



Carolina Power & Light Company
PO Box 10429
Southport, NC 28461-0429

November 8, 1999

SERIAL: BSEP 99-0180

U. S. Nuclear Regulatory Commission, Region II
ATTN: Mr. Luis A. Reyes, Regional Administrator
Atlanta Federal Center
61 Forsyth Street, SW, Suite 23T85
Atlanta, GA 30303-3415

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

Gentlemen:

By letter dated October 22, 1999, the NRC documented arrangements made between the NRC and Carolina Power & Light (CP&L) Company regarding the administration of licensing examinations at the Brunswick Steam Electric Plant, Unit Nos. 1 and 2, during the weeks of February 14, 2000, and February 21, 2000. That letter requested CP&L to submit reference materials identified in Attachment 2 of ES-201, which is contained in NUREG-1021, "Operator Licensing Examination Standards for Power Reactors," by November 8, 1999.

The Enclosure to this letter provides a Master Table of Contents of the reference materials being provided. Due to the volume of information being provided, the requested information is being sent only to Mr. Harold O. Christensen, NRC Region II Chief Operator Licensing and Human Performance Branch. The reference materials being provided is a subset of that identified in Attachment 2 of ES-201. Consistent with ES-201, CP&L contacted Mr. George T. Hopper, NRC Region II Senior License Examiner, to determine the scope of materials needed to support exam preparation.

Please refer any questions regarding this submittal to Mr. Warren J. Dorman, Supervisor - Licensing, at (910) 457-2068.

Sincerely,

Keith R. Jury
Manager - Regulatory Affairs
Brunswick Steam Electric Plant

IE42

Mr. Luis A. Reyes
BSEP 99-0180 / Page 2

KMN/kmn

Enclosure:

Master Table of Contents

cc:

U. S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, DC 20555-0001

U. S. Nuclear Regulatory Commission
ATTN: Mr. Theodore A. Easlick, NRC Senior Resident Inspector
8470 River Road
Southport, NC 28461-8869

U. S. Nuclear Regulatory Commission
ATTN: Mr. Allen G. Hansen (Mail Stop OWFN 8G9)
11555 Rockville Pike
Rockville, MD 20852-2738

U. S. Nuclear Regulatory Commission
ATTN: Mr. Harold O. Christensen, NRC Region II
Atlanta Federal Center
61 Forsyth Street, SW, Suite 23T85
Atlanta, GA 30303-3415

U. S. Nuclear Regulatory Commission
ATTN: Mr. Richard S. Baldwin, Region II, Division Reactor Safety
Operator Licensing / Human Performance Branch
Atlanta Federal Center
61 Forsyth Street, SW, Suite 23T85
Atlanta, GA 30303-3415

Ms. Jo A. Sanford
Chair - North Carolina Utilities Commission
P.O. Box 29510
Raleigh, NC 27626-0510

ENCLOSURE

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

Master Table of Contents

VOLUME	PROCEDURE	TITLE
1	0AI-58.2	EQUIPMENT CONTROL AND CAUTION TAGGING
1	0AI-59	JUMPERING AND WIRE REMOVAL
1	0AI-66	PROCEDURE FOR SAFE WORK WITHIN CONFINED SPACES
1	0AI-68	BRUNSWICK NUCLEAR PLANT RESPONSE TO SEVERE WEATHER WARNINGS
1	0AI-70	BASIC SECURITY REQUIREMENTS FOR BNP EMPLOYEES
1	0AI-81	WATER CHEMISTRY GUIDELINES
1	0AI-89	EMERGENCY PLANT CHANGES
1	0AI-97	PLANT LABELING
1	0AI-106	FOREIGN MATERIAL EXCLUSION FOR THE REFUELING FLOOR
1	0AI-112	CONTROL OF MATERIALS IN SPENT FUEL POOL
1	0AI-115	125/250 VDC SYSTEM GROUND CORRECTION GUIDELINES
1	0AI-117	GUIDANCE FOR TROUBLESHOOTING SAFETY RELATED EQUIPMENT
1	0AI-125	SYSTEM CLEANLINESS/FOREIGN MATERIAL EXCLUSION
1	0AI-127	PRIMARY CONTAINMENT INSPECTION AND CLOSEOUT
2	0AOP-02.0	CONTROL ROD MALFUNCTION/MISPOSITION
2	0AOP-03.0	POSITIVE REACTIVITY ADDITION
2	0AOP-04.4	JET PUMP FAILURE
2	0AOP-05.0	RADIOACTIVE SPILLS, HIGH RADIATION, AND AIRBORNE ACTIVITY
2	0AOP-12.0	LOSS OF UNINTERRUPTIBLE POWER SUPPLY (UPS)
2	0AOP-13.0	OPERATION DURING HURRICANE, FLOOD CONDITIONS, TORNADO, OR EARTHQUAKE
2	0AOP-14.0	ABNORMAL PRIMARY CONTAINMENT CONDITIONS
2	0AOP-15.0	LOSS OF SHUTDOWN COOLING
2	0AOP-16.0	RBCCW SYSTEM FAILURE
2	0AOP-17.0	TURBINE BUILDING CLOSED COOLING WATER SYSTEM FAILURE
2	0AOP-18.0	NUCLEAR SERVICE WATER SYSTEM FAILURE
2	0AOP-19.0	CONVENTIONAL SERVICE WATER SYSTEM FAILURE
2	0AOP-20.0	PNEUMATIC (AIR/NITROGEN) SYSTEM FAILURES

VOLUME	PROCEDURE	TITLE
2	0AOP-22.0	ABNORMAL SYSTEM FREQUENCY
2	0AOP-23.0	CONDENSATE/FEEDWATER SYSTEM FAILURE
2	0AOP-26.0	HIGH REACTOR COOLANT OR CONDENSATE CONDUCTIVITY
2	0AOP-29.0	MALFUNCTION OF ANNUNCIATORS
2	0AOP-30.0	SAFETY/RELIEF VALVE FAILURES
2	0AOP-31.0	FLOODING IN TURBINE BUILDING CONDENSER PIT OR PIPE TUNNEL
2	0AOP-32.0	PLANT SHUTDOWN FROM OUTSIDE CONTROL ROOM
2	0AOP-33.0	OIL SPILLS IN CAPE FEAR RIVER
2	0AOP-34.0	CHLORINE EMERGENCIES
2	0AOP-36.1	LOSS OF ANY 4160V BUSES OR 480V E-BUSES
2	0AOP-36.2	STATION BLACKOUT
2	0AOP-37.0	LOW CONDENSER VACUUM
2	0AOP-38.0	LOSS OF FUEL POOL COOLING
2	0AOP-39.0	LOSS OF DC POWER
2	1AOP-04.0	LOW CORE FLOW
2	2AOP-04.0	LOW CORE FLOW
3	0EOP-01-AEDP	ALTERNATE EMERGENCY DEPRESSURIZATION PROCEDURE
3	0EOP-01-LEP-01	ALTERNATE COOLANT INJECTION
3	0EOP-01-LEP-02	ALTERNATE CONTROL ROD INSERTION
3	0EOP-01-LEP-03	ALTERNATE BORON INJECTION
3	0EOP-01-NL	EOP/SAMG NUMERICAL LIMITS AND VALUES
3	0EOP-01-RXFP	REACTOR FLOODING PROCEDURE
3	0EOP-01-SEP-01	PRIMARY CONTAINMENT VENTING
3	0EOP-01-SEP-02	DRYWELL SPRAY PROCEDURE
3	0EOP-01-SEP-03	SUPPRESSION POOL SPRAY PROCEDURE
3	0EOP-01-SEP-04	REACTOR BUILDING HVAC RESTART PROCEDURE
3	0EOP-01-SEP-05	PRIMARY CONTAINMENT PURGING
3	0EOP-01-SEP-06	SHUTDOWN COOLING FOLLOWING BORON INJECTION
3	0EOP-01-SEP-07	BYPASSING RWCU FILTER DEMINERALIZERS
3	0EOP-01-SEP-08	RESTORATION PROCEDURE
3	0EOP-01-SEP-09	CRD FLOW MAXIMIZATION
3	0EOP-01-SEP-10	CIRCUIT ALTERATION PROCEDURE
3	0EOP-01-STCP	STEAM COOLING PROCEDURE
3	0EOP-01-UG	USER'S GUIDE
3	0EOP-02-PCCP	PRIMARY CONTAINMENT CONTROL PROCEDURE
3	0EOP-03-SCCP	SECONDARY CONTAINMENT CONTROL PROCEDURE
3	0EOP-04-RRCP	RADIOACTIVITY RELEASE CONTROL PROCEDURE

VOLUME	PROCEDURE	TITLE
3	1EOP-01-LPC	LEVEL/POWER CONTROL
3	1EOP-01-RSP	REACTOR SCRAM PROCEDURE
3	1EOP-01-RVCP	REACTOR VESSEL CONTROL PROCEDURE
3	2EOP-01-LPC	LEVEL/POWER CONTROL
3	2EOP-01-RSP	REACTOR SCRAM PROCEDURE
3	2EOP-01-RVCP	REACTOR VESSEL CONTROL PROCEDURE
4	0GP-01	PRESTARTUP CHECKLIST
4	0GP-02	APPROACH TO CRITICALITY AND PRESSURIZATION OF THE REACTOR
4	0GP-03	UNIT STARTUP AND SYNCHRONIZATION
4	0GP-04	INCREASING TURBINE LOAD TO RATED POWER
4	0GP-05	UNIT SHUTDOWN
4	0GP-06	COLD SHUTDOWN TO REFUELING (HEAD UNBOLTED)
4	0GP-07	PREPARATIONS FOR CORE ALTERATIONS
4	0GP-08	REFUELING TO COLD SHUTDOWN
4	0GP-10	ROD SEQUENCE CHECKOFF SHEETS
5	0GP-11	SECOND OPERATOR ROD SEQUENCE CHECKOFF SHEETS
5	0GP-12	POWER CHANGES
5	0GP-13	INCREASING UNIT CAPACITY AT END OF CORE CYCLE
6	0OI-01.01	OPERATIONS UNIT ORGANIZATION AND ADMINISTRATION
6	0OI-01.02	SHIFT ROUTINES AND OPERATING PRACTICES
6	0OI-01.03	NON-ROUTINE ACTIVITIES
6	0OI-01.04	PRE-POST JOB BRIEFS
6	0OI-01.05	LICENSE ACTIVATION AND MAINTENANCE
6	0OI-01.06	POST TRIP REVIEW
6	0OI-01.07	NOTIFICATIONS
6	0OI-01.08	CONTROL OF EQUIPMENT AND SYSTEM STATUS
6	0OI-18	DEFINITION OF INSTRUMENT CHANNELS AND TRIP SYSTEMS FOR SELECTED INSTRUMENTS
7	0OI-37.1	EOP WRITTEN PROCEDURE STEP DISCUSSIONS
7	0OI-37.2	EOP FLOWCHARTED PROCEDURE STEP DISCUSSIONS
7	0OI-37.6	REACTOR FLOODING PROCEDURE BASIS DOCUMENT
7	0OI-37.7	STEAM COOLING PROCEDURE BASIS DOCUMENT
7	0OI-37.9	SECONDARY CONTAINMENT CONTROL PROCEDURE BASIS DOCUMENT
7	0OI-37.10	RADIOACTIVITY RELEASE CONTROL PROCEDURE BASIS DOCUMENT
8	0OI-44	EXCESS FLOW CHECK VALVE POSITION INDICATION EVALUATION
8	0OI-50	125/250 VDC ELECTRICAL LOAD LIST
8	0OI-50.1	4160V EMERGENCY BUS E-1 ELECTRICAL LOAD LIST

VOLUME	PROCEDURE	TITLE
8	0OI-50.2	4160V EMERGENCY BUS E-2 ELECTRICAL LOAD LIST
8	0OI-50.3	4160V EMERGENCY BUS E-3 ELECTRICAL LOAD LIST
8	0OI-50.4	4160V EMERGENCY BUS E-4 ELECTRICAL LOAD LIST
8	0OI-50.10	4160V BUS 2B ELECTRICAL LOAD LIST
8	0OI-50.11	4160V BUS 2C ELECTRICAL LOAD LIST
8	0OI-50.12	4160V BUS 2D ELECTRICAL LOAD LIST
8	0OI-50.13	4160V BUS COMMON B ELECTRICAL LOAD LIST
8	0OI-50.14	4160V CASWELL BEACH BUSES A AND B ELECTRICAL LOAD LIST
9	0OI-53	ROD WORTH MINIMIZER (NUMAC-RWM)
9	0OI-60	ERFIS DATA DISPLAY SYSTEM
9	0OI-72	PLANT PROCESS COMPUTER SYSTEM OPERATING INSTRUCTION
9	1OI-03.1	CONTROL OPERATOR DAILY SURVEILLANCE REPORT
9	2OI-03.2	CONTROL OPERATOR DAILY SURVEILLANCE REPORT
10	0ERP	RADIOLOGICAL EMERGENCY RESPONSE PLAN (ERP)
10	0PEP-01.0	PLANT EMERGENCY PROCEDURES INTRODUCTION
10	0PEP-02.1	INITIAL EMERGENCY ACTIONS
10	0PEP-02.1.1	EMERGENCY CONTROL - NOTIFICATION OF UNUSUAL EVENT, ALERT, SITE AREA EMERGENCY, AND GENERAL EMERGENCY
10	0PEP-02.6	SEVERE WEATHER
10	0PEP-02.6.6	ENVIRONMENTAL MONITORING TEAM LEADER
10	0PEP-02.6.12	ACTIVATION AND OPERATION OF THE OPERATIONAL SUPPORT CENTER
10	0PEP-02.6.20	DOSE PROJECTION COORDINATOR
10	0PEP-02.6.21	EMERGENCY COMMUNICATOR
10	0PEP-02.6.26	ACTIVATION AND OPERATION OF THE TECHNICAL SUPPORT CENTER (TSC)
10	0PEP-02.6.27	ACTIVATION AND OPERATION OF THE EMERGENCY OPERATIONS FACILITY (EOF)
10	0PEP-02.6.28	OFF-SITE PROTECTIVE ACTION RECOMMENDATIONS
10	0PEP-02.6.29	ACTIVATION AND OPERATION OF THE JOINT INFORMATION CENTER (JIC)
10	0PEP-02.7	RECOVERY
11	0PEP-03.4.7	AUTOMATION OF OFF-SITE DOSE PROJECTION PROCEDURES
11	0PEP-03.5.5	ENVIRONMENTAL MONITORING AND PLUME TRACKING
11	0PEP-03.6.1	RELEASE ESTIMATES BASED UPON STACK/VENT READINGS
11	0PEP-03.6.3	ESTIMATE OF THE EXTENT OF CORE DAMAGE UNDER ACCIDENT CONDITIONS
11	0PEP-03.6.5	COLLECTION AND ANALYSIS OF HIGHLY RADIOACTIVE SAMPLES
11	0PEP-03.7.6	EMERGENCY EXPOSURE CONTROLS
11	0PEP-03.7.7	ONSITE RADIOLOGICAL CONTROLS
11	0PEP-03.8.2	PERSONNEL ACCOUNTABILITY AND EVACUATION
11	0PEP-03.9.2	FIRST AID AND MEDICAL CARE

VOLUME	PROCEDURE	TITLE
11	0PEP-03.9.3	TRANSPORT OF CONTAMINATED INJURED PERSONNEL
11	0PEP-03.9.6	SEARCH AND RESCUE
12	0PLP-01.1	FIRE PROTECTION COMMITMENT DOCUMENT
12	0PLP-01.2	FIRE PROTECTION SYSTEM OPERABILITY, ACTION, AND SURVEILLANCE REQUIREMENTS
12	0PLP-17	IDENTIFICATION, DEVELOPMENT, REVIEW, AND CONDUCT OF INFREQUENTLY PERFORMED TESTS OR EVOLUTIONS
12	0PLP-20	POST-MAINTENANCE TESTING PROGRAM
12	0PLP-21	INDEPENDENT VERIFICATION
12	0PLP-22	TEMPORARY MODIFICATIONS
12	0PLP-29	SELF-ASSESSMENT FOR READINESS TO STARTUP FOLLOWING AN OUTAGE
12	0PLP-31	TECHNICAL SPECIFICATION SURVEILLANCE TEST SCHEDULING SYSTEM (STSS)/CROSS REFERENCE
13	SD-01	NUCLEAR BOILER SYSTEM
13	SD-01.1	FUEL BUNDLE ASSEMBLY
13	SD-01.2	REACTOR VESSEL INSTRUMENTATION
13	SD-02	REACTOR RECIRCULATION SYSTEM
13	SD-03	REACTOR PROTECTION SYSTEM INCLUDING ALTERNATE ROD INJECTION SYSTEM
13	SD-04	PRIMARY CONTAINMENT
13	SD-04.1	SECONDARY CONTAINMENT
13	SD-05	STANDBY LIQUID CONTROL SYSTEM
13	SD-06.3	RADWASTE RELEASE SYSTEM
13	SD-07	REACTOR MANUAL CONTROL SYSTEM
13	SD-07.1	ROD WORTH MINIMIZER SYSTEM (RWM)
13	SD-08	CRD HYDRAULIC SYSTEM
13	SD-08.1	CONTROL ROD DRIVE (CRD) MECHANISM
13	SD-09.1	NEUTRON MONITORING SYSTEM (STARTUP AND INTERMEDIATE RANGE)
14	SD-09.3	POWER RANGE NEUTRON MONITORING SYSTEM
14	SD-09.4	ROD BLOCK MONITORING (RBM) SYSTEM
14	SD-09.5	TRAVERSING IN-CORE PROBE (TIP) SYSTEM
14	SD-10	STANDBY GAS TREATMENT SYSTEM
14	SD-11.0	PROCESS RADIATION MONITORING SYSTEM
14	SD-11.1	AREA RADIATION MONITORING SYSTEM
14	SD-12	PRIMARY CONTAINMENT ISOLATION SYSTEM (INCLUDING STEAM LEAK DETECTION AND REACTOR INSTRUMENT PENETRATIONS)
15	SD-13	FUEL POOL COOLING AND DEMINERALIZER SYSTEM
15	SD-14	REACTOR WATER CLEANUP SYSTEM

VOLUME	PROCEDURE	TITLE
15	SD-15	SAMPLING (PROCESS, AOG, AND PASS) SYSTEMS
15	SD-16	REACTOR CORE ISOLATION COOLING (RCIC) SYSTEM
15	SD-17	RESIDUAL HEAT REMOVAL SYSTEM
15	SD-18	CORE SPRAY SYSTEM
16	SD-19	HIGH PRESSURE COOLANT INJECTION (HPCI) SYSTEM
16	SD-20	AUTOMATIC DEPRESSURIZATION SYSTEM (ADS)
16	SD-21	REACTOR BUILDING CLOSED COOLING WATER SYSTEM
16	SD-24	CONTAINMENT ATMOSPHERIC CONTROL SYSTEM
16	SD-25	MAIN STEAM SYSTEM
16	SD-26	TURBINE SYSTEM
16	SD-26.1	MAIN TURBINE LUBE OIL AND LUBE OIL STORAGE AND CONDITIONING SYSTEMS
17	SD-26.2	ELECTROHYDRAULIC CONTROL SYSTEM (MECHANICAL)
17	SD-26.3	EHC ELECTRICAL
17	SD-27	MAIN GENERATOR AND EXCITER SYSTEM
17	SD-27.1	GENERATOR HYDROGEN SEAL OIL SYSTEM
17	SD-27.2	STATOR COOLING WATER SYSTEM
17	SD-27.3	GENERATOR GAS SYSTEM
17	SD-28	MAIN CONDENSER
17	SD-29	CIRCULATING WATER SYSTEM
18	SD-29.1	SCREEN WASH WATER SYSTEM
18	SD-30	CONDENSER AIR REMOVAL AND OFF-GAS RECOMBINER SYSTEM
18	SD-31	MAKEUP WATER TREATMENT SYSTEM
18	SD-31.2	CONDENSATE AND DEMINERALIZED WATER STORAGE AND TRANSFER SYSTEM
18	SD-32	CONDENSATE AND FEEDWATER SYSTEM
18	SD-32.1	CONDENSATE DEEP BED DEMINERALIZER AND FILTER DEMINERALIZER SYSTEM
18	SD-32.2	DIGITAL FEEDWATER CONTROL SYSTEM
19	SD-33	AUGMENTED OFF-GAS SYSTEM
19	SD-34	EXTRACTION STEAM, FEEDWATER HEATER DRAINS, VENTS, AND LEVEL CONTROL SYSTEM
19	SD-36	MOISTURE SEPARATOR/REHEATER DRAINS SYSTEM
19	SD-37	CONTROL BUILDING HEATING, VENTILATION, AND AIR-CONDITIONING SYSTEM
19	SD-37.1	REACTOR BUILDING HVAC
19	SD-37.2	RADWASTE BUILDING HEATING, VENTILATING, AND AIR CONDITIONING SYSTEM
19	SD-37.3	TURBINE BUILDING HEATING, VENTILATION, AIR CONDITIONING (TB HVAC)
19	SD-37.4	DIESEL GENERATOR BUILDING HEATING AND VENTILATION SYSTEM
20	SD-37.6	TSC/EOF VENTILATION
20	SD-37.8	NITROGEN AND OFF-GAS BUILDING HEATING AND VENTILATING SYSTEM

VOLUME	PROCEDURE	TITLE
20	SD-38	FUEL OIL SYSTEM
20	SD-39	EMERGENCY DIESEL GENERATORS
20	SD-40	AUXILIARY STEAM SYSTEM
20	SD-41	FIRE SUPPRESSION/DETECTION SYSTEMS
20	SD-43	SERVICE WATER SYSTEM
21	SD-43.1	CHLORINATION SYSTEM
21	SD-44	TURBINE BUILDING CLOSED COOLING WATER SYSTEM
21	SD-46	PNEUMATIC SYSTEMS
21	SD-47	FLOOR AND EQUIPMENT DRAIN SYSTEM
21	SD-48	COMMUNICATIONS SYSTEM
21	SD-50	230 KV ELECTRIC DISTRIBUTION SYSTEM
21	SD-50.1	4160 VAC ELECTRICAL DISTRIBUTION SYSTEM
22	SD-50.2	480 VAC ELECTRICAL SYSTEM
22	SD-51	DC DISTRIBUTION SYSTEM
22	SD-52	120 VAC ELECTRICAL SYSTEM
22	SD-53	FREEZE PROTECTION AND HEAT TRACING SYSTEM
22	SD-55	PROCESS COMPUTER SYSTEM
23	SD-57	SEISMIC MONITORING SYSTEM
23	SD-58	STRUCTURES AND CRANES
23	SD-59	HYDROGEN WATER CHEMISTRY SYSTEM
23	SD-60	ERFIS DATA ACQUISITION, PROCESSING, AND DISPLAY
23	SD-61	CONTROL ROOM ANNUNCIATOR SYSTEM
23	SD-62	REMOTE SHUTDOWN PANEL
24	--	UNIT 1 TECHNICAL SPECIFICATIONS
25	--	UNIT 1 BASES - BOOK 1
26	--	UNIT 1 BASES - BOOK 2
27	--	UNIT 1 TECHNICAL REQUIREMENTS MANUAL
27	--	UNIT 1 CORE OPERATING LIMITS REPORT
27	--	UNIT 1 SUPPLEMENTAL RELOAD LICENSING REPORT
28	--	UNIT 2 TECHNICAL SPECIFICATIONS
29	--	UNIT 2 BASES - BOOK 1
30	--	UNIT 2 BASES - BOOK 2
31	--	UNIT 2 TECHNICAL REQUIREMENTS MANUAL
31	--	UNIT 2 CORE OPERATING LIMITS REPORT
31	--	UNIT 2 SUPPLEMENTAL RELOAD LICENSING REPORT
32	--	OFFSITE DOSE CALCULATION MANUAL
32	--	PROCESS CONTROL PROGRAM