PMTurkeyCOLPEm Resource

From: Kugler, Andrew
Sent: Tuesday, February 01, 2011 8:55 AM
To: Steve Franzone (steve.franzone@fpl.com)
Cc: TurkeyCOL Resource
Subject: Corps RAI
Attachments: 110131-RAI 5340 - Corps RAI on Alternatives.docx

Steve

My previous attempt to send you this RAI failed. I had an error in your email address. As far as I can tell, it did reach Rick, Bill, and Antonio.

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Hearing Identifier: TurkeyPoint_COL_Public
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Subject: Corps RAI
Sent Date: 2/1/2011 8:55:02 AM
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From: Kugler, Andrew

Created By: Andrew.Kugler@nrc.gov

Recipients:
"TurkeyCOL Resource" <TurkeyCOL.Resource@nrc.gov>
Tracking Status: None
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Request for Additional Information No. 5340 Revision 1

1/31/2011

Turkey Point Units 6 and 7
Florida P and L
Docket No. 52-040 and 52-041
SRP Section: EIS USACE - US Army Corps Of Engineers
Application Section: 9.3

QUESTIONS for Environmental Projects Branch 2 (RAP2)

EIS USACE-1

Background

The U.S. Army Corps of Engineers (Corps) will need a separate document from Florida Power & Light (FPL) to address the requirements related to the least environmentally damaging practicable alternative (LEDPA). In the requests for additional information that follow, the Corps provides an explanation of the basis for the general needs, along with some specific questions.

FPL has provided information in its permit application to the Corps and its combined license (COL) application to the NRC. The Corps' comments are predicated on the requirement that evaluation of a proposed project requiring a Department of the Army permit under the Clean Water Act must apply and comply with the criteria set forth in the 404(b)(1) Guidelines (Guidelines), as found in 40 CFR Part 230.

The information supplied does not appear to clearly satisfy the requirement in the 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."

Please note that during the review of this application, the Corps will be reviewing all proposed impacts to waters of the United States including special aquatic sites associated with the proposed work which includes the transmission line corridors. Please note that for non-water dependent activities proposed to impact special aquatic sites, practicable alternatives that do not involve special aquatic sites are presumed available and less damaging to the aquatic environment, unless clearly demonstrated otherwise by the applicant.

The Guidelines state that all appropriate and practicable steps to minimize adverse impacts on the aquatic ecosystem must be incorporated in the project. In addition, the Corps believes that unnecessary impacts to wetlands are contrary to the public interest. Practicable alternatives that preserve the overall project purpose while minimizing

impacts to natural resources should be sought. Practicable alternatives are defined as alternatives that are available and can be done after taking into consideration cost, existing technology, and logistics in light of overall project purpose. For example, a practicable alternative may be to decrease the overall length of transmission line corridors or fully utilize existing transmission line corridors, thereby reducing both the acreage of waters of the United States impacted by discharge of dredged or fill material and the fragmentation of habitat.

The Corps has determined that the following information should be included in the alternatives analysis, to assist with the review of the project's compliance with the Clean Water Act 404(b)(1) Guidelines and Public Interest Review. (Submittals on 8.5" by 11" paper please).

1. Define Purpose and Need

Pursuant to NEPA, the Corps looks at Alternatives that meet the Project's purpose and need. Pursuant to the 404(b)(1) Guidelines, the Corps looks at Alternatives that meet the overall project purpose; to meet the public's need for reliable increased electrical baseload generating capacity in Florida Power & Light's service territory.
In an Alternatives Analysis, the applicant should clearly state the project purpose and need; however, the Corps defines the overall project purpose. Significant thought should be applied when developing the project purpose as it will drive the alternatives analysis under both NEPA and the 404(b)(1) Guidelines. For example:

1. *The overall project purpose must be specific enough to define a permit applicants' needs, but not so restrictive to preclude alternatives. It should also not be too wide ranging without consideration for the applicant's needs.*
    a. *Too restrictive because there are no alternatives: To develop a 150-unit residential development at the Southeast intersection of I-95 and America Boulevard.*
    b. *Too wide if the applicant intends to construct homes for the Jacksonville market: To develop a residential development in North Florida.*

The geographic boundary in the overall project purpose also defines the geographic boundary of the off-site alternatives analysis for purposes of CWA. In the examples above, the geographic boundaries were either the "southeast intersection of I-95 and America Boulevard" or all of "north Florida." The geographic boundary should be reasonably set to define the area of alternatives and should be based on the project purpose. For example, clarify the current, greatest extent from the Miami Load area which power can be transmitted from to serve the area that is currently lacking the power support. Maps of the service area are acceptable but should be explained by a narrative. Please differentiate between the limits of the alternatives analysis and the boundaries of the markets that will be serviced by the proposed project.

2. Identify Alternatives

The applicant must describe Alternatives that would meet the Corps' requirements in consideration of the Overall Project Purpose including:

1. The proposed alternative.

2. Alternatives that would involve no discharges of dredged or fill material into waters of the U.S. (no-action, off-site, on-site options).
3. Any alternatives that would involve less adverse impact to waters of the US. (off-site, on-site options). These would include design modifications to projects (see more in #5).
4. Any alternatives that would involve greater adverse impact to waters of the U.S. but less impacts to the environment overall (off-site, on-site options). For example: impacting more low quality wetlands instead of fewer acres of high quality wetlands; impacting a site surrounded by development instead of a site that has been identified as a potential restoration site.
5. Design options in the physical layout and operations of nuclear reactor are usually available which should be considered as alternatives. Presenting these options as alternatives to the public and the regulatory agency early in the process will facilitate the environmental review process and provide an effective Alternatives Analysis.

At this stage, the applicant should not rule out alternatives based on their being impracticable or unavailable. For example, Okeechobee 1 and Okeechobee 2 were considered during the screening criteria site ratings but Okeechobee 1 was deferred in favor of Okeechobee 2 due to their close geographic proximity and the resulting expectation that no important siting trade-offs or opportunities would be eliminated. The applicant also claimed that Okeechobee 1 is also farther from the proposed water source for these sites, leading to the expectation that it would encounter more cost and regulatory difficulties in water supply compared to Okeechobee 2. Evaluations of both sites should be continued through the analysis process and not automatically eliminated.

3. Screen the Identified Alternatives for future Analysis

The applicant should consider which of the alternatives should NOT be screened out.

1. The “No-Action Alternative” Alternatives that would involve no discharge of dredge or fill material into Waters of the U.S. (No-Action Alternative, upland alternative on-site, upland alternative off-site) are required. Although the “No Action” alternative might not seem reasonable, it must always be included in the analysis. The no action alternative can serve several purposes. First, it may be a reasonable alternative, especially for situations where the impacts are great and the need is relatively minor. Second it can serve as a benchmark, enabling decision makers to compare the magnitude of the environmental effects of the action alternatives.
2. The proposed or preferred alternative should be clearly identified and discussed objectively at a comparable level of detail to all other action alternatives.
3. All reasonable alternatives. The maximum amount of reasonable alternatives will vary and depends on the nature of the proposed project but there typically should be multiple alternatives considered. Unreasonable alternatives do not have to be considered. [This is not intended to rule out things that are “unreasonable” according to the applicant, but things that would be considered “unreasonable” to a non-interested party.]

Which of the alternatives CAN be screened out?

1. Alternatives that could not reasonably satisfy the project purpose. For energy projects, areas may be screened out because they are outside of the boundaries of the existing FPL Service Area.
2. Alternatives that do not require further analysis under the 404(b)1 Guidelines include those alternatives outside the geographic boundary identified in the Overall Project Purpose.

For projects with a large number alternatives using an "alternatives screening process" which separates alternatives into categories or levels based on the parameters for which they were evaluated may prove helpful. If any alternatives were eliminated from detailed study because they could not reasonably satisfy the project purpose, provide a brief discussion of reasons for eliminating them.

4. Analyze the Identified Alternatives

Issues to be addressed in the alternatives analysis should be described as follows:

1. Include the following minimum information for each alternate site examined:

a. Specific parcel information including, but not limited to; parcel ID numbers, aerial photos, location maps, FLUCCS codes and GPS coordinates;
b. Presence, quantity and quality of wetlands;
c. County/City zoning designation;
d. Availability for purchase, and an evaluation explaining if the proposed cost are reasonable or practicable;
e. The presence or any federal listed endangered species or the presence of any historical properties
f. Existing site access. Will the site require new access roads/infrastructure? What are the potential impacts associated with these improvements?
g. In addition to the in depth analysis, alternatives should be clearly listed and numbered for ease of reference and comparison by the Corps project manager.

2. Identify the Environmental Impacts.

a. State what the impacts are (beneficial or adverse) to the aquatic ecosystem
b. State what the overall (beneficial or adverse) environmental impacts.
c. Be specific and qualitative in this identification of impacts.

i. Instead of "Alternative A results in a large impact to low quality wetlands and ditches with little vegetation,
ii. Use "Alternative A will result in filling of 2.1 acres of herbaceous wetland habitat and 1.2 acres of fallow farm ditches with a herbaceous fringe of wetland habitat. The function and value of the herbaceous wetland and ditch system have been calculated with Uniform Mitigation Assessment Method and are valued at 0.3 and 0.15, respectively."

d. Be fair and accurate in the representation of impacts. Neither NEPA nor the 404(b)(1) Guidelines require the alternative chosen be the alternative

with the least impacts. NEPA requires a "hard look" and a "fair disclosure" of impacts; the 404(b)(1) Guidelines require that the Least Environmentally Damaging ***Practicable*** Alternative ("LEDPA") be chosen. Do not attempt to minimize a favored alternative's effects or maximize the effects for an un-preferred alternative.

3. Address the consequences on the applicant and the public if the project is not implemented.

4. Address practicability of each alternative.

a. Alternatives that are practicable are those that are available and capable of being done by the applicant after considering the following (in light of the project purpose):
- · Cost (Transportation cost or transportation needs, utilization of existing infrastructure such as existing power or water supplies or the requirement to construct infrastructure, quality and value of the mineral or aggregate reserves)
- · Existing Technology (is the most efficient/ less impacting construction methods currently available being used)
- · Logistics (placement of facilities within a required distance, utilization of existing storage or staging areas, safety concerns, what access does the applicant have to a parcel)

b. The 404(b)(1) Guidelines state that if it is otherwise a practicable alternative, an area not presently owned by the applicant which could reasonably be obtained, utilized, expanded, or managed in order to fulfill the overall purpose of the proposed activity should be considered. In other words, if the applicant doesn't own an alternative parcel, that doesn't rule that parcel out as a practicable alternative.

5. **Comparisons of alternatives to identify which is the least Environmentally Damaging Practicable Alternative.**

1. An alternatives comparison matrix (examples below) is a very effective way to present multiple alternatives and highlight the main parameters (i.e. cost, acreage of impacts, other relevant factors) that were considered during the evaluation. 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.
2. Remember, the LEDPA is the ***Least Environmentally Damaging*** Practicable Alternative. Do not attempt to sell the project in this analysis. Of the alternatives that meet the project purpose, the LEDPA must be the one that is actually the *least environmentally damaging*. It may result in less impacts or, in the case of mining, less mining than originally envisioned by the applicant, but it will also result in a quicker decision and much less time spent in permitting if the analysis provided is accurate.
3. During the alternative site visits conducted in July 2010, the Martin site contained a new, not yet online solar plant within the same footprint of the proposed nuclear reactors. The applicant should clarify whether or not this site is still currently being considered as a viable alternative.

The applicant's reports do not quantify the amount of proposed impacts to wetland acres or to other waters of the United States for the entirety of the project. The Corps needs to quantify all proposed impacts to wetlands and other waters of the United States for all aspects of the project including transmission lines. Please provide aerials that depict the existing vegetation/plant communities with an overlay such as FLUCCS codes and their respective acreages and include any prior converted cropland designations for any of the alternative sites currently in agricultural use. Please utilize the Corps' 1987 Wetland Delineation Manual and the Atlantic and Gulf Coastal Plain Region Supplement to delineate the presence or absence of wetlands at the alternative sites since the State of Florida and the Corps have different wetland definitions.

Example Comparison Matrix

Tier I Upland Sites	**Tier II Aquatic Sites**
1. Land Use	1. Land Use
2. Proximity to Water Source	2. Proximity to Water Source
3. Listed Species	3. Wetland Quantity
4. Proximity to Market	4. Wetland Quality
5. Proximity to Well Fields	5. Listed Species
6. Availability	6. Proximity to Market
7. Cost	7. Proximity to Well Fields
8. Historical Resources	8. Availability
9. High Value Uplands	9. Cost
10.Transportation Access	10.Historical Resources
	11.High Value Uplands
	12.Transportation Access