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Serial: PE&RAS-04-117  
October 28, 2004

United States Nuclear Regulatory Commission  
ATTENTION: Document Control Desk  
Washington, DC 20555-0001

Michael Tschiltz, Chief  
Probabilistic Safety Assessment Branch  
MS: O10-H4  
U.S. Nuclear Regulatory Commission  
11555 Rockville Pike  
Rockville, MD 20852-2738

BRUNSWICK STEAM ELECTRIC PLANT, UNIT NOS. 1 AND 2  
DOCKET NOS. 50-325 AND 50-324 / LICENSE NOS. DPR-71 AND DPR-62

SHEARON HARRIS NUCLEAR POWER PLANT, UNIT NO. 1  
DOCKET NO. 50-400 / LICENSE NO. NPF-63

H. B. ROBINSON STEAM ELECTRIC PLANT, UNIT NO. 2  
DOCKET NO. 50-261 / LICENSE NO. DPR-23

CRYSTAL RIVER UNIT 3 NUCLEAR GENERATING PLANT  
DOCKET NO. 50-302 / LICENSE NO. DPR-72

**RESPONSE TO INFORMATION REQUEST FOR NEXT REVISION OF  
SIGNIFICANCE DETERMINATION PROCESS RISK-INFORMED INSPECTION  
NOTEBOOK**

REFERENCES: Letter from Michael Tschiltz, USNRC, to John Caves, Progress Energy Carolinas, Inc., "Transmittal of Revision 1 Significance Determination Process Risk-Informed Inspection Notebook and Information Request for next Revision," dated September 2, 2004. (ML 042510084)

Ladies and Gentlemen:

As directed by the NRC in the referenced letter, Carolina Power & Light Company, now doing business as Progress Energy Carolinas, Inc. (PEC), and Florida Power Corporation, now doing business as Progress Energy Florida, Inc. (PEF), hereby transmit the requested plant-specific information for the Brunswick Steam Electric Plant (BSEP), Unit Nos. 1 and 2, Shearon Harris Nuclear Power Plant (SHNPP), H.B. Robinson Steam Electric Plant (HBRSEP), and Crystal River Unit 3 Nuclear Generating Plant (CR3) via the enclosed compact disk (CD), to Mr. Michael Tschiltz at the NRC. The CD contains the revision 1 Significance Determination Process (SDP) notebooks generated from the initial NRC benchmarking visit and our comments on revision 1 of

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the NRC SDP notebooks. Also enclosed is updated plant-specific Probabilistic Risk Analysis (PRA) information for the subject PEC and PEF nuclear plants, including answers to plant-specific questions from the NRC.

A summary of the changes to each plant's PRA model since the last SDP notebook and information request is shown below:

### BSEP

The BSEP MOR03 model update incorporated model changes due to implemented plant system and procedure changes (impacting post-initiating human errors only), including those related to Extended Power Uprate (EPU) for Unit 2. The update involved the evaluation of the plant changes, the resolution of existing nuclear condition reports regarding the models, incorporation of identified PRA and Equipment Out of Service (EOOS) model enhancements, and revisions to the model database and the other supporting files.

### CR3

The CR3 MOR03 model was updated to incorporate revised data and implement enhancements and corrections identified during use. The risk insights were not significantly changed since the previous SDP visit. One specific change of interest was that operators were given more credit for controlling High Pressure Injection (HPI) following a loss of "C" DC power based on simulator experience and engineering assessments.

### SHNPP

The MOR2003 model update incorporated model changes as follows: the most recent Westinghouse guidance (WCAP-15831, "WOG Risk-Informed ATWS Assessment and Licensing Implementation Process") on modeling Anticipated Transients Without Scram (ATWS); the latest Westinghouse guidance (WCAP-15955, "Steam Generator Tube Rupture PSA Notebook") for Steam Generator Tube Rupture (SGTR) modeling was incorporated with exceptions; the Rhodes Seal Loss-of-Coolant Accident (LOCA) model was implemented, including an update of the Loss of Offsite Power (LOOP) data through 2002; the Interfacing System LOCA (ISLOCA) analysis was revised to correct the failure mode probability for check valve internal rupture and to change the frequency calculation for sequences involving two or more identical failure modes to account for covariance of the basic event probabilities; a basic event for clogging of the recirculation sumps was added to the model as a single event affecting both sumps, based on NUREG/CR-3394 ("Probabilistic Assessment of Recirculation Sump Blockage Due to Loss Of Coolant Accidents, Vol. 1&2") and the plant-specific sump design parameters; the frequencies of Reactor Coolant System (RCS) LOCAs were revised to use the values in NUREG/CR-5750 ("Rates of Initiating Events at U.S. Nuclear power Plants:1987-1995", February 1999), without any Bayesian update based on plant-specific piping configurations; Common Cause Failure (CCF) events were reviewed and corrections/updates made to various events; and a general update to initiating events and plant-specific data through the end of 2002 was completed.

HBRSEP

The MOR04 model update involved the evaluation of the plant changes, the resolution of existing nuclear condition reports regarding the models, incorporation of identified model enhancements, and revisions to the model database and the other supporting files. The risk insights were not significantly changed since the previous SDP visit. Several minor changes were: an update to the LOOP frequency; small adjustments to the LOOP non-recovery probabilities; and improvement of a conservative modeling of dependency of Motor-Driven Auxiliary Feedwater Pump (MDAFWP) "B", on DC power.

Consistent with the NRC Staff directions, we specify that the NRC has made a preliminary determination in accordance with the provisions of section 2.390 of Title 10 of the Code of Federal Regulations that the information requested and the SDP notebooks may relate to a plant's physical protection. In accordance with this determination, this information in the enclosure to this letter has been marked as "proprietary information" and should be withheld from public disclosure.

No new regulatory commitment is contained in this submittal.

Please contact me at (919) 546-6901 if you need additional information.

Sincerely,



Chris Burton  
Manager - Performance  
Evaluation & Regulatory Affairs

RTG

Enclosure 1: CD containing revision 1 Significance Determination Process (SDP) notebooks for Progress Energy plants – PROPRIETARY INFORMATION

c: (without enclosure)

W. D. Travers, Regional Administrator – Region II  
USNRC Resident Inspector – BSEP, Unit Nos. 1 and 2  
USNRC Resident Inspector – CR3  
USNRC Resident Inspector – SHNPP, Unit No. 1  
USNRC Resident Inspector – HBRSEP, Unit No. 2  
B. L. Mozafari, NRR Project Manager – BSEP, Unit Nos. 1 and 2; CR3  
C. P. Patel, NRR Project Manager – SHNPP, Unit No. 1; HBRSEP, Unit No. 2  
J. A. Sanford - North Carolina Utilities Commission

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**Compact Disk**  
**Containing Revision 1 Significance Determination Process (SDP) Notebooks**  
**Progress Energy Florida, Inc.**  
**Progress Energy Carolinas, Inc.**