PMLevyCOLPEm Resource

From: Martin, Jody
Sent: Monday, July 18, 2011 7:42 AM
To: Bruner, Douglas
Subject: FW: (UNCLASSIFIED)
Attachments: Final Presentation 07 14 11.pdf

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From: Barron, Robert B SAJ [mailto:Robert.B.Barron@usace.army.mil]
Sent: Thursday, July 14, 2011 9:54 AM
To: Martin, Jody; Pritchett.DavidA@epamail.epa.gov
Cc: Collazo, Osvaldo SAJ
Subject: (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: NONE

Osvaldo asked me to forward the enclosed presentation to you.

Bob Barron
Regulatory Division (904) 232-2203
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Levy Nuclear Plant

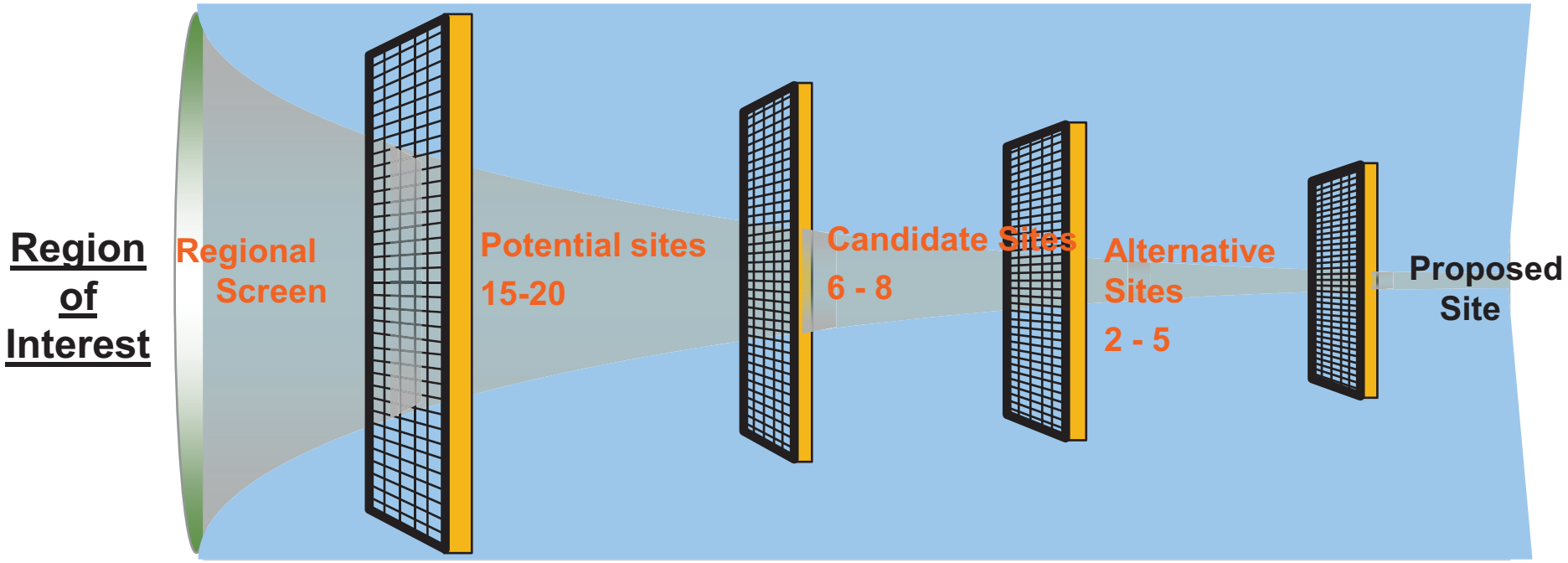
USACE/EPA/NRC Meeting
07-14-11

Progress Energy

Meeting Objectives

- Review plans and status of Levy licensing
- Discuss plans to resolve USACE questions
- Discuss groundwater evaluation
- Approach to ensure no significant impact to aquifer
- Establish routine interface to complete review

Site Screening



Levy Nuclear Plant

Levy Site

500 kV
Switchyard
Units 1 & 2

Cooling Towers
Unit 2

Unit 2

Cooling Towers
Unit 1

Unit 1

Barge
Slip

Units 1 & 2
Make Up
Pumphouse

Progress Energy

Preferred Blowdown Pipeline Route

Levy Site Aerial View

Regulatory Logic Sequence

License Application

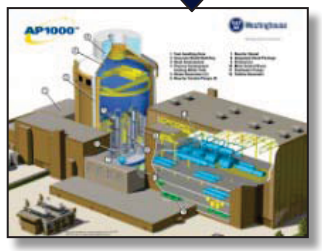
NRC Safety Evaluation

AP1000 Design Certification

Environmental Impact Statement

Hearings

License Issued



Plant Construction

USACE 404 Permit

Site Preparation

Site Certification

Progress Energy

Current Schedule

- April 2012
  - Final Safety Evaluation Report (FSER)
  - Final Environmental Impact Statement (FEIS)
- April 2012 – February 2013
  - Contested and Mandatory Hearings
- Early – Mid 2013
  - LNP COL Issued

Prefer to maintain integrated EIS for NRC-USACE-EPA

EPA Comments

1. Provide an analysis of alternatives to avoid and minimize impacts to high quality wetlands, associated with the installation of pipelines.

   Analysis being prepared and will be provided with response by November 2011.

2. Provide more specific information on the wetland functions and values that would be impacted at the non-preferred alternative site locations.

   Information is being prepared and will be provided with response by November 2011.

EPA Comments

3. EPA requests that PEF submit to EPA a Cross Florida Barge Canal and Withlacoochee River Survey and Monitoring Plan.

   NRC provided EPA with copies of PEF's November 2010 "Cross Florida Barge Canal and Withlacoochee River Survey and Monitoring Plan – Levy Nuclear Plant." In accordance with the Site's Conditions of Certification, PEF negotiated this plan with the Florida Fish and Wildlife Conservation Commission.

EPA Comments

4. Transmission line right-of-ways (ROWs) should be reduced to as minimum dimensions as practical.

In selection of the preferred ROWs PEF has:

- Reduced the length of the CB line (originates at Citrus Substation instead of CREC)
- Collocates the CB and PHP line with existing ROW except for 2 small areas
- Collocates the 4-500kV lines leaving the LNP site reducing the width of the ROW
- Collocates the LCFS with existing ROW reducing the need for new ROW

Environmental information provided to the USACE for the jurisdictional determination reflects these ROW widths. Finalized information showing the ROW width will be provided to the USACE by August 31, 2011.

EPA Comments

5. Why was the detailed site layout, as it is presently configured, selected?

   Information to address this question will be provided in our response by November 2011. However, in general the entire property (including North and South parcels) were evaluated from a geotechnical basis for the plant's foundation with the North parcel providing preferred siting characteristics.

EPA Comments

6. Temporary impact areas should be restored back to forested and mixed forested wetland systems, if there are no safety or other serious operational reasons that would require these areas to be open grassy areas.

   A temporary impacts restoration plan will be prepared and will be provided with response by November 2011.

EPA Comments

7. Provide clarification and information as to what specific wetlands are associated with miscellaneous fill, pipelines, and structures, as identified in the DEIS.

   This information is being prepared to facilitate review of the project's impacts and will be provided by September 2011.

8. EPA concurs that an alternative blowdown pipeline route should be established to avoid impacts to 4.5 acres of salt marsh wetland.

   PEF modified the blowdown pipeline corridor to allow the pipeline to avoid any salt marsh wetland impact in Mod C to the Site Certification approved by FDEP on 01/25/11.

EPA Comments

9. The forested wetland systems should be replanted in order to insure impacts are temporary only (rather than allow wetlands to regenerate from the existing seed bank).

   The forested wetlands systems replanting will be addressed in temporary impacts plan which will be filed Nov 2011

EPA Comments

10. EPA recommends that a wetland functional analysis be conducted on the adjacent wetlands (along pipelines and structures with temporary dewatering for installation) and any adverse wetland impacts that are identified due to dewatering be mitigated.

    The recommended analysis is in progress and information will be provided with PEF's response by November 2011.

EPA Comments

11. Provide a detailed wetland mitigation plan and the UMAM scores for the impact and mitigation sites.

    The detailed wetland mitigation plan is being developed and will be submitted by September 30, 2011.

12. Provide an analysis of other alternative sources of water to support the LNP project.

    The Levy Conditions of Certification require an analysis of alternative water sources. However, this topic will be discussed later in this presentation with regard to groundwater requirements.

EPA Comments

13. EPA believes a stronger narrative is needed with more details, including additional technical rationale, regarding the strategic considerations for why the LNP site is preferable to collocating at the Crystal River Energy Complex.

    A stronger narrative will be provided with PEF's response by November 2011.

NMFS Comments

1. The Corps requests that PEF comply with EFH Conservation Recommendations 1) and 2) and provide information as to how these recommendations would be complied with and/or implemented:

   1) A minimum five-year baseline survey

   The "Cross Florida Barge Canal and Withlacoochee River Survey and Monitoring Plan" previously approved by the FWC (per the Site Certification conditions) outlines a 3-5 year baseline monitoring plan and should be used as the basis to address this recommendation.

   2) A minimum three-year SAV survey

   The "Levy Nuclear Plant and Crystal River Energy Complex Combined Discharge Survey and Monitoring Plan" previously approved by the FWC (per the Site Certification conditions) outlines a survey/monitoring plan and should be used as the basis to address this recommendation.

NMFS Comments

2. On January 3, 2011, the Corps approved a Jurisdictional Determination for an alternate blowdown pipeline route that does not transverse tidal wetlands, However, it appears that the Corps has no written record that PEF has formally modified the blowdown route.

   PEF modified the blowdown pipeline corridor to allow the pipeline to avoid any salt marsh wetland impact in Mod C to the Site Certification approved by FDEP on 01/25/11. PEF will provide a map/drawing of the revised route in our response by November 2011.

NMFS Comments

3. Concerns with regard to whether there is a need to dredge the shallow nearshore portions of the CFBC access channel in the Gulf of Mexico for barges proposed to be used by PEF for this project

   PEF has evaluated this issue and determined that no dredging will be needed to support the Levy project's needs. Information supporting this conclusion will be provided with our response by November 2011.

USACE Comments – Alternative Sites

1. Wetland Delineations Among the Alternative Sites

   PEF is performing a functional analysis of the wetlands at the non-preferred alternative sites using areal photography and FLUCCS data to more accurately identify the extent of wetlands on the alternative sites in comparison with the Levy Site. This information will be provided with our response by November 2011.

Other USACE Comments and Questions

1. Provide project plan drawings in sufficient detail to accurately show all impacts both permanent and temporary to wetlands and other waters associated with this project…

   Detailed project plan drawings are in preparation and will be provided to the Corps by September 2011.

2. Demonstrate impacts minimized to the maximum extent practical. Provide written justification as to why specific project components must be located in wetlands or other waters, rather than reconfigured so as to avoid wetlands and other water.

   Justification is in preparation and will be provided to the Corps by September 2011.

Other USACE Comments and Questions

3. Provide a wetland restoration plan for all temporary impacted wetlands.

   A temporary impacts restoration plan will be prepared and will be provided with response by November 2011.

Other USACE Comments and Questions

4. All remaining wetlands associated with the plant site and support facilities should be preserved under conservation easement granted to FDEP.

- The unimpacted wetlands are not part of the mitigation proposal. Preservation is not needed for compensatory mitigation. Current plan contains 289 UMAM impact units, 342 UMAM wetland credits, 147 UMAM upland credits (1548.7 onsite wetland acres part of mitigation).
- Permanent preservation unwarranted to satisfy compensatory mitigation based on functional assessment.
- Demand for encumbrance/conservation easement unsupported by 33 CFR 332.7(a), 40 CFR 230.97(a).

Other USACE Comments and Questions

5. Provide an enforceable exotic and invasive plant control plan, which will effectively monitor and control invasive and exotic species within areas to be impacted or otherwise disturbed by the proposed project.

   An invasive and exotic control plan will be prepared and will be provided with response by November 2011.

SWFWMD Responsible for Determining Level of Impacts from Groundwater Withdrawals

- Under Chapter 373, Florida Statutes the Southwest Florida Water Management District (SWFWMD) regulates the withdrawal of groundwater
- These regulations ensure that such withdrawals do not cause unacceptable impacts to water resources including wetlands
- The SWFWMD evaluated the PEF's proposed groundwater withdrawals with the primary focus on preventing wetland impacts

PEF Used the DWRM2 Model Developed by the SWFWMD

- The SWFWMD developed the District Wide Regulation Model v2 (DWRM2) and uses the model to evaluate groundwater behavior on a local and regional scale
- PEF worked closely with the SWFWMD incorporating their guidance and preferences into the site specific model development
- SWFWMD determined that the withdrawal posed no adverse impacts to wetlands in the area
  - Results show no more than 0.4 ft draw-down in the surficial aquifer beneath wetlands near the wellfield after 60 yrs of pumping

NRC Requested a Single Purpose Recalibration to Match the USGS 2007 Potentiometric Map

- The NRC expressed concerns that the water levels in the DWRM2 model differed from the USGS water level map
- The primary purpose of the “Recalibrated” model was to simulate the USGS water level contours
- The “Recalibrated” model was “forced” to simulate the USGS water levels at the model boundaries and at the few reference wells in the model domain
- The resulting “Recalibrated” model is significantly different from the DWRM2 model, is not a better simulation, and should not be considered an equal tool

NGG Think Fleet.

Progress Energy

Differing Model Goals Make DWRM2 Model More Appropriate for Wetland Impact Evaluations

- The DWRM2 model is used routinely by the SWFWMD to evaluate potential wetland impacts from groundwater withdrawals
- The DWRM2 model is calibrated to measured water levels from over 1,500 wells, 80% of which are in the surficial and upper Floridan aquifers
- Aquifer performance test data (APT) from hundreds of wells are incorporated into the calibration
- The model was PEER reviewed by the USGS, University of South Florida, and professional consultants and is updated by the SWFWMD

NGG Think Fleet.

Progress Energy

The "Recalibrated" Model Input is Very Limited

- The SWFWMD stated that the DWRM2 model was the best representation of the area and declined to review the "Recalibrated" model
- The "Recalibrated" model is calibrated to USGS water level contours at the model boundaries and the few monitoring wells at the LNP site
- No actual APT aquifer values were used in the "Recalibrated" model
- The "Recalibrated" model required significant changes to the model parameters:
  - horizontal and vertical hydraulic conductivity
  - leakance between model layers
  - boundary heads
  - drain and river cells
  - transmissivity

NGG Think Fleet.

Progress Energy

Recalibrated Model Water Budgets Highlight the Poor "Goodness of Fit" to Observed Groundwater Conditions

- "Recalibrated" model does not reflect realistic values in the following areas:
  - Horizontal flow in the upper Floridan aquifer
  - Vertical flow from the Floridan to the surficial aquifer and surface water
  - Groundwater gradients in the upper Floridan
  - Simulation of the upper Floridan as a net recharge layer in the model
  - Unrealistic distribution of transmissivity values
- These values in the "Recalibrated" model are not consistent with the hydrologic conditions of the area

Groundwater Use Presents No Unacceptable Impacts to Wetlands

- The results of the “Recalibrated” model are inappropriate for permitting purposes and should not be used as a basis for evaluating potential wetland impacts
- We request an opportunity to meet with the USACE modelers to discuss the models in more detail

Florida Permit Limits Possible USACE Practical Alternative

- A Practicable Alternative is not available under CWA or NEPA if it cannot be permitted. *James City County, Virginia v. U.S. Envtl. Protection Agency*, 955 F.2d 254, 259-60 (4th Cir. 1992) (finding that alternatives that cannot obtain local permitting are not practicable under CWA); *Nat. Res. Def. Council v. Fed. Aviation Admin.*, 564 F.3d 549, 557 (2d Cir. 2009) (finding alternative not reasonable under NEPA where applicant could not secure state-level permit from FDEP).

- LNP alternative with "worst case" groundwater withdrawal impact modeling (LNP/RW) is not a practicable alternative for use in alternatives evaluations because it cannot be permitted under Florida law.

USACE LEDPA Site Same As LNP With Florida Permit With Respect to Groundwater Impacts

- PEF Proposal limits potential impacts from groundwater use as required by Florida CoC
  - Florida found "Progress Energy provided reasonable assurance that its proposed use of groundwater from the Floridan Aquifer satisfied the substantive criteria of the SWFWMD." Final Order Approving Certification, Florida Cabinet sitting as a Siting Board (Aug. 26, 2009), p. 13.
- USACE LEDPA site does not differ substantially from PEF Proposal as both expect no adverse impacts from groundwater withdrawals. The USACE LEDPA is equivalent to the LNP as described by the Florida DOAH ALJ
  - "No operational groundwater withdrawals" in USACE letter (at p. 10)
  - "Groundwater pumping for the LNP is not expected to adversely impact Lake Rousseau, the Withlacoochee River, or other streams or springs in the Project area. Groundwater withdrawals for the LNP are likewise not expected to induce saline water intrusion, cause the spread of pollutants in the aquifer, adversely impact any offsite land uses, cause adverse impacts to wetland systems, or adversely impact any other nearby uses of the aquifer system." DOAH RO, para. 74 of Exhibit A to Final Order Approving Certification.

USACE Comment on Plant Operation with Groundwater Withdrawal Impacts

- LEDPA alternative can be based on “condition” or mitigation. Minimization achievable through modification or permit conditions. 55 Fed. Reg. 9210.
- The LNP site with the groundwater withdrawal conditions is within the basis for ranking the USACE LEDPA site
  - Ensures that no significant groundwater impacts are allowed.
- CoC determined in SCA proceeding provide the appropriate basis for LNP ranking. This includes:
  - APT performed when production wells are installed, far in advance of use
  - Provisions for alternative water supply planning
  - Adaptive management to be based on actual site data

Proposed USACE Condition

- PEF will provide USACE the plan for conducting an aquifer performance test (APT) on the surficial aquifer at the same time as SWFWMD.
- Data from APT will be submitted to USACE at the same time as submitted to SWFWMD
- When required by the CoC, PEF will perform additional groundwater modeling for SWFWMD. The USACE will be provided a copy of any revised modeling performed.
  - PEF shall also provide and confer with the USACE about the results of that final groundwater modeling and any projected change in impacts to hydraulically-connected wetlands.
  - PEF shall confer with the USACE and Florida on the need for any additional wetland impact avoidance, minimization or mitigation as appropriate. including the development of potential alternative water supply projects.
- PEF shall also provide the USACE with copies at the same time as provided to SWFWMD of all annual monitoring reports concerning impacts to wetlands at the Project site that are prepared as part of the Environmental Monitoring Plan that will be implemented pursuant to the state-issued conditions of certification [PEF LNP Final Condition of Certification C.II.A.2].

Summary

- PEF Response to USACE Position Letter
  - July 23, 2011 - Submit response plan by
  - November 18, 2011 – PEF response complete
  - April 2012 – NRC issues FEIS
- USACE requested to reconsider
  - Accept proposed conditions to assure no significant groundwater impacts
  - Evaluate Levy with proposed conditions (LEDPA)
  - No conservation easement for wetlands beyond mitigation plan
- PEF requests a meeting with USACE hydrologists to discuss groundwater model
- Establish routine meetings for progress review with USACE
  - Monthly frequency proposed