



September 30, 2008

Ms. Mary Ann Poole
Director
Office of Policy and Stakeholder Coordination
Florida Fish and Wildlife Conservation Commission
620 South Meridian Street
Tallahassee, Florida 32399-1600

Subject: Progress Energy Florida Levy Nuclear Plant Units 1 and 2

Dear Ms. Poole:

This letter provides additional clarifying information in response to comments raised in your letter to the DEP Siting Coordination Office, dated August 27, 2008. Please note that the attachments referenced in the response below are being provided to FWC and DEP Siting Coordination Office only.

Comment 1

Progress Energy has provided the details of the "COLA Aquatic Sampling Workplan" dated March 2008 (RAI Number: LNP SCA RAI-I07). In the review of the workplan, it does not appear that benthic monitoring of seagrasses is planned or is being conducted. We request additional information on procedures that Progress Energy will employ to monitor impacts to seagrass beds. If no plan has been developed, we recommend that seagrass monitoring studies be incorporated into the workplan. Further, we recommend that these surveys should include: 1) seagrass species identification and location, 2) delineation of seagrass patch distribution if seagrass distribution is not continuous within the current and projected thermal plume, and 3) areal percent cover by species. We request that Progress Energy provide a map showing seagrass distributions by species (with densities or areal coverage) within the current and projected thermal plume.

Response to Comment 1:

The proposed LNP discharge will be a lower temperature than the existing CREC discharge and it will not cause or contribute to a greater thermal footprint in the zone of discharge at the end of the CREC discharge canal. As a result, the temperature of the combined LNP and CREC discharge is projected to be slightly lower than the temperature of the discharge from the existing CREC units. Discharge details are provided in the following table.

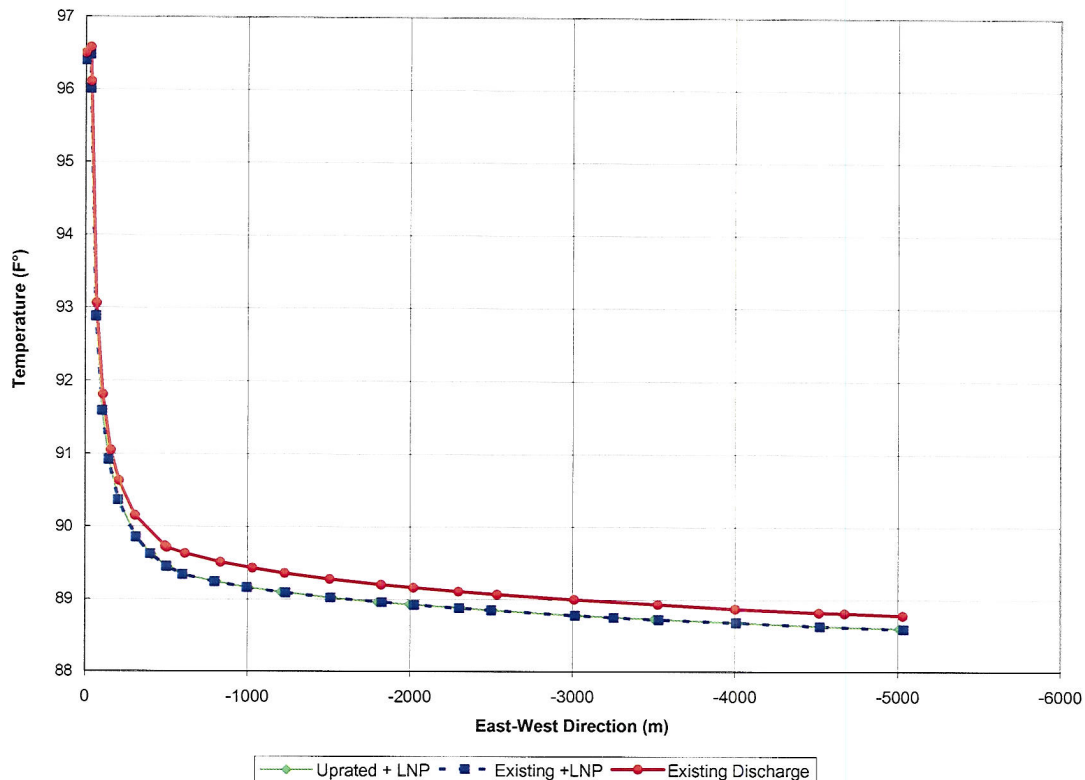
Summary of Cooling Tower Blowdown Discharges

Generating Units	Discharge Flow Rate (mgd)	Up rated Flow Rate (mgd)	Max. Temp. (°F)	COC
CREC 1, 2, and 3	1897.9	1878.15	96.5	1.0
CREC 4 and 5	88	N/A	96.5	1.5
LNP	87.5	N/A	94.4	1.5

COC = cycles of concentration

By adding the lower temperature LNP discharge, the overall temperature of the combined discharge plume is not expected to increase with distance. The 4 percent additional flow rate from LNP, with a lower temperature, will contribute to more dilution in the Gulf of Mexico. The existing CREC plume stratifies into a shallower surface layer because the higher temperature plume is slightly less dense than ambient Gulf waters. The more stratified existing condition results in more buoyant lateral spreading (i.e., the plume would be "squeezed" into a thinner layer), resulting in a plume area with less vertical mixing, covering a larger area. Adding the LNP discharge to the CREC discharge stream will cause the combined plume to be slightly denser because of lower temperature and slightly higher salinity. There will be slightly more vertical mixing under the proposed conditions, which will result in a more rapid reduction in temperature over distance and a smaller area of dispersion. The comparison between the existing and proposed discharges, as estimated with plume dilution modeling, indicates that the addition of the LNP discharge to the existing CREC discharge will have no significant or discernible effect on the thermal footprint of the CREC discharge, as illustrated in the following figure.

Temperature vs. Distance from Discharge Canal



Monitoring of seagrasses has been previously conducted at CREC. These studies demonstrated that seagrass distribution varies seasonally and may be influenced by a number of factors unrelated to CREC. These studies, which include maps of seagrass distributions, are attached in the response to Comment 5. Because no additional thermal increases are projected, no additional seagrass monitoring is warranted.

Comment 2

The Aquatic Sampling Workplan indicates the protocols that will be used for "Ichthyoplankton and Meroplankton" sampling and the "Chain of Custody" information. Based upon this information the taxonomic level of identification for ichthyoplankton and meroplankton collections (e.g., family, genus, or species) is not clear. We request that the applicant provide information on the lowest (i.e, most detailed) level of identification for ichthyoplankton and meroplankton that will be included in the laboratory analysis.

Response to Comment 2

Identification of ichthyoplankton and meroplankton (shellfish larvae), along with fish eggs and other invertebrates, will be made to the lowest practicable taxon, the target being genus and species. For ichthyoplankton, the number of individuals for each taxon by life stage (for example, egg, yolk-sac larvae, post-yolk-sac larvae, or juvenile) will be identified and counted. Identification of meroplankton will be conducted in accordance with the protocol

provided in Attachment 1. Generally, identifications are to the genus and species level for those taxa that are of commercial value in later lifestages and to more general categories for other meroplankton taxa. Specimens damaged beyond recognition will be recorded as unidentified. Scientific and common names will follow standard scientific convention, as set forth in the Federal Integrated Taxonomic Information System (ITIS). Internal taxonomic quality assurance will be performed on 10 percent of all samples identified by individual taxonomists.

Final laboratory reporting will include, but not be limited to, the following: number of specimens counted for each taxon, notes on the condition of organisms, archive vial numbers, the type of plankton identified (meroplankton, ichthyoplankton, etc.), and the developmental stage, if known.

Comment 3

The Aquatic Sampling Workplan schedule also indicates that sampling will end in September 2008 for work in the Cross Florida Barge Canal. Please indicate the reasons why this will not continue over multiple seasons and years and what the future sampling schedule will be upon initiation and completion of the Levy Power Plant. Please indicate what mitigative measures will be undertaken based upon the impingement and entrainment sampling results.

Response to Comment 3

Aquatic sampling began in late fall in 2007 and field sampling is scheduled to end following the collection of ichthyoplankton/meroplankton samples in September 2008.

Data analysis of the collected samples will continue through December 2008 and early into 2009. A project sampling schedule is provided as Attachment 2. This sampling and analysis protocol will provide 1 year of seasonal ichthyoplankton/meroplankton data and multiple season sampling of fish, motile crustaceans, and macroinvertebrates in the Cross Florida Barge Canal (CFBC) and nearshore Gulf waters. In addition, one set of samples of fish, macroinvertebrates, and motile crustaceans has been collected in the old channel of the Withlatchochee River below the Lake Rousseau Dam to characterize the nature and extent of the freshwater biota in that river reach. Preliminary draft biological sampling program data available at this time are provided in Attachment 3. These data are considered draft but are representative and are provided as requested by FWC.

This level of sampling is adequate to characterize the seasonal differences in the potentially affected waters at a level commensurate with an evaluation of potential impacts of the proposed project to aquatic biota. It is expected that a sampling program will be established for the cooling water intake structure (CWIS) to monitor the effects, if any, of LNP operations. The terms and conditions of any such program will be established through the NPDES permit and associated conditions.

The impacts of the operation of the proposed CWIS are anticipated to be small, since operations of LNP will comply with the 316(b) Phase I Rule that requires use of a closed-cycle recirculating cooling system that uses non-contact cooling towers. The design of the CWIS is being performed to ensure that through-screen velocities at the intake structure will not exceed 0.5 foot per second (fps). The use of a closed-cycle cooling tower system will reduce potential entrainment by over 90 percent and the design of the low through-screen velocity intake system will assure minimal impingement effects. In addition, the discharge of the cooling tower blowdown to the existing CREC discharge will add less than 5 percent to the existing discharge flow stream and the maximum temperature of the LNP blowdown stream will be slightly less than the existing CREC discharge temperature. Attachment 4 summarizes some of the aquatic biota assessment methodologies that will be employed to evaluate potential project impacts.

For these reasons, Progress Energy does not anticipate the need for further mitigation.

Comment 4

The Aquatic Sampling Workplan indicates (Section 2.4.3) the protocols that will be used for collection and identification of the fish community. We request that the applicant identify fish (and invertebrate) species to the genus and species instead of the stated "genus and species (if practical)."

Response to Comment 4

The target for identification of fish captured is to genus and species. The fish collection equipment described in Section 2.4.2 (for example, gill net, minnow trap, trawl) can result in the capture of a range of specimen sizes and life stages. Very small immature specimens and damaged organisms may be difficult to positively identify to species; thus, in rare cases where there is unavoidable uncertainty, a specimen would be identified to the lowest practicable level, such as genus or family.

Comment 5

Progress Energy in their response to RAI Number: LNP SCA RAI-118 which states that seagrass monitoring studies in association with the Crystal River Energy Complex indicate that the seagrass beds are dynamic in nature. We request copies of the seagrass monitoring study reports that corroborate these statements. We also request that the applicant provide the estimated amounts of seagrasses that may be potentially affected by the elevated thermal plume from the discharge.

Response to Comment 5

Copies of the seagrass monitoring study reports conducted in association with CREC are included with this response as Attachment 5. These reports include baseline information excerpted from 316 studies (Mote, 1985), 1993-1995 annual monitoring reports, a 2001 resurvey report (Coastal Seas Consortium, 2002), and a summary report by the Seagrass

Technical Advisory Committee (STAC; Florida Power Corporation). These reports document both between-year and seasonal variation in seagrass distribution. The STAC report also notes that a number of variables other than temperature may be influencing seagrass distribution.

As discussed in the response to Comment 1, the discharge of LNP blowdown to the CREC discharge canal is not expected to result in a combined discharge with a higher maximum temperature than the existing CREC discharge stream. Since the footprint of the combined discharge into the Gulf of Mexico is not expected to be larger than the footprint currently existing for CREC, seagrasses will not be significantly affected.

Comment 6

Progress Energy's response to RAI Number: LNP SCA RAI-115 concerning access by manatees to the intake structure states that a proposed trash rack will prevent manatee access. Please provide a complete description of the proposed trash rack system, including the type (brand) of trash rack proposed, the rack installation angle, and if a rake/rake gripper (or other moving element for cleaning or straining) is proposed as part of the mechanism, a description of the rake gripper, the size (in inches) of the rake gripper opening, the proposed descent velocity of the rake or other straining mechanism, and the proposed type of operation of the rake (automated or manual). Please reference any relevant figures from the application materials including drawings of the rack and the proposed location of the trash rack relative to the cooling water intake structure forebay.

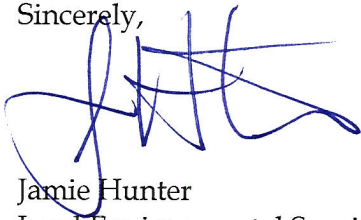
Response to Comment 6

The details of the CWIS design are in development and will be supplied to the agency as the design is finalized. However, it is known that the fixed intake bar (trash) racks extending from above the water surface to the bottom of the canal will have a bar spacing of no more than 4 inches between vertical bars. This spacing will provide adequate protection for manatees. The projected velocities at the bar racks will be no greater than approximately one-half of the Phase I requirement for "less than 0.5 fps through-screen velocity "and, depending on the finalized forebay size and configuration, the approach velocities at the bar racks could be less than the projected 0.25 fps. These low design velocities and bar rack widths will allow for any manatee encounters with the CWIS to result in an easy escape without injury.

Ms. Mary Ann Poole
September 30, 2008
Page 7

We appreciate your review of these responses and would welcome the opportunity to resolve any additional questions. Please contact me if you have any questions or require additional information. Thank you.

Sincerely,



Jamie Hunter
Lead Environmental Specialist
Progress Energy Florida

Enclosure – Disk with Attachments

cc: see attached list