



Florida Department of Environmental Protection

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TO: Toni Sturtevant, OGC
FROM: Mike Halpin, Siting Coordination Office

Pursuant to § 403.5066, Florida Statutes, the Department of Environmental Protection (DEP) after consulting with the affected agencies has determined that the application for the site certification of Progress Energy Florida (PEF) Levy Nuclear Plant is not complete to support a recommendation concerning certification. The following Item I represents the DEP Northeast District's requests for additional or clarifying information; item II the Southwest District; item III the Department of Community Affairs; Item IV the Florida Fish and Wildlife Conservation Commission; Item V Levy County; Item VI the Southwest Florida Water Management District; and Item VII represents the Withlacoochee Regional Planning Council's request for additional information. The applicant should identify any items which may be more suitably handled through post-certification submittals, as well as propose related conditions of certification. Requests for completeness items related to federal permit applications are processed directly by the federally delegated or approved program and are not shown herein.

I. DEP NORTHEAST DISTRICT OFFICE (NED)

A. NED Air Program

Provide specific means planned for disposal of all materials cleared and grubbed.

B. NED Water Resource Program Potable Water Section

1. Provide further details for proposed potable water treatment plant and distribution system. Submit a preliminary design report according to the format of rule 62-555 FAC, signed and sealed drawings and DEP Forms 62-555.900(1) and 62-555.900(20). For additional information please visit this DEP website: <http://www.dep.state.fl.us/legal/rules/drinkingwater/62-555.pdf>
2. Will the potable water system comply with Florida Administrative Code (F.A.C.) requirements as found in 62-555, 62-550, 62-560, 62-699 and Lead & Copper Rule? These rules can be found at <http://www.dep.state.fl.us/water/rulesprog.htm#dw>
3. Will the potable well(s) be constructed according to public well standards found in 62-532, F.A.C.?

4. Will the potable well(s) meet required setbacks as found in 62-555.312, F.A.C.?
5. The list of requirements for a Preliminary Design Report (PDR) can be found in 62-555.520(4), F.A.C. A preliminary design report or specifications, details, and design drawings are required for approval of a potable water system.
6. A demonstration of financial, managerial, and technical capacity (capacity development) form must be completed by all new potable water systems of the type that this system will be. This system will be a non-transient non-community public water system.

C. NED Water Resource Program Wastewater Permitting Section

1. Please provide the information required by Section E of the permit application for the transmission lines and associated access road and structure pads, including site plans, drainage analysis, stormwater management system design, etc.
2. For the floodplain analysis please address the following questions:
 - a) Calculate the flow rates on the site using a minimum of three cross-sections and provide a tabular summary. The data summary should include stage or water elevation, basin areas and volumes of cut and fill and calculations of the compensating storage for pre and post conditions. Show the stage as the difference between the 100 year storm event and the elevation of the seasonal high water level in NVGD basis.
 - b) It is suggested that the three cross-sections represent the plant site, the heavy haul road south of the plant site and the heavy haul road at CR 40. Can the three major watershed areas be used for this basis (as mapped in Appendix A4)?
 - c) With the fill material in place, which drawing depicts the pre and post flow lines for the drainage from the site at these three main locations (the plant site, the heavy haul road south of the plant site and the heavy haul road at CR 40)?
 - d) Indicate if the calculations are using Manning equation and indicate coefficients used and expected flow regimes for the site or other techniques used for the calculations. Has or will a model such as HEC-RAS or a GIS application be used for this site?
3. An NPDES Generic Permit for Stormwater Discharge from Large and Small Construction Activities is required, if one or more acres of land will be disturbed during construction, and if stormwater runoff is discharged to surface waters or offsite. The application shall be submitted to the DEP-NPDES Notices Center in Tallahassee. For additional information please visit this DEP website:
<http://www.dep.state.fl.us/water/stormwater/npdes/construction3.htm>

4. Provide further details for proposed potable water treatment plant and distribution system. Submit a preliminary design report according to the format of rule 62-555 FAC, signed and sealed drawings and DEP Forms 62-555.900(1) and 62-555.900(20). For additional information please visit this DEP website: <http://www.dep.state.fl.us/legal/rules/drinkingwater/62-555.pdf>
5. Provide further details for the proposed industrial wastewater treatment and if effluent is land applied as a ground water discharge or discharged to surface waters in accordance with rules 62-620 and 62-660 FAC. Submit DEP Forms 2CS and 2 CG as applicable. For additional information please visit this DEP website: <http://www.dep.state.fl.us/water/wastewater/iw/index.htm>
6. Provide design details of the stormwater and drainage system for the transmission corridor (route) on-site of the property. The design summary should include drawings and calculations of the compensating storage for pre and post conditions.

D. NED Water Facilities\Ground Water Section

Pursuant to rule 62-520.600, F.A.C., and based on the information provided in the application, the proposed Ground Water Monitor Plan is not complete.

1. After evaluation of the proposed monitoring wells, parameters, frequencies, and well location map(s), the ground water monitoring plan will become finalized, and the pre-operational and operational ground water monitoring programs will be incorporated into the Site Certification as condition requirements. Any changes in the ground water monitoring plan will require a modification of the Site Certification.
2. PEF's Quality Assurance/Quality Control Program(s) in Reference 6.6-003 must meet the field sampling and analytical requirements of rule 62-160, F.A.C.
3. Table 2.3-50, Groundwater Field Parameters (Vol.9, Chapter 6) indicates specific conductivity values in the monitor wells ranging from 0.266 to 0.624 uS/cm. Specific conductivity values for aquifers in this area should range from 100 to 800 uS/cm for aquifer(s) in this area. Note that 1 uS/cm = 1 umhos/cm. Please clarify these values, and make any necessary corrections to the table, if applicable.
4. Table 2.3-52, Groundwater Metals (Vol.9, Chapter 6) indicates existing arsenic values in monitor well MW-13S above the Florida ground water standard of 10 ug/L for the last three quarterly sampling events of 2007. The turbidity levels for this well during the same sample events seem very low in the range of 6 to 7 NTUs. Please investigate previous activity in the area of this well, and provide potential sources for the elevated levels of arsenic in the aquifer.
5. Numerous references in the application indicate normal releases of contaminants into the environment from the proposed facility will have negligible effects on

ground water. Please provide additional details for this type of direct discharge into the ground water aquifer (i.e.: describe type of discharges, parameters of concern, locations of discharges, amount of discharges, identify locations on scaled site plans, etc.).

6. Information provided in the application indicates that all discharge or disposal areas will be lined, but liner or enclosure specifics are not provided, except for the wastewater retention basin. Please provide the liner and enclosure details on all potential discharge basins, sumps, tanks, and sites (i.e.: CWS basin, SWS Settling basin, liquid radwaste systems, spent fuel storage areas, dry cask storage areas, transformer oil collection pits, equipment parts washing discharge sites, vehicle washing with under carriage cleaning sites, etc.).
7. A suitably scaled site plan (maximum 11" x 14") is requested that clearly identifies the locations of all discharge and disposal areas mentioned in the previous item.
8. In addition to the ground water monitoring parameters that were all ready sampled in the existing wells, representative samples of the following parameters are requested to be analyzed prior to operation in monitor wells MW-1S, MW-3S, and MW-15S. These wells can be substituted for proposed wells in the general area, if they are no longer available.

Aluminum, antimony, barium, beryllium, cadmium, selenium, silver, thallium, fecal coliform, gross alpha-including radium 226 but excluding radon & uranium, combined radium 226 & 228, uranium, tritium, strontium-90, and all primary organics of EPA Methods 624 and 625, or comparable EPA methods. The method detection limits must be lower than the drinking\ground water standards in rule 62-550, F.A.C.

9. The facility needs to propose a number of representative monitor wells that can be used to provide a characterization analysis once every five years after the facility begins operating. This analysis will be for all primary inorganics in rule 62-550.310, F.A.C., secondary standards in rule 62-550.320, F.A.C., and all organics of EPA Methods 624 and 625, or comparable EPA methods. The method detection limits must be lower than the drinking\ground water standards in rule 62-550, F.A.C. Both upgradient and downgradient wells need to be proposed.
10. The characterization analysis mentioned in the above item needs to be conducted once every five years on the wastewater effluent stream, including the radiological parameters mentioned in the item below.
11. In addition to the chemical ground water monitoring parameters listed in Tables 6.6-2 and 6.6-3, the following radionuclide need to be monitored annually for gross alpha-including radium 226 but excluding radon & uranium, combined radium 226 & 228, uranium, tritium, and strontium-90. Please select a number of

representative reactor area and sentinel monitor wells. All potential liquid radioactive waste release areas should be monitored, as well.

12. DEP Monitor Well Completion Report Form (attached) must be submitted for the existing permanent monitor wells MW-1S, MW-2S, MW-3S, and MW-4S. Any new permanent monitor well will need to have this form submitted, as well.
13. A 72-hour prior notification must be provided to the Ground Water Section of the DEP Northeast District Office before any future monitor well is installed.
14. Any changes in the monitor well locations need to be shown on an aerial photo, similar to Figure 6.1-4.
15. The construction details of all proposed monitor wells need to be submitted, including depths.
16. The four supply wells indicate a potential drawdown area of the aquifer. The effects of this drawdown may cause a localized reversal of ground water flow for the aquifer. With respect to the drawdown, please provide assurance that the monitor well locations are satisfactorily located to monitor all potential contamination sources.
17. Please identify one or more background (i.e.: upgradient) monitor wells. The background well(s) will need to be labeled using the following nomenclature: MWB-3S, MWB-3D, etc. All other well names can stay the same. Figure 6.1-4 will need to be revised to reflect these new names. This figure will be incorporated into the Site Certification conditions.
18. Please provide a contingency plan for potential sinkholes that may affect the wastewater areas.
19. Please provide a scaled location map showing all Class 4 springs, or greater within one-mile of facility property boundary that could be affected by the facility's operations and potential contamination. Figure 2.6-2 shows the Homosassa Springs Dome, and any hydrogeological and chemical issues regarding aquifer connectivity to any springs in the area, and the effects on these springs needs to be addresses.

E. NED Submerged Lands/Environmental Resource Program (SLERP)

1. Please provide the maximum length of trench in wetlands that would remain open at any point in time during construction and the maximum length of time the trench would remain open prior to beginning backfilling operations for the installation of the make-up and blowdown pipelines.
2. Will all of the excavated material be used for backfilling the trench? If not, where and how will the excess material be disposed?

3. Please submit a statement addressing whether dewatering is required. Detail the dewatering proposal to include the methods that are proposed to contain the discharge, methods of isolating dewatering areas, and indicate the period dewatering structures will be in place.
4. A public easement for the crossing of state owned submerged lands is required.
5. Please clarify the scope of wetland impacts resulting from the project. Please indicate if impacts are temporary or permanent and if they are in forested or non-forested wetlands. FLUCCS Code designation is fine.
6. Please provide a mitigation plan that will adequately offset the proposed amount of wetland impacts for the entire project. Provide a detailed description of restoration, enhancement, or creation activities that are proposed. If credits are going to be purchased from mitigation banks servicing the affected areas, credit reservation letters must be submitted prior to the issuance of a permit. Credits must be sought from banks servicing the basins in which the impacts occur.

F. NED Waste Management Program Solid Waste Section

Based on the review of the application, the following discrepancies were noticed:

1. The application states, "Levy County operates a Class I Solid Waste Management Facility located north of the LNP site and approximately 3 mi. southeast of the Town of Bronson to serve the entire county area including the incorporated areas. Between 2001 and 2005 Levy received an average of 27,758 tons² of material to landfill annually (FDEP's 2005 Solid Waste Annual Report). The Levy County Comprehensive Plan notes that the facility is at 49 percent of design capacity and is not anticipated to reach full capacity until 2020, allowing the facility to accommodate the limited amounts of solid waste generated at LNP for local disposal."

Please note, while Levy County has active Class I Solid Waste Transfer Station and Class III landfill at the above-referenced Facility, the Class I landfill is in the process of closure construction under DEP Permit Number 0018490-004-SF.

2. The application states, "Solid waste generated during construction will be disposed of in an approved upland disposal facility. Construction waste may be taken to a temporary on-site spoils area prior to for off-site disposal." (sections **4.10.1.3** and **4.10.2.3**)

However, according to Rule 62-701.300(1)(a) FAC, "No person shall store, process, or dispose of solid waste except at a permitted solid waste management facility or a facility exempt from permitting under this chapter." Therefore, in order to evaluate the necessity of permitting a temporary on-site temporary storage area, additional information concerning the process and storage procedures, including the maximum length of storage at the temporary on-site spoils area is needed.

II. DEP SOUTHWEST DISTRICT OFFICE (SWD)

1. Please revise the aerial surveys, to include the following:
 - Clearly show the proposed haul road, pipe line, and rail spur corridors on aerial photos. The photos should be scaled at 1:400 or less.
 - Show the limits of any wetlands located within the proposed corridors and the FLUCCS codes that correspond to each wetland.
2. Once the wetlands are delineated and the boundaries are approved by Department staff. Provide a table that shows the potential wetland impacts (in square feet or acres). The table should include the types of wetlands impacted using FLUCCS codes and whether the impacts will be temporary or permanent. Refer to Chapter 62-343.900(1), Section E, Florida Administrative Code (F.A.C.).
3. Turbidity and sediments must be controlled to prevent violations of water quality pursuant to Rule 62-302.500, 62-302 .530(70) and 62-4.242, FAC. Best Management Practices, as specified in the *Florida Stormwater, Erosion and Sedimentation Control Inspectors Manual*, shall be installed and maintained at all locations where there is possibility of transferring suspended solids into wetlands and/or surface waters due to the permitted activity. If site-specific conditions require additional measures, then the Applicant shall implement them as necessary to prevent adverse impacts to wetlands and/or surface waters. The location of erosion control barriers must be shown on plan view drawings and the specific soil stabilization methods to be used at each site must be described. Erosion control and soil stabilization methods should be included on the plan and cross sectional view drawings required in condition number one above. Refer to the Southwest Florida Water Management District Basis of Review (B.O.R.) Chapter 3.2.4.1.
4. In areas where temporary or permanent wetland impacts occur mitigation will be required. Provide the supporting UMAM information required in Chapter 62-345, F.A.C. Also, provide a mitigation plan for the impact areas using UMAM. In addition, a restoration plan will need to be provided for the impact areas. Refer to Chapter 62.345, F.A.C.
5. If this project significantly degrades or is within an Outstanding Florida Waterbody (OFW), provide reasonable assurance the project is clearly in the public interest. Refer to the B.O.R. Chapter 3.1.1.
6. Provide a state lands title determination from the Division of State Lands Title and Land Records Section indicating whether any portion of the project is located on sovereign submerged state lands or within an aquatic preserve. If any portion of the project is located on sovereign submerged state lands or within an aquatic preserve then the project must comply with Chapter 18-20 and 18-21 F.A.C. and Chapter 253 and 258 Florida Statutes (F.S.) and section G of the Joint Application

- for Environmental Resource Permits must be completed and submitted to the Department prior to construction. Refer to Chapter 62-343.900(1), Section G.
7. Volume 2, Figure 9-A 1.2-14 shows the typical access road is 18 feet wide. Is it possible to reduce the size of the road in wetland areas? Also, the typical road height will be two feet above the seasonal high water line. To reduce the impacts to wetlands associated with access roads, would it be possible to maintain the existing natural grade? Refer to the B.O.R. Chapter 3.2.1.1.
 8. Volume 6, the construction drawings shows the make-up and blowdown lines corridor adjacent to the heavy haul road. To reduce impacts is it possible to locate the pipes under the heavy haul road? Refer to the B.O.R. Chapter 3.2.1.1.
 9. Will the heavy haul road remain in use after the LNP's construction or is the road temporary? Refer to the B.O.R. Chapter 3.2.3.
 10. To ensure that flooding does not occur, provide documentation that the size, number, and placement of the culverts associated with the heavy haul road is appropriate. Refer to the B.O.R. Chapter 4.2.
 11. To ensure that the haul road does not have contaminated runoff show a vegetated swale on either side of the road. Refer to the B.O.R. Chapter 5.1
 12. In volume 6 and 7 of the application, are the UMAM scores solely for the impacts associated with the LNP? Or, do the UMAM scores include the pipe line, rail spur, and heavy haul road corridor impacts? Please show the locations of the scored wetlands on an aerial photo and contact Greg Nieboer at (813) 632-7600 for an onsite verification of the UMAM scores. Refer to Chapter 63-345, F.A.C.
 13. Are the wetlands associated with the construction of the Haul Road, Rail Spur, and Pipeline going to be delineated by the Wetlands Evaluation and Delineation Section (WEDS) in Tallahassee? If not, please contact the SW District Greg Nieboer at (813) 632-7600 for an onsite verification of the wetland lines. Please flag the wetland lines before the onsite verification. Refer to Chapter 63-340, F.A.C.
 14. What are the largest size vessels that use the Ingles Lock Bypass Channel? Provide cross-sectional drawings showing the height of the bridges above mean high water. Provide reasonable assurance that the bridges over the Ingles Lock Bypass Channel will not be a navigational hazard. Refer to the B.O.R. Chapter 3.2.3.1.
 15. Provide a cross-sectional detail for the boat slip and earthen berm removal. Include water depths, mean high water level, and mean low water level. Refer to Chapter 62-343.900(1), Section E.
 16. A barge slip and ramp are referred to in the narrative and throughout the permit application. It is stated that these structures will be permitted separately. Are they going to be permitted through an Environmental Resource Permit (ERP) separate

from the Siting Act? If so, when will the ERP application be submitted to the S.W. District? If they are going to be permitted through the Siting Act please provide a detailed plan view and cross-sectional view drawing of the slip and ramp.

17. The development is in a flood plain but no flood plain compensation was provided, as is required in Chapter 4.4 of the SWFWMD B.O.R. The increase in stage due to loss in storage is stated to be 0.44 inches. Does this mean 0.44 inches over the entire project area? Why was flood plain compensation not provided? Refer to 40D-4.301, F.A.C., and the Southwest Florida Water Management District Environmental Resource Permit Information Manual, Management and Storage of Surface Waters, Part B, Basis of Review (BOR).

III. DEP OFFICE OF GREENWAYS AND TRAILS (OGT)

A. Overall Comments and concerns

1. Public access to public lands should remain intact as well as OGT's access to our managed property for maintenance purposes. Need clarification on this issue in locations where construction and development by Progress will occur.
2. Co-location of all linear facilities constructed by PE would be desirable. Some of their proposed locations show facilities running parallel in separate locations. A reduction in the overall footprint and impact to state lands is our request.
3. It is unclear as to precisely which lands and how many acres of state-owned lands will be impacted by PE. This makes it difficult for the state to ascertain exactly what PE should provide in exchange (to offset the impacts to state lands).
4. We believe that PE's land ownership is now different than what is depicted in the application. (They have gained additional ownership.) This information needs to be available as we negotiate offsets to state lands.
5. Need exact location of PE's proposed rail corridor

B. Canal Off-Loading Site

1. For off loading heavy equipment, power units, and construction materials. No mention of request to moor barges at the existing mooring dolphins, wing wall of Inglis Lock or in canal near site. If multiple barges show up to off load, they will have to park some where. Where will the tugs/barges moor?
2. Will the water area become a security area? (i.e. preclude the public? If so, for how long and where exactly?)

C. Water Intake Site

There will be four 54" diameter intake pipes (2 per power unit) buried 5' below grade. The power units will require 198.1 cubic feet per second of intake water for

cooling. In contrast, this is twice the typical flow coming down the Withlacoochee River below the Inglis dam from seepage leakage.

1. Water in the barge canal will increase in salinity. This may then impact the fresh water ecosystem in the river with the higher salt concentrations. Need analysis of this.
2. Public access across OGT facilities must be maintained. Unclear how this will be accomplished.
3. Crosses Bypass Canal on top of proposed 33' wide bridge. So the pipes will rise up out of the ground and then back into the ground each side of the Bypass Canal. How do we get our east / west access for maintenance and trails on both the north and south sides of the canal? (Need specifics on this plan.)
4. Grates have screens that will pass small fish. Fish and Wildlife review of impacts here?
5. It appears the grating system has an automatic cleaning system that dumps debris into bins that are then transferred to a fenced off site. How large is this fenced area and how often will container be dumped?
6. Why does the piping system not stay adjacent to the transmission corridor versus pulling away to the east which means they will be using more OGT property? The corridor north of the CR40 is 1,000' wide, it has an extra 260' on the east side for future transmission lines. Would those lines impact state lands?
7. Below CR40, the corridor drops down to 670' wide to Inglis Inland where it picks up the existing 69kV line, widening back to 705'. So is PEF requesting 1,000' through our lock site and thru Inglis Island? At the area west of the lock, there is an extra 260' not utilized the water piping could be run straight to the canal instead of spreading out the location. Need clarification and explanation for occupying so much space here.

D. Blow Down Pipeline along Barge Canal

1. Blow down pipe location on the north of canal is probably acceptable. Southern location is not acceptable and would conflict with current recreational facilities. OGT's verbal discussions with Progress may contradict the depiction in the application. Just need clarification.
2. The proposed easement area on the Holcim property (South of Canal and West of US 19 bridge) would require an easement from Holcim (OGT also has an easement here). Would our trail or vehicle access road be closed for a period of time? What is the plan?
3. The north south route from the barge canal to the power plant is proposed to be on OGT managed property, west side of the existing transmission line. Why is the

blow down pipeline not installed within the existing easement? No information is provided in the documents.

4. Improvements can not impact the existing height of the adjacent canal berm below 33' for meeting dam failure flood control.
5. Piping will have to be below the existing 12 foot wide access road adjacent to the mechanically stabilized earthen wall (this is a flood control wall). How will this be installed without damaging the wall?
6. Blow down pipe cannot interfere with berm swale drainage system, including buried storm water pipes.
7. Placement of pipes must not interfere with plans for future public boat ramp west of US 19 bridge and north of canal.
8. If construction of PE facilities, damages existing facilities, they would need to be repaired/replaced. (i.e., trails, access roads, etc.

E. Haul Road / Pipeline Corridor

1. 150' ROW seems excessive width. OGT could grant a temporary construction easement if that width is only needed for construction.
2. Why does PE need separate bridges over Bypass Canal? OGT suggests co-locating the haul road and the pipes.
3. No plans showing how OGT access will occur between the two canals over the haul road and pipeline corridors. Appears to block public and OGT access going east and west.
4. Bridge cuts off boat access for aquatic plant control in the bypass canal due to the low clearance. Needs to be addressed.

F. Other Issues:

1. The construction of the pipeline corridors and haul road occur in an area occupying storage and materials which would need to be relocated in nearby vicinity. If PE intends to use this area, OGT would require new storage areas.
2. Regarding the fueling, disposal and refilling of nuclear materials – are they being shipped to the site by rail or barge? If barge off loading is used, how would this impact the Cross Florida Greenway and Public lands?
3. Decommissioning – if the units are decommissioned or become obsolete in the future, will remove the transmission lines?

G. OGT's requested offsets for Progress Energy's impacts to and use of state lands (the Cross Florida Greenway) at this time. These are not all inclusive.

1. **Design and construct a connector trail.** PE owns a corridor from **Chiefland to Dunnellon** which connects to state owned and OGT managed trails/properties. (This would connect The Nature Coast Trail in Chiefland and the Cross Florida Greenway near Dunnellon.) OGT has had preliminary discussions with PE and is working towards a MOU for PE to provide a perpetual public access right on this corridor and also to design and construct a paved trail the length of this corridor. This would complete a major connection between two state trails.
2. **Design and construct a paved trail from the Felburn Trailhead** (east of US 19) and continue east to Inglis Dam recreational area. (**This includes a bridge** over the Withlacoochee River.)
3. **Pave the vehicular access road west of US 19** on the Cross Florida Greenway. This road serves as public access to the fishing areas along the canal and to the Gulf.
4. **Purchase the timber rights on the Dixon Hammock property.** This parcel is owned by the BOT and managed by OGT, but two private companies still hold some timber rights in this parcel.
5. **Inglis Island oil pit clean up and remediation.** This oil pit was left by Florida Power decades ago. Oil sludge from the former Inglis hydro power plant.
6. **Design and construct a paved trail under PE's proposed transmission line corridor** leading from Inglis Island south and connecting to the proposed Suncoast Parkway II and **Suncoast Trail** extension. (This is being designed and built by the Turnpike Authority.) Connection most likely within the vicinity of Bitter Root Road, but uncertain as to exact location at this time because the Suncoast Parkway is still under design.

IV. DEP SITING OFFICE

1. PEF states in Section 1.3.7 (p. 1-6, Volume 1) that "each anticipated variance from applicable state and local standards that is sought as part of the state certification proceedings for an operation-related impact is shown in the applicable SCA section". Please provide a list of all such anticipated variances.
2. No radioactive materials other than fissile materials and their products (which fall under the jurisdiction of the United States Nuclear Regulatory Commission) are mentioned in the application. What other radioactive materials will be used or possessed at the site? Describe PEF's plans and timelines for authorization of such materials.
3. Concerned citizens have advised this office of a potential lime-rock mine planned to be located across the highway from the proposed nuclear plant, with corresponding blasting operations. Please advise as to the affects of such an

operation in the vicinity of the plant location, as well as the compatibility of nuclear power plants with nearby blasting operations.

4. Describe the potential offsets of carbon emissions from the LNP when compared to a comparably sized natural gas fired combined cycle plant.
5. Please submit summary information indicative of the outreach efforts which were extended to potentially affected persons in the vicinity of the power plant. Furthermore, the applicant should be advised that Governor Crist approved House Bill 7135 on June 25th. Accordingly, this Office requests that Progress Energy make a good faith effort to comply with the new Statutory requirements, including those below from 403.5115(6), F.S:

(a) A good faith effort shall be made by the applicant to provide direct written notice of the filing of an application for certification by United States mail or hand delivery no later than 45 days after filing of the application to all local landowners whose property, as noted in the most recent local government tax records, and residences are located within the following distances of the proposed project:

- 1. Three miles of the proposed main site boundaries of the proposed electrical power plant.*
- 2. One-quarter mile for a transmission line corridor that only includes a transmission line as defined by s. 403.522(22).*
- 3. One-quarter mile for all other linear associated facilities extending away from the main site boundary except for a transmission line corridor that includes a transmission line that operates below those defined by s. 403.522(22).*

(b) No later than 60 days from the filing of an application for certification, the applicant shall file a list with the department's Siting Coordination Office of landowners and residences that were notified.

V. DEPARTMENT OF COMMUNITY AFFAIRS

1. What is the atmospheric loading and concentration of the salt plume from cooling towers and what is the direction in which it will travel?
2. Describe the anticipated impacts of salt deposits to adjacent surface water bodies and to the state forests and other conservation lands in the vicinity.
3. Describe the expected potential long term impacts to the surficial aquifer and eventually to the groundwater. Document loading of salt to groundwater resources including the surficial and Floridan aquifer with extended exposure to salt deposits.
4. Identify the containment measures being considered to negate these impacts.

VI. FLORIDA FISH AND WILDLIFE CONSERVATION COMMISSION (FWC)

A. Listed Species Surveys

1. The applicant, in the Environmental Report (Volumes 8 and 9), indicated that various listed species (gopher tortoises [threatened], Florida scrub jays [threatened], red-cockaded woodpeckers [species of special concern], Sherman's fox squirrel [species of special concern]) were found at the proposed Levy Nuclear Plant site and in or adjacent to the proposed Powerline Transmission corridors. FWC records indicate that the transmission corridors are also within the range of the Florida mouse (species of special concern), which is unlikely to have been detected during observational surveys. The explanations of survey methodologies contained in Chapter 6 are very brief. We request that the applicant provide additional information on the methodologies used to survey for listed species, dates and times when the surveys were conducted, location maps of the surveys and transect locations, and specific locations and numbers of listed species found.
2. It is also not clear what monitoring studies and survey protocols will be conducted during and after construction. The applicant will need to provide additional information that describes the monitoring plans and protocols, for all species (aquatic and terrestrial), that are anticipated to be conducted during construction, after construction, and for operational monitoring. We will need more detailed survey information prior to completion of the Levy Nuclear Plant and the associated Transmission Lines application.

B. Gopher tortoises.

Chapter 6, Section 6.5.1.2.1, indicates that a gopher tortoise relocation plan will be developed in accordance with FWC guidelines. After the spring of 2009, new gopher tortoise management permitting requirements will be in place. These permits require either on-site or off-site relocation of all gopher tortoises potentially impacted by development, and a mitigation contribution to the FWC will be required for all relocation permits. We encourage Progress Energy to conduct on-site relocations to address any gopher tortoise issues, especially in the vicinity of the transmission lines, rather than offsite relocations where suitable habitat exists. The applicant will need to indicate if the on-site relocation plan is intended for different segments of the transmission corridor and plant location or as a complete "unit." The applicant will also need to identify any offsite recipient site locations for the relocation of the gopher tortoises.

C. State Listed Species

Chapter 6, Section 6.5.1.2.1 Important Species, does not provide any conservation measures for state-listed Florida mice or Sherman's fox squirrels. The applicant will need to provide conservation and mitigation measures for state-listed species in accordance with Chapter 68A-27, Florida Administrative Code.

D. Red-cockaded Woodpeckers

Sec. 5.4.4.3 Biota Doses (pages 5-51 & 52), talks about the exposure of air-borne radiation to the terrestrial biota. ' Table 5.4-16 shows that with the exception of the red-cockaded woodpecker (RCW) and northern bobwhite, the doses meet the 25 milliRoentgen equivalent man per year (mrem/yr) whole body dose equivalent criterion in 40 CFR 109." Using Fig. 2.7-16 - Wind Rose Jan. 1, 2001, to Dec. 31, 2005, approximately 20% of the winds in this area will be blowing onto inhabited red-cockaded woodpecker clusters and planned clusters on Goethe State Forest.

Also in Sec.5.4.4.3, "From an ecological viewpoint, population stability is considered more important to the survival of the species than the survival of individual organisms. Thus higher doses are permitted." While generally this is true for a widely dispersed viable population, an isolated population requires the survival of as many individuals as possible for its continued success. The following is from the Recovery Plan for the redcockaded woodpecker (*Picoides borealis*) Second Revision; U. S. Fish and Wildlife Service. ". . . The buffering effect of helpers against annual variation operates only when helpers can readily occupy breeding vacancies as they arise. Helpers do not disperse very far and typically occupy vacancies on their natal territories or a neighboring one. If groups are isolated in space, dispersal of helpers to neighboring is disrupted and the buffering effect of the helper class is lost. When this happens, populations become much less likely to persist through time. Cooperative breeding system does not allow rapid annual growth of populations." The population of red-cockaded woodpeckers on Goethe has only 40 active clusters; organized into two subpopulations, one in the Black Prong area of Goethe and the other in the southern end of Goethe, in the Daniels Island and Apex tracts, with little contact between both subpopulations. Subpopulations reach stability when they support 30 or more active clusters and therefore these subpopulations are not ecologically stable. For this reason, the State has directed substantial resources toward managing these subpopulations so they are sustained. The applicant should describe mitigation measures that will be undertaken to address the potential impacts to the red-cockaded woodpecker clusters and planned clusters on Goethe State Forest.

E. Manatees

1. The environmental report (4.3.2.2, page 4-47) states that standard manatee conditions will be followed and professional biologists will serve as boat-based observers during certain phases of construction. The applicant should provide information detailing how observers will be selected, whether they have any previous experience observing for manatees, how many observers will be assigned to the construction areas and how many hours per day each observer will be assigned to work.
2. The environmental report (4.3.2.2, page 4-46) states that a cofferdam will be used to minimize release of sediment to the Cross Florida Barge Canal. The applicant

should describe the procedure that will be used to ensure that manatees are not trapped behind the cofferdam.

3. The environmental report (4.3.2.2, page 4-46) describes the components of the cooling water intake structure as an intake structure, vertical bar screens, traveling screens, pumps and a pump house. The applicant should describe what access, if any, manatees could potentially have to the completed cooling water intake structure and what measures are being taken, if necessary, to prevent access.

F. Aquatic Systems

1. The applicant has provided information on the biological characterization of the Cross Florida Barge Canal in the vicinity of the Levy Nuclear Plant site in the Environmental Report and in the National Pollution Discharge Elimination System (NPDES) permit application. The applicant indicates that benthic invertebrate sampling was conducted by the "approved Aquatic Sampling Work Plan." A short summary is provided in Volume 5, NPDES permit, Attachment 2; Volume 8, Section 2.4.2.6; and also in Volume 9, Chapter 6. The applicant has indicated that the cooling water intake structure will affect flows and aquatic life in the Cross Florida Barge Canal for a distance of five miles from the Inglis Lock and Dam. We request that the applicant provide a copy of the "aquatic sampling work plan," detailed survey protocols for the macro-invertebrates, the various plankton communities, and fish communities. We request the applicant indicate where the new aquatic sampling stations will be located on the old Withlacoochee River channel. We also request the applicant provide a sampling protocol that would be initiated during operation of the plant in order to address impingement and entrainment. Further, we request that the applicant develop a mitigation plan to address impacts to aquatic life.
2. We request that the applicant consider providing a mitigation plan that includes the creation of multiple breaches along the earthen berm that extends into Withlacoochee Bay (Gulf of Mexico) from the Cross Florida Barge Canal. Historically, freshwater would enter the bay, flow southward and support a euryhaline system consisting of oysters and other estuarine organisms. With the creation of the berm for the Cross Florida Barge Canal, this supply of freshwater was diverted offshore. A hydrographic analysis should accompany the mitigation plan in order to model the modified flow pattern that would result from the creation of the proposed breaches and the ultimate consequence on the local salinity regime.
3. Previous mitigation was required for the effluent from the existing Crystal River Plant. Since the applicant proposes to use the existing Crystal River Plant's discharge canal, we request information regarding any marine or estuarine mitigation efforts associated with the construction and operation of the existing Crystal River Plant. This should include detailed descriptions of the specific

activities, along with the outcomes of each activity. We also request that the applicant address whether the mitigation was successful in terms of achieving the predefined goals.

G. Cumulative Impacts

The Environmental Report (volumes 8 and 9) for the proposed plant facility and the transmission lines does not appear to contain an analysis of the cumulative impacts of the proposed facility and its transmission lines in conjunction with the Crystal River Nuclear Facility and transmission lines and other activities in the area. We recommend that a thorough cumulative effects analysis be conducted that includes, at a minimum, effects on marine/estuarine habitat and species, atmospheric deposition of material from both power plants, bird migration/transmission line mortality, and impacts of the transmission line on habitat and species.

H. Potential Restoration of the Withlacoochee River

Volume 9, Section 4.1.1.1.2.3, provides information on the land use plan effects with the construction of the Levy County Plant. The applicant should explain impacts to plant operations of the lock and dam are removed from Lake Rousseau and possible impacts to the plant and operations if restoration of the Withlacoochee River is pursued in the future. In addition, the applicant should describe alternatives for different water intake structure locations that would allow for future restoration of the Cross Florida Barge Canal.

I. Recreational Access

The applicant should indicate if there will be any security zones established in any areas of the proposed facility that would restrict access to areas currently open to fishing and hunting activities.

VII. SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT

A. Hydrologic Analysis

Drawdown Impact Modeling was submitted by the Applicant in support of the above referenced site certification application. The ground-water flow model MODFLOW was used to evaluate drawdown impacts from the proposed withdrawals. In order to evaluate the modeling the MODFLOW input and output data files will be needed. If a model preprocessor was used, such as Visual Modflow or Groundwater Vistas, the files created by those programs should also be submitted. In addition, an analysis of the cumulative impacts of all withdrawals within the model should be performed.

1. In order to assess the hydrologic impacts associated with proposed water use from all sources, the applicant must perform analyses that demonstrate the extent of the water-level drawdown in the surficial and Floridan aquifers, showing related lake level and spring flow impacts (where applicable) as a result of cumulative withdrawals. Please provide model-simulation results that illustrate the above

mentioned concerns, and provide maps to document models and display results at the appropriate scale(s). Please show the cumulative predicted drawdown associated with the currently permitted withdrawals for all users, and the cumulative predicted drawdown associated with the requested withdrawals. Please submit all model input and output files (raw MODFLOW or Groundwater Vistas) in digital format and sign and seal all reports describing the results of the model-simulation results. Reference Rule 40D-2.301(1), F.A.C.

2. Please compare and discuss the differences between the calibrated model transmissivity and the aquifer transmissivity determined from on-site pumping tests. In addition, please provide all surficial and Floridan aquifer pumping test data and analyses.

B. Environmental Evaluation

The proposed site is located within a known area of karst topography and groundwater recharge. Strict adherence to the engineering standards for stormwater facilities and maintenance of existing floodplains will be required.

According to the information contained within Attachment B (Groundwater Modeling) of Volume 5, the impact evaluation to wetlands was addressed utilizing the minimum flows and levels (MFLs) criteria in Chapter 40D-8, F.A.C.

1. MFLs have not yet been established within or adjacent to the site certification assessment area. Therefore, please provide an impact evaluation of the water resources utilizing the Performance Standards in Section 4 of the Basis of Review, Chapter 40D-2, F.A.C.
2. The groundwater modeling graphic presented in Attachment B of Volume 5 is difficult to interpret due to the large size of the assessment area and the numerous interior contours. Please show the specific wetlands expected to be directly impacted due to construction related activities on the site.
3. Attachment B of Volume 5 contains a table labeled "Summary of Wetland Areas with 1.0 ft or Greater Drawdown in Surficial Aquifer." In order to accurately assess the potential for adverse wetland impacts according to habitat type, please include within the table, wetland acreages based upon FLUCCS codes. Reference Sections 40D-2.101 and 40D-2.301, F.A.C.
4. The groundwater modeling assessment stated that 138 acres of wetlands would be impacted by 1 foot or more drawdown from the normal operation of the groundwater pumping wells. What actions are proposed to prevent these drawdowns from adversely impacting these wetlands?

C. Requested Quantities

The application requests a peak month quantity of 5,850,000 gallons per day (gpd). The purpose and time frame for using this quantity of water is unclear.

1. Please discuss the need for the requested peak month quantity. When will this quantity of water be needed and for how long?
2. Please explain the difference between the Normal Demineralized Water Makeup Rate of 350 gallons per minute (gpm) listed in Table 3.3-2 and the Annualized Cycle Average Makeup Source Rate of 44.6 gpm provided by Westinghouse in Table 3.3-1.
3. Please discuss the alternative technologies evaluated to minimize the consumptive use associated with evaporation from the Service Water System cooling towers?
4. Was the use of re-cycled storm water evaluated to reduce the amount of groundwater to be used? Please discuss other alternative water sources that have been considered to reduce groundwater use?

D. Barge Canal Withdrawals

CEMEX's Inglis Mine is located approximately four miles southwest of the proposed intake location. Elevated levels of chlorides and other constituents are currently showing up in some of the monitoring wells at the site. It is stated in the application that during normal operations, water in the barge canal will essentially be sea water from the Gulf of Mexico, effectively changing the normal conditions within the canal.

1. What effect will the increase in salinity in the barge canal have on the water quality of the Inglis Mine and surrounding area?
2. How will the withdrawal of water from the barge canal affect the ecology and water quality of the Withlacoochee River downstream of the Inglis dam, within the barge canal, the adjacent estuary, and designated Outstanding Florida Waters (OFW) areas, during various stream flow regimes and barge canal withdrawal regimes?

E. Dewatering During Construction

Dewatering will be required during construction of the two units. A dewatering plan was not included in the application.

1. Please describe the construction related dewatering activities and the expected drawdown.
2. How much water will be pumped during dewatering activities and where will the water be discharged?
3. What will be the duration of the dewatering activities at each unit construction site?

F. Boring and Well Information

Logs of borings A-10 and A-17 were provided with the application. It is unclear where these borings are located in relation the proposed plant sites. Also, boring logs, well

construction details, water quality data, water levels, and geophysical logs for all monitoring wells and test wells were not provided with the application.

Please provide copies of boring logs, well construction details, geophysical logs (if available), water levels, and water quality data for all borings, monitoring wells, and test wells completed at the site and provide a map showing the locations.

G. Regional Water Supply Planning

1. Lake Rousseau is not listed in Part 3 of the applicant's Environmental Report. Please provide additional information specifically addressing potential impacts to this water body, which has been identified as a potential water supply source by the District and by the Withlacoochee Regional Water Supply Authority.
2. Attachment E of the application does not include information on the new plant designs for water conservation. The applicant is proposing a Westinghouse AP1000 pressurized water reactor for this site. The District will require that the applicant use the lowest water quality available for the proposed use. Please provide additional information describing any water-conserving plant designs and anticipated conservation to be achieved from such designs.

VIII. Withlacoochee Regional Planning Council

1. Section 4.5 the Site Certification Application (SCA) generally discusses plant water use, including anticipated aquifer groundwater withdrawals. It references Section 3.3 of the Environmental Report (ER), and Section 6.3 of that same document outlines how hydrological monitoring would occur during plant construction and operation. Per the scale of projected groundwater use cited in Section 4.5.3 of the SCA, between 1.3 million and 5.8 million gallons daily, staff requests the applicant define and address fully in the site certification application the range of potential local to regional aquifer and connected natural systems impacts. Then, having established freshwater use impacts, how might current plans be adapted to promote conservation or reuse of groundwater resources?
2. Sections 4.7.2, 6.4.1 and 6.4.2 of the SCA cover on-site hazardous waste generation and off-site disposal. Section 3.8 of the ER identifies truck transport as the preferred mode for radioactive waste disposal. What analysis or decision-making criteria support this mode choice for hazardous and radioactive waste removal? What are the benefits of alternative mode choices? Specify what procedures and safeguards would apply to the transportation of all solid waste both to and from the plant site. Would the proposed program of radiological monitoring encompass routes utilized for hazardous and radioactive waste transport?
3. Section 4.4.2 of the SCA addresses the emission of particulate matter from mechanical draft cooling towers, but Section 6.6.2 states that no air quality monitoring shall occur on-site. The SCA identifies this phenomenon as the primary

source of gaseous emissions resulting from construction of the proposed plant. Are there opportunities to measure air quality as part of other monitoring activities? If no monitoring will occur, what surplus control technologies might be utilized to further reduce particulate matter release beyond best available technology?

4. Section 4.5 of the ER describes radiological impacts during plant construction. Section 3.5 of that document explains the Levy Nuclear Plant's waste management system, and it clarifies how the liquid and gaseous waste management system elements conduct radioactive effluent and emission release. Chapter 5 of the ER relates potential radiological impacts of plant operation including: exposure pathways, waste hazards, and other aspects of plant operation. In Chapter 6, the ER details the applicant's intended program of radiological monitoring. Of all the measures controlling radiological impacts of plant construction and operation, what action has the applicant voluntarily undertaken above that minimum necessary to obtain required plant licensing and permit approvals?
5. Section 4.11 of the SCA states that an Emergency Preparedness Disaster Plan would be created and submitted to the Florida Department of Community Affairs for review. When would this occur? What categories of risk and hazard would that plan generally identify, and which would be addressed elsewhere? Which existing public emergency planning documents may need to be modified as a result of project development? Would other new plans be required? In what documents would emergency evacuation routes be identified, and how would the public be made better aware of vital emergency planning information? Through partnership as well as direct support at the county and municipal levels, does the applicant intend to enhance local government emergency management capacity to increase level of response preparedness?
6. Chapter 6 of the SCA refers the reader to Chapter 5 of the ER for explanation of water use impacts stemming from plant operation. Section 4.2.1.5 of the ER discusses impacts to wetlands during construction, and 5.2.1.5 discusses the impact of plant operations on wetlands. ER Section 5.2.2.3 discusses the impacts of groundwater use and mentions potential for adverse effects to wetlands, owing to groundwater consumption. What scale of impact could result to wetlands on-site and in the vicinity as a result of proposed groundwater extraction? How could this impact planned wetland mitigation efforts during construction and plant operations phases? What long-term impacts exist?
7. Section 4.5.1.1 of the SCA discusses the system to manage residual heat output from the plant. The ER's Section 5.3.2 specifically discusses cumulative impacts to the aquatic ecosystem owing to increased heat and chemical discharge due to plant operation. As outlined in Chapter 6, the ER gives details of a thermal monitoring

program. What additional control technologies could yield extra mitigation of impact to regionally significant waters, fisheries, and aquatic ecosystems?

8. Section 4.5.1.4 of the SCA discusses organism removal from the cooling water intake system. What provisions has the applicant made to obviate adverse impact to marine life, especially endangered West Indian (Florida) Manatee and sea turtle species, which have been known to inhabit the Cross Florida Barge Canal? What other measures could the applicant voluntarily pursue to reduce potential conflicts between wildlife and proposed plant operations?
9. Section 5.0 of the SCA cites Section 4 of the ER to expound impacts related to project construction. ER Section 4.1.1.1.2.1 states that the plant site will be filled and graded to a general elevation of between 47' to 50'. Oppositely, Figure 3.1.2 (Sheets 2, 3, and 4), contained in the ER, appears to show plant site elevation and building height indexed from a grade elevation of 100'. Correspondingly, the subterranean *basemat* is then correctly depicted at an elevation of 60.5'. ER Section 4.2.1.5 evidences this interpretation of Figure 3.1.2; as it describes *basemat* placed to a depth of 39.5' feet. Yet this same section also mentions excavation may reach as much as 75' from *ground surface* for some structural elements.

While in all cases it is understood that filling would happen to elevate cooling towers and reactors above the 100-year floodplain, this presentation makes it unclear the depths to which excavation may occur on-site. Uniformly referencing a standard measure – such as mean sea level – would help clarify the scope of excavation and therefore any impacts to the subject location and vicinity. With proposed excavation activity defined, what potential aquifer impacts could result?

10. Section 5.2.2 of the SCA directs the reader to Chapter 6 of the ER for exposition of project impact monitoring. Section 6.1 of the ER identifies where the plant's residual thermal output could impact existing conditions in water bodies around the subject location, and it outlines supporting methodology for a program of vicinity water temperature monitoring. In so doing, this section extensively references Tables 6.1.1 through 6.1.3, which contain no data. Whereas in many cases data would not exist until a future point of collection, will background water temperature data now available be made publicly accessible? Likewise, to what extent will pre-application monitoring data be available as it pertains to current aquatic ecosystems and other categories of background conditions? Generally, how are the monitoring process and supporting methodologies – covered in ER Section 6.0 – structured to recognize impacts directly attributable to project development as an independent variable?
11. Section 7 of the SCA discusses the economic impacts of the Levy Nuclear Plant. Has the applicant considered what other types of economic uses might benefit from co-location either on-site or in proximity to the Levy Nuclear Plant and Crystal River Energy Complex?

IX. Levy County

1. The Site Certification Application lacks a statement of consistency with County zoning ordinances as required by Section 403.50663 of the PPSA. The Application fails to contain any statement concerning the status of the zoning. Additionally, copies of applicable zoning ordinances that apply to the project are not included in the Site Certification Application, as required by applicable sections of the Florida Administrative Code. The County requests a statement of consistency with the County zoning ordinances, as well as copies of the applicable County ordinances the applicant determines are applicable.
2. Statements contained within the Application that refer to the County's zoning district and land use category designations as being one and the same are inaccurate for this site. The County requests information that will clarify these statements regarding the zoning and land use designations.
3. The Site Certification Application lacks sufficient information for the County to make a determination as to the consistency of the proposed use with various provisions of the County's Land Development Code. There is insufficient information related to the requirement for a special exception use permit for the use as an electric generating facility in the zoning district for this site. In addition, the Site Certification Application does not contain sufficient information to make the determination that the electric generating facility will not result in such noise, odor, dust, vibration, offsite glare, substantial traffic or degradation of road infrastructure so as to adversely impact surrounding development or cause hazardous traffic conditions.
4. Although the County recently received an application for a special exception use permit, County staff has not had ample opportunity yet to determine whether the application packet is complete. In addition, the special exception application has not gone through the regular public review process, nor has the application received a final approval or denial from the Board of County Commissioners. The County requests sufficient information for the County to review and determine whether the proposed project meets the criteria for approval of a special exception use permit for an electric generating facility in this zoning district and to make determinations relating to the offsite impacts described in the previous paragraph.
5. The subject property contains areas designated as environmentally sensitive by the County's Land Development Code and Comprehensive Plan. The Application identifies threatened, endangered and listed species of concern on the site. The Application does not provide the applicable permit or letter of exemption from the appropriate State of Florida Water Management District and the Florida Department of Environmental Protection and any other applicable permitting agency related to these issues, as required by the County's Land Development Code. The County requests those permits or letters of exemption.

6. The Site Certification Application does not appear to address the impacts to the aquifer and connected groundwater systems resulting from the proposed project. The Application appears to contain inconsistencies regarding water withdrawals from the Floridan aquifer. The total average daily withdrawal of fresh water from the aquifer is unclear, based on the information provided in the Application. The County requests information indicating the impacts to the aquifer and connected groundwater, clarifying inconsistencies related to water withdrawals, and indicating total average daily withdrawal of fresh water from the aquifer.

Attached also, please find a copy of submitted letters/comments from Florida Fish and Wildlife Conservation Commission, Southwest Florida Water Management District, Withlacoochee Regional Planning Council, Levy County, and Florida Department of State Division of Historical Resources.

Attach: