpart A, 230.11(b) (Water circulation, fluctuation, and salinity determinations); Subpart A 230.11(d) (Contamination determinations); Subpart C, 230.22 (Water); and Subpart C, 230.25 (Salinity gradients). This is an appropriate review factor in regard to impacts on the aquatic environment. However, the review appears to be incomplete, because it appears that there is no analysis of the impact in regard to these factors, which would directly result from the discharge of fill or dredged materials into waters and wetlands. According to Table 5.0-3, the rating was based on the relative difference of concentrated salts in discharge water into different waterbodies (Gulf of Mexico vs. rivers) among the alternative sites. But would the differences, assuming adherence to water quality standards for such discharges, be sufficient to cause discernable and different negative impacts on the aquatic environment among the alternatives? The ratings do not appear to be consistent between Table 5.0-1 and Table 5.0-3. It appears that this factor should include the water quality analysis, as described in #32 below (General Water Quality).

5. Flood Hazards and Floodplain Values: Subpart A, 230.11(b) (Water circulation, fluctuation, and salinity determinations); and Subpart C, 230.24 (Normal water fluctuations). This appears to be an appropriate review factor in regard to impacts on the aquatic environment. However, the ranking does not seem appropriate. The ranking does not take into account the relative quantitative differences among sites in regard to the number of acres within the 100-year floodplain, which would be impacted (See general comment #4 above). Also, it appears that counting the transmission line impacts as having the same per acre impact as onsite dredge and fill for plant sites, including reservoirs, is inappropriate. Most of the wetland impacts associated with transmission corridors are vegetation clearing, and not the discharge of fill or dredged material, which would change ground elevation, and thus affect floodplain capacity. See #11.b(1) below for similar comments in regard to assessment of wetland impacts associated with transmission corridors.

6. Storm, Wave, and Erosion Buffers: The *Section 404 Alternatives Analysis* states that this was a quantitative analysis of risk factors for reliable power production. The review was of the potential impacts of storm, wave and erosion on reliability of the plant (production) and transmission lines (supply). Table 5.02 states that the weighting for these factors was increased due to reliability requirements to meet purpose and need of the project. Reliability in regard to the overall purpose for this project is potentially a factor in determining the practicability of the alternative sites. This review

factor is not appropriate to analyze the impacts of the alternative sites on the aquatic environment under the Guidelines.

7. Shore Erosion and Accretion: Subpart C, 230. 23 (Current patterns and water circulation) and 230.24 (Normal water fluctuations). This appears to be an appropriate review factor in regard to impacts on the aquatic ecosystem, and the rating appears to be appropriate, but it should probably be included in #2 above.

8. Aquifer Recharge: This does not appear to be a specific factor, which is directly referenced in the Guidelines. It may be appropriate to include some aspects of aquifer recharge within the analysis in Subpart F, 230.50 (Municipal and private water supplies), which is #16 below. Also, aquifer recharge may be an appropriate analysis in terms of secondary impacts from the project in regard to the disruption of groundwater, and therefore, impacts on the hydrology of wetlands in areas located within and adjacent to the alternative sites (See Subpart E, 230.41(b).

9. Baseflow: It appears that this review factor could be a component of #2 above, since baseflow would be a component of Subpart C, 230.24 (Normal water fluctuations). There does not appear to be an analysis of the impacts on the baseflows of receiving waters from the discharge of fill or dredged materials into wetlands and waters. In regard to the analysis, as presented in the *Section 404 Alternatives Analysis*, would baseflows of rivers be affected permanently or just for the filling of the reservoir? Would there not be regulatory requirements to maintain baseflow after reservoir filling? How would the answers to these questions affect ranking of the alternative sites?

10. Mixing Zone: This review factor would seem to be a component of #4 above.

11. Special Aquatic Sites: Subpart E (Potential Impacts on Special Aquatic Sites).

11.a. Sanctuaries, Refuges, Endangered Species Habitat: Subpart E, 230.40 (Sanctuaries and refuges) and Subpart D, 230.30 (Threatened and endangered species). Reference is made to endangered species habitat here, but this should be a component of the analysis for the review factor at #14 below. Sanctuaries and refuges comprise an appropriate review factor in regard to impacts on the aquatic ecosystem. The rankings given in Table 5.0-1 do not appear to be consistent with the description of impacts in Section 4.2.1.1 of the *Section 404 Alternatives Analysis*. Specifically, the Highlands site is described in the text as potentially affecting this review factor, but given a ranking of 5 in the table, while the Dixie site is given a ranking of 2 and no impacts are described in the text. Assuming that the table mistakenly reversed the rankings for the Dixie and Highland sites, is the ranking for the Crystal River site relative to the Dixie site appropriate, since the Crystal River site is an existing electrical power generation site, as opposed to the Dixie site, which is a greenfield? Weighting for this factor may be too heavy, since it appears that none of the alternatives directly impact existing sanctuaries or refuges.

11.b. FLUCS Wetlands Impacts: Subpart E, 230.41 (Wetlands).

(1) Transmission Line Corridors Wetland Impacts – The public notice, which was issued for this project by the Corps on March 16, 2009, and which used wetland impact information provided by PEF, stated that the proposed LNP project would impact approximately 355 acres of wetlands for transmission lines. PEF RAI response #NPD-NRC-2009-146 includes a table, which shows potential wetland impacts based on FLUCS for LNP transmission lines. The wetland impacts shown on the table total 354.61 acres. This is approximately 25% of the wetland impacts as shown for transmission line impacts based on FLUCS for LNP in Table 4.2.1.2.-1 of the *Section 404 Alternatives Analysis*. NPD-NRC-2009-146 also includes a table, which shows that when transmission lines for LNP are assessed on a per-impact site basis, there are 55.5 acres of wetland fill impact and 203.44 acres of wetland clearing impact. This equates to about 5% of the impact to wetlands for the transmission lines would result from filling and about 20% of the impact to wetlands for wetland clearing on a wetland acreage basis. Using these percentages Table 4.2.1.2.-1 is modified below to avoid significant over-counting of wetland impacts associated with transmission lines when added to wetland fill impacts associated with plant site development, reservoirs and off-site corridors. Using the 5% and 20% factors, as determined above, proportional wetland impacts from filling and clearing could be approximated for the other alternative sites, so as to provide some basis of uniform comparison of impacts among the transmission corridors for the alternative sites.

(2) Table 4.2.1.2.-1 is also modified to include the wetland acreages for development of the LNP site as identified in the public notice.

(3) The Corps' additions to the table below are highlighted yellow and gray. Categories where these additions were made are underlined.

TABLE 4.2.1.2-1 Alternative Sites Wetland (NWI and FLUCCS) Information

	LNP	Crystal River	Dixie 1	Highlands	Putnam 3
Site Areas					
NWI Area ac. (% of area)	1,942 (32%)	1,169 (19%)	662 (11%)	923 (15%)	1,166 (19%)
FLUCCS (% of area)	1,913 (32%)	1,286 (21%)	636 (11%)	1,102 (18%)	1,404 (23%)
On-site Impact Areas					
NWI Area ac. (% of area)	147 (33%)	20 (5%)	10 (2%)	12 (3%)	40 (9%)
FLUCCS (% of area)	155 (35%) 368*	27 (6%)	8 (2%)	6 (1%)	34 (8%)
Reservoir Impact Areas					
NWI Area ac. (% of area)	NA	NA	102 (8%)	84 (6%)	207 (16%)
FLUCCS (% of area)	NA	NA	90 (7%)	135 (10%)	210 (16%)
Transmission Line Corridors					
NWI Area ac. (% of area)	1,577 (17%)	1,529 (16%)	2,068 (16%)	752 (12%)	1,006 (17%)
FLUCCS (% of area)	1,561 (17%) 312 clear† 78 fill† 203 clear** 56 fill**	1,516 (16%) 303 clear† 76 fill†	2,163 (16%) 433 clear† 108 fill†	558 (9%) 112 clear† 28 fill†	702 (12%) 140 clear† 35 fill†
Off-site Corridors					
NWI Area ac. (% of area)	66 (26%)	6 (9%)	36 (6%)	26 (8%)	10 (5%)
FLUCCS (% of area)	39 (16%) 42*	6 (10%)	38 (7%)	17 (5%)	15 (8%)
Total Impacts					
NWI Area ac.	1,790	1,555	2,114	874	1,263
FLUCCS	1755 272 fill 312 clear 466 fill 203 clear	1,549 109 fill 303 clear	2,299 244 fill 433 clear	716 186 fill 112 clear	961 294 fill 140 clear

Notes: National Wetland Inventory (NWI) area is a combination of the following wetland types: freshwater emergent wetlands acreage, freshwater forested/shrub wetland acreage, and freshwater pond acreage. NA = not applicable for the LNP and Crystal River sites because reservoirs are not needed. Source: National Wetland Inventory (NWI) Wetlands and Watershed Polygons database, 2009; Florida Land Use Cover and Forms Classification System (FLUCCS) database, 2009 (see Appendix A).

* Wetland impacts from Public Notice 03/16/2009 for LNP site.

** Wetland impacts from PEF RAI response NPD-NRC-2009-156, p.5 of 11 for LNP site.

† Proportional impacts to wetlands in transmission corridors using "Potential Impacts of Transmission Lines by Watershed" for LNP site from PEF RAI response NPD-NRC-2009-156, p.4 of 11.

(4) The ranking of the alternative sites should take into account the relative quantitative differences among sites in regard to the number of acres of

wetlands that would be affected or eliminated by the alternatives (See general comment #4 above). It may be appropriate to have separate rankings and weightings for wetland impacts, which result from clearing only versus elimination of wetlands by the discharge of dredged or fill material. Weighting(s) for this factor should take into the account that under the Guidelines the discharge of dredged and fill material into potentially hundreds of acres of wetlands, and thus the elimination of hundreds of acres of aquatic ecosystems, which would result from the construction of the proposed project using any one of the identified alternative sites, would likely constitute the greatest potential impact on the aquatic ecosystem associated with this project.

11.c. High Quality Wetlands: Subpart E, 230.41 (Wetlands). On page 41 of Section 4.2.1.2 of the *Section 404 Alternatives Analysis* is a list of specific FLUCS wetland categories identified as comprising high quality wetlands. Text in Section 4.2.1.2 states: "In addition, the State of Florida generally considers wetlands that provide a high value of functions for fish and wildlife as high quality wetlands." The list excludes freshwater marsh and wet prairies, which the Corps considers to be of very high quality. According to the tables in Appendix C of the *Section 404 Alternatives Analysis* freshwater marsh and wet prairies comprise many hundreds of acres on several of the alternative sites and within the transmission corridors. The Corps considers "low quality" wetlands to be those that have suffered substantial impacts, such as wetlands converted to pine plantations. Therefore, this analysis, as conducted, appears to be inappropriate. This factor should likely be deleted, unless the applicant develops a definition of high quality wetlands, which is acceptable to the Corps, and which can be quantified for this analysis. Note: The Corps has a similar concern in regard to the analysis, as provided in *Enclosure 1*, page 38, PGN RAI ID# L-0569 in regard to the identification of wetlands as being high quality. The text specifies that high quality wetlands are "Freshwater forested/shrub wetland". This definition of high quality wetlands would exclude freshwater and estuarine/salt marshes and wet prairies.

11.d. Vegetated Shallows: Subpart E, 230.43 (Vegetated shallows). This is an appropriate review factor in regard to impacts on the aquatic ecosystem. The rankings and weighting appear appropriate.

11.e. Riffle and Pool Complexes: Subpart E, 230.45 (Riffle and pool complexes). This is an appropriate review factor in regard to impacts on the aquatic ecosystem. The rankings and weighting appear appropriate.

12. Habitat for Fish and Other Aquatic Organisms: Subpart D. 230.31 (Fish, crustaceans, mollusks, and other aquatic organisms in the food web). This is an appropriate review factor to evaluate impacts of the alternatives on the aquatic ecosystem. However, the analysis does not account for the substantial impact of the discharge of dredged and fill materials into wetlands, and thus on the wetland (aquatic) organisms present in the affected wetlands. Rankings for impacts to open water crossings do not appear to take into account the relative quantitative differences among sites in regard to this metric.

13. Wildlife Habitat: Subpart D, 230.32 (Other wildlife). This appears to be an appropriate review factor in regard to impacts on the aquatic ecosystem, but the analysis does not appear to conform to that required by 230.32. Specifically, the analysis should focus on the impact of the discharge of dredged and fill material into the aquatic environment, especially wetlands, and the impact on wildlife species, which use or depend on wetlands, such as many reptiles, amphibians, mammals, and birds. Due to the variability of the size of the areas of wetlands and types of wetlands that would be impacted on the various alternative sites, there would likely be substantial differences among the sites regarding impacts on wildlife.

14. Endangered or Threatened Species: Subpart D, 230.30 (Threatened and Endangered Species). This appears to be an appropriate review factor in regard to impacts on the aquatic ecosystem. The ranking of the alternative sites should take into account the relative quantitative differences among sites in regard to the metrics used to quantify impacts on endangered or threatened species that would result from the alternatives (See general comment #4 above). It would seem that analysis of impacts on habitats used by endangered and threatened species should be included in this review factor, rather than in #11.a above.

15. Biological Availability of Possible Contaminants in Dredge or Fill Material: Subpart B, 230.11(d) (Contaminant determinations). This appears to be an appropriate factor. Ranking and weighting seems appropriate, since there would be a reasonable expectation of appropriate controls at all five sites to comply with water quality standards.

16. Municipal and Private Water Supplies, Water Conservation: Subpart F, 230.50 (Municipal and private water supplies). This appears to be an appropriate factor in regard to impacts on the aquatic ecosystem. Rankings of the alternative sites for 16.a appear appropriate in light of explanation in text, though weighting may be too heavy. Rankings and weightings appear to be appropriate for 16.b and 16.c.

17. Recreation and Commercial Fisheries: Subpart F, 230.51(Recreational and commercial fisheries). This is an appropriate review factor in regard to impacts on the aquatic environment.

18. Other Water-related Recreation: Subpart F, 230.52 (Water-related recreation). This is an appropriate review factor in regard to project impacts on the aquatic environment, and the rankings and weighting appear to be appropriate as well.

19. Aesthetics of the Aquatic Ecosystem: Subpart 230.53 (Aesthetics). This is an appropriate review factor in regard to the review of impacts to the aquatic ecosystem. In regard to the rankings, it seems based on the narrative at 4.3.4in the *Section 404 Alternatives Analysis*, that if Highlands, Dixie and Putnam are rated 3 due to new visual impacts to waterways, and Crystal River is rated 5, since it is an existing

industrial facility, then LNP should probably be rated 4 due to impacts on the Cross Florida Barge Canal and surrounding state recreational lands, which would result from construction and operation of the proposed barge slip facility, water intake structure, and haul road.

20. Parks, National and Historic Monuments, etc.: Subpart F, 230.54 (Parks, national and historic monuments, etc.). This is an appropriate review factor in regard to impacts on the aquatic ecosystem. The rankings and weighting appear appropriate.

21. Traffic/Transportation Patterns: This is not a factor for determining the impact of alternative sites on the aquatic environment under the Guidelines. It could be a factor in consideration of the "practicability" of alternative sites for some projects.

22. Energy Consumption or Generation: This is not a factor for determining the impact of alternative sites on the aquatic environment under the Guidelines. It could be a factor in consideration of the "practicability" of alternative sites for some projects.

23. Navigation: This is not a factor for determining the impact of alternative sites on the aquatic environment under the Guidelines. It could be a factor in consideration of the "practicability" of alternative sites for some projects.

24. Safety: This is not a factor for determining the impact of alternative sites on the aquatic environment under the Guidelines. It could be a factor in consideration of the "practicability" of alternative sites for some projects.

25. Air Quality: This is not a factor for determining the impact of alternative sites on the aquatic environment under the Guidelines. It could be a factor for some projects for "other adverse environmental consequences", as found in Subpart B, 230.10(a).

26. Noise: This is not a factor for determining the impact of alternative sites on the aquatic environment under the Guidelines. It could be a factor for some projects for "other adverse environmental consequences", as found in Subpart B, 230.10(a).

27. Historic properties: This is not a factor for determining the impact of alternative sites on the aquatic environment under the Guidelines. It could be a factor in consideration of the "practicability" of alternative sites for some projects.

28. Land Use Classification: This is not a factor for determining the impact of alternative sites on the aquatic environment under the Guidelines. It could be a factor in consideration of the "practicability" of alternative sites for some projects.

29. Economics: This is not a factor for determining the impact of alternative sites on the aquatic environment under the Guidelines. It could be a factor in consideration of the "practicability" of alternative sites for some projects.

30. Prime Farmland Impacts: This is not a factor for determining the impact of alternative sites on the aquatic environment under the Guidelines. It could be a factor in consideration of the "practicability" of alternative sites for some projects.

31. Food and Fiber Production: This is not a factor for determining the impact of alternative sites on the aquatic environment under the Guidelines. It could be a factor in consideration of the "practicability" of alternative sites for some projects.

32. General Water Quality: This appears to be an appropriate part of the analysis of the alternative sites on water quality, but probably more appropriate for this specific analysis to be included as a component of the water quality analyses in #4 (Water Quality) above.

33. Mineral needs. This is not a factor for determining the impact of alternative sites on the aquatic environment under the Guidelines. It could be a factor in consideration of the "practicability" of alternative sites for some projects.

34. Considerations of Property Ownership: This review factor included five specific criteria. This review factor and its five specific criteria are not appropriate for determining the impact of alternatives sites on the aquatic environment under the Guidelines. They could be factors in consideration of "practicability" of alternative sites for some projects.

35. Summary of Indirect and Cumulative Impacts: Subpart B, Part 230.11(g) (Determination of cumulative effects on the aquatic ecosystem) & (h). (Determination of secondary effects on the aquatic ecosystem). Under the Guidelines these are appropriate factors when used to specifically analyze the impacts of the alternate sites (including transmission corridors associated with each alternative site) on the aquatic ecosystem, and in the case of this proposed project, especially wetlands. Section 4.4 of the *Section 404 Alternatives Analysis* specifically references NEPA for this analysis. However, this analysis should use terms, definitions and other information for secondary and cumulative effects pursuant to the citations above in the Guidelines, not for NEPA.

In regard to the determination of the acreage impacts (wetlands and uplands) using a typical layout approach based on the conceptual layout for LNP, as described in Section 1.4 of the *Section 404 Alternatives Analysis*, please explain the differences in onsite impacts, as shown in Table 1.4-1, "Summary Information of Impacts for Alternative Sites" on page 17 of the *Section 404 Alternatives Analysis*, with that provided in PEF's response dated September 3, 2009 to NRC RAI #2.4.1-3. Table 1.4-1 shows 441 acres of "on-site" impact while Table 2.4.1-3-003 in the RAI response shows a total of 627.1 acres of permanent "on-site" impact and 149.7 acres of temporary "on-site" impact. Should the acreages shown in Table 1.4-1 and subsequent other determination of areal impacts used in the *Section 404 Alternatives Analysis*, be modified to be more reflective of that shown in the RAI response?

Responses to the various comments, concerns and requests for clarification and additional information above are needed in order for the Corps to continue its review of your project under the Guidelines. The Corps appreciates the efforts made by PEF staff and consultants in regard to working with the Corps in our regulatory review of your proposed project. We will continue to work with the PEF team and the NRC in this effort. If you have any questions concerning this letter, please contact the undersigned by mail at the letterhead address, by electronic mail at gordon.a.hambrick@usace.army.mil, or by telephone at (850) 763-0717, ext. 25.

Sincerely,

Gordon A. Hambrick, III
Senior Project Manager

Copy furnished (by electronic mail):
NRC, Douglas Bruner
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