

**Teleconference Summary with Progress Energy Florida, Inc.
Levy Nuclear Plant, Units 1 and 2
Combined License Application**

October 30, 2009, 1:00 PM EDT

Discussion Topic

Introductions

Levy County Environmental Review

- Correction to October 22, 2009, teleconference summary – Request for Additional Information (RAI) 9.3-3

Summary: Analyses were based on 6,000-ac circles, which will be clarified in the response. Updated maps of the five finalist alternative sites (previously stated “all”) will be provided in a revised alternatives analysis to support the Least Environmentally Damaging Practicable Alternative (LEDPA) decision. Note that maps are needed for National Environmental Policy Act (NEPA) documents as well.

- RAI 5.2.2-4 - Status of providing calibrated DWRM2 TMR model results that consider local scale conditions and the goodness of fit between simulated and observed hydraulic heads in the vicinity of the Levy Nuclear Plant (LNP) site.

The discussion focused on Progress Energy Florida, Inc.’s (PEF) approach to recalibrating the model using the site monitoring wells as the calibration points:

- Layers 2 and 3, the intermediate layers, were removed since those layers are not present at the Levy site. The model now has three layers
- Increased boundary head conditions to show increase in water level at monitoring wells (only ½’ increase observed so not taken further)
- Boundary to west was left alone
- Removed drains in Layer 1 (saw a 10’ increase in potentiometric surface)
- Conducted a steady-state inverse calibration (using the Political, Economic, Social, and Technological [PEST] code) that incorporated head data from the LNP site as the only observation. This inverse calibration resulted in adjustments to model parameters (i.e., conductivity) that brought the potentiometric surface to within 0.2’ of target at the LNP site.

Further discussion indicated that the model must be calibrated to a potentiometric surface that honors both local and regional conditions. Path forward is to start with the U.S. Geological Survey (USGS) interpretation of the regional potentiometric surface (USGS-OFR-2008-1105 or equivalent) and adjust to account for new water-level data at the LNP site. This revised potentiometric surface map would then act as the objective function for the inverse calibration. Thus, the calibration target would be adjusted to honor site specific information that the USGS did not have when they generated the potentiometric surface. The new calibrated model should be able to simulate both the water-level conditions at LNP, and the “Levy County high” to the east. PEF plans to generate the revised potentiometric surface and present this surface to the U.S. Nuclear Regulatory Commission (NRC) prior to proceeding with the inverse calibration.

- RAI 2.4.1-3 – The U.S. Army Corps of Engineers/U.S. Environmental Protection Agency (USACE/USEPA) field inspection of wetlands delineation for blowdown pipelines identified potential impact to 25 acres of salt marsh, which was not identified for the USACE public notice. PEF response, NPD-NRC-2009-203 (page 14), indicates that 4.5 acres of saltwater marsh would be impacted. Provide clarification on the impact to salt marsh.

USACE/EPA wetland field inspection identified 25 acres of salt marsh that could be impacted by construction of the blowdown lines. The PEF delineation maps show the pipeline corridor, but not the route that would be followed. The expected construction footprint would be much smaller than the corridor as would impacts to wetlands. The preliminary estimate of 4.5 acres of salt marsh impact was based on Water District Florida Land Use, Cover, and Forms Classification System (FLUCCS) mapping and a preliminary route. PEF has not yet finalized the route and is currently evaluating alternatives. PEF will revisit this issue during a conference call in which the USACE is available to participate.

- Per Title 10 of the *Code of Federal Regulations* 51.45, “The draft environmental impact statement will list all Federal permits, licenses, approvals, and other entitlements which must be obtained in implementing the proposed action and will **describe the status** of compliance with those requirements.” NRC will seek assistance from PEF in confirming the status of compliance for Federal permits, licenses, approvals, and other entitlements.

PEF will assist with providing information on the status of Federal permits (including those Federal permits delegated to the state), licenses, approvals, and other entitlements as the preliminary draft writing session nears.

General

- RAI General – 1 (June 23, 2009), staff requested color figures from the CH2M Hill Sampling Report; TMEM-087. The PDF of this report provided as an RAI response includes all figures in black and white, and they are of poor visual quality.

Provide files of figures that reproduce clearly in both black-and-white and color, and that can be modified as necessary by our geographic information system (GIS) experts and graphic specialists, as specified below. For non-GIS figures, i.e., those that are drawn or otherwise created by graphic designers, provide “original” files such as native-platform vector files, working layered Photoshop files, Illustrator files, Cad files, Freehand files, etc. In addition, provide high-resolution (300 dpi) editable PDFs in both black-and-white and color for each figure. These files are needed because the website version of the environmental impact statement (EIS) will be in color, while hard copies are printed in black-and-white. For GIS figures, provide shapefiles. Provide the following figures in the format described above:

CH2MHill Technical Memo 338884-TMEM-087 (CH2MHill, 2009, Sampling Report for Crystal River Energy Complex (CREC):

- 2-1 (CFBC Aquatic Sampling Locations),
- 2-2 (CREC Aquatic Sampling Stations),
- 2-3 (OWR Aquatic sampling Locations)

PEF provided this information to the NRC in response to the original request. The reproducible figures are included on Disks 7 of 7 and 1 of 7 of the same PEF submittal. NRC will confirm.

Terrestrial

- Table 2.4.1-3-005 (pages 17 -19 of the 9-3-09 supplemental response) indicates that transmission line impacts would occur to Cypress-Pine-Cabbage Palm (Segment 1), Sand Pine (Segments 4 & 5), Xeric Oak (Segments 4 & 5), and Live Oak (Segment 4) cover types. Yet the baseline conditions for the off-site corridors (Table 2.4.1-3-002, pages 6-8 of the 9-3-09 supplemental response) do not list these cover types as occurring in the off-site facilities corridors. The Golder 2008 report (USACE Environmental Resource Permit Application for the Transmission Corridors Associated with the Levy Nuclear Plant) does list these cover types as being present in the off-site corridors. So this would suggest that the error is with the baseline conditions table (Table 2.4.1-3-002). The sand pine and xeric oak cover types provide suitable habitat for several federal and state listed plants and animals, so resolution of this discrepancy is needed.

FLUCCS data for the offsite corridors and the preliminary transmission line routes were obtained from multiple Water District sources, and from Golder's revised FLUCCS mapping for the transmission lines that were based on their field evaluations. This resulted in the more specific FLUCCS categories for the transmission lines as opposed to the more generic corridor descriptions. PEF will provide a description of these data variations.

- The Hardwood Conifer Mixed cover type (FLUCCS 434) appears to occur twice in Table 2.4.1-3-002 (on page 7 of the 9-3-09 supplemental response). The second repeat is named Upland Mixed Coniferous/Hardwood, but is identified as FLUCCS 434. There is no FLUCCS cover type named Upland Mixed Coniferous/Hardwood in the FDOT (1999) FLUCCS manual. Can the acreage for Upland Mixed Coniferous/Hardwood (FLUCCS 434) be combined with Hardwood Conifer Mixed (FLUCCS 434), or is there an error (e.g., Upland Mixed Coniferous/Hardwood [FLUCCS 434] should actually have been a different FLUCCS cover type).

FLUCCS 434 is correct in both instances. The data provided by one Water Management District used a slight name variation for this FLUCCS type. The two acreages can be combined into one number to represent FLUCCS 434.

- Baseline conditions Table 2.4.1-3-002 identifies two FLUCCS plantation cover types on the off-site corridors (page 7 of the 9-3-09 supplemental response) - an abundant acreage of Tree Plantations (FLUCCS 440), and a much lesser acreage of Coniferous (Pine) Plantations (FLUCCS 441). The plantation impacts due to the transmission lines (Table 2.4.1-3-005 - pages 17 -19 of the 9-3-09 supplemental response) are identified as Coniferous Plantations (FLUCCS 441). [Note the impacts for Segments 1-4, which represent transmission lines up to the first substation, exceed the amount of Coniferous Plantations identified as available in these segments in Table 2.4.1-3-002.] The plantation impacts for the off-site corridors excluding the transmission lines (Table 2.4.1-3-004 - pages 14 & 15 of the 9-3-09 supplemental response) are identified as Tree Plantations (FLUCCS 440). If PEF can confirm that all of the plantation cover types that lie within the off-site corridors are planted to pine, then the NRC will consolidate all plantation categories into the Coniferous Plantations (FLUCCS 441) cover type for the

draft EIS. Most managed forest stands in this region are planted to pine, but hardwood stands are occasionally planted. If PEF cannot confirm this, the NRC will consolidate the plantation categories into the Tree Plantations (FLUCCS 440) cover type which would encompass all plantation types.

Mapping for the tree plantations using the FLUCCS codes 440 and 441 comes from the Water Management District, and from Golder's revised FLUCCS mapping for the Transmission lines that was based on their field evaluations. PEF will provide a description of these data variations. PEF could not confirm that all of the plantation cover types that lie within the off-site corridors are planted to pine, and indicated that both cover types could be consolidated under FLUCCS 440 to be conservative. NRC will discuss with State forestry whether the cover types could instead be combined as FLUCCS 441.

- Column 4 of Table 4.3.1-1-002 from the 6-12-09 RAI supplemental response (page 94) provides the acreage of FLUCCS cover types that lie within the LNP site vicinity (i.e., a 6-mile radius). A quick examination of the accompanying figure (031 Attachment 4.3.1-1B – FLUCCS Habitat Types in Vicinity of LNP site) identifies substantial areas of Residential, Low Density (FLUCCS 110) and Residential, Medium Density (FLUCCS 120) cover types not accounted for in Table 4.3.1-1-002. Numerous other inconsistencies are noted between the table and figure (i.e., FLUCCS cover types in the table not shown on the figure; FLUCCS cover types shown on the figure not represented in the table). Please explain these discrepancies and provide a revised table or figure as warranted.

The table provided as a response to the original RAI presents the Level 3 FLUCCS codes for the site and availability within a 6-mile radius. FLUCCS classifications on the figure used Level 2 codes. Level 3 adds more FLUCCS detail. PEF will revise the table and figure to include the Level 3 data and provide to the NRC.

Floodplains Compensation

- The Floodplain Evaluation Bounding Analysis (Rev. 1) was revised to address Historic Basin Storage (HBS) by modifying Tables 4 and 5, and by revising Table 6. No clarifying discussion or definition of HBS is provided in the Bounding Analysis text; however, limited discussion is provided under Item 1 of PEF's 10/9/09 RAI supplemental response (page 4). Explain why the relevance of HBS to the issue of floodplain encroachment and compensation is not discussed in the Rev. 1 Bounding Analysis text. It seems that the HBS is estimated by subtracting the average ground elevation from the bottom of floodplain storage with a minimum of 0.5 ft. However, this rule does not agree with several HBS values reported in Table 4 of Rev 1. Provide a clear definition of HBS, supplemented by illustrations.

PEF will review the floodplains compensation submittal and provide clear definitions for terminology consistent with Southwest Florida Water Management District (SWFWMD) regulations/guidance and provide illustrations that help describe PEF's analysis.

- The FLUCCS compensation table provided under Item 2 of PEF's 10/9/09 RAI supplemental response (page 4), and Table 6 (Volume of Estimates for Potential Compensation Locations) provided on page 24 of the Rev. 1 Bounding Analysis both identify about 322 acres of potential floodplain compensation area available to offset

floodplain encroachment. This area is less than half of the 707 acres of potential floodplain compensation area that was identified for the Rev. 0 Bounding Analysis (also page 24). However, Figure 7 identifying the location of the compensation areas is exactly the same for the Rev. 0 and Rev. 1 Bounding Analyses (both located on page 25 of their respective versions). Does Figure 7 of the Rev. 1 Bounding Analysis accurately portray the location of the potential floodplain compensation areas identified under Item 2 of PEF's 10/9/09 RAI supplemental response and Table 6 of the Rev. 1 Bounding Analysis?

PEF identified an error in the Rev. 0 calculations. PEF confirmed that 322 acres of potential floodplains compensation as presented in Rev. 1 is correct and accurately portrayed in Figure 7.

- Isolated floodplain units J1, K1, L1, P1, Q1, R1, S1, V1, B2, and C2 are excluded from the estimation of floodplain encroachment volume provided in the Rev. 1 Bounding Analysis. Based upon NRC staff conversations with Florida Department of Environmental Protection (FDEP) and SWFWMD personnel, this exclusion appears to be in error, at least for estimation of HBS. Explain why it is not necessary to compensate for the loss of HBS incurred from the fill of isolated floodplain units. Have all upland HBS losses been adequately accounted and compensated for in the Rev. 1 Bounding Analysis?

There are several locations where isolated wetlands are located completely on site. Infilling may raise the stage but this should only affect PEF property. PEF will provide an estimate of the HBS within the isolated floodplain units. Isolated units can drain to storm water ponds; however, this option for HBS loss compensation will only be available if the FDEP approves the permit based on PEF's dynamic analysis. For the bounding analysis, PEF will add the HBS within isolated floodplains to estimate the total bounding HBS loss. PEF will provide an explanation as a supplement to the floodplains compensation submittal.

- The Rev. 1 Bounding Analysis states that 6 inches (0.5 feet) was assumed to be the minimum depth of fill for both floodplain units (page 5, first paragraph) and HBS units (footnote to Table 4, page 14). However, Table 5 (page 19) appears to show 3 instances where "Depth of Fill in Floodplains" was less than 0.5 feet. If these represent errors, provide revised estimates for Floodplain Fill Volume and HBS Volume. It also appears that the column 7 from Table 4 was brought into Table 5 as column 7. However, these two columns do not match in the two tables. Please explain.

PEF will provide a clear summary of the methods and the approaches used in the bounding floodplain storage loss analysis.

- Explain how "Bottom of Value Used" was calculated for each compensation area in Table 6 of the Rev. 1 Bounding Analysis (page 24).

PEF will provide a clear summary of the methods and the approaches used in the bounding floodplain compensation analysis.

- Referencing Section 4.0 (Compensation Results) of the Rev. 1 Bounding Analysis, it is stated that 257.9 acre-feet of compensating storage is needed to offset encroachment (page 23). Why is compensation for HBS encroachment (another 62.2 ac-ft) not included in this estimate? At a minimum, would not 320.1 ac-ft (257.9 + 62.2) of compensating storage be required? And compensation requirements could be higher, depending upon issues associated with revisions to account for minimum depths of fill and HBS within isolated floodplain units, as described previously.

Compensation for HBS can be achieved by excavating deeper but above seasonal high water at the same locations as for floodplain compensation. The estimated volume of floodplain storage loss could be higher after review of HBS in isolated floodplains and potential corrections made to Tables 4 and 5. PEF will provide a new estimate consistent with the definitions, methods, and approaches used in the analysis.

- The Rev. 1 Bounding Analysis does not demonstrate that “there is sufficient upland area on-site to provide cup-for-cup floodplain compensation” (page 23). Table 6 (page 24) identifies 316.4 ac-ft of estimated volume available for compensation. As noted above, a minimum of 320.1 ac-ft of compensation storage would likely be required, and this could be higher. No surplus compensation is available should site surveys of these candidate areas determine that some of these upland habitats are not low quality, or that threatened or endangered species are present (e.g., gopher tortoise).

This was previously addressed. The new estimate of the bounding floodplain storage loss, including the loss of HBS will be provided. PEF will provide an estimate for total volume available for compensation within the areas identified in Table 6.

Other

- Next Teleconference: TBD
- Participants on Teleconference (October 22, 2009):

Paul Snead (PEC)	Doug Bruner (NRC)
Joseph Pavletich (PEC)	Michelle Moser (NRC)
Amy Windhom (CH2M Hill)	Michael Smith (PNNL)
Amanda Berens (CH2M Hill)	Kimberly Leigh (PNNL)
Jamie Hunter (CH2M Hill)	Vince Vermeul (PNNL)
Martha Klein (CH2M Hill)	Rajiv Prasad (PNNL)
Scott Freeman (CH2M Hill)	Bill Baber (ISL/ICF)
Lorin Young (CH2M Hill)	Cecilia Harper (USEPA)
Chris Peterson (CH2M Hill)	
Bill Marsh (CH2M Hill)	
Jeff Lehnen (CH2M Hill)	