

January 3, 1990

Docket Nos. 50-325
and 50-324

DISTRIBUTION
See attached list

Mr. Lynn W. Eury
Executive Vice President
Power Supply
Carolina Power & Light Company
Post Office Box 1551
Raleigh, North Carolina 27602

Dear Mr. Eury:

SUBJECT: ISSUANCE OF AMENDMENT NO. 138 TO FACILITY OPERATING LICENSE NO. DPR-71
AND AMENDMENT NO. 170 TO FACILITY OPERATING LICENSE NO. DPR-62 -
BRUNSWICK STEAM ELECTRIC PLANT, UNITS 1 AND 2, REGARDING DELETION OF
ORGANIZATION CHARTS AND ADMINISTRATIVE CHANGES
(TAC NOS. 73017 AND 73018)

The Nuclear Regulatory Commission has issued the enclosed Amendment No. to
Facility Operating License No. DPR-71 and Amendment No. to Facility
Operating License No. DPR-62, for Brunswick Steam Electric Plant, Units 1 and 2.
The amendments consist of changes to the Technical Specifications (TS) in
response to your submittals dated April 28, 1989 and November 16, 1989.

The amendments change the TS to delete organization charts from the TS,
incorporate other organizational changes to Section 6.0, Administrative
Controls, and update TS Section 6.5.4.9 to reflect current 10 CFR 50.72 and
10 CFR 50.73 reporting requirements. For a complete listing of the changes see
the enclosed Safety Evaluation.

A copy of the related Safety Evaluation is also enclosed. A Notice of Issuance
will be included in the Commission's Bi-Weekly Federal Register Notice.

Sincerely,

Original Signed By:

Ngoc B. Le, Project Manager
Project Directorate II-1
Division of Reactor Projects I/II
Office of Nuclear Reactor Regulation

Enclosures:

1. Amendment No. 138 to License No. DPR-71
2. Amendment No. 170 to License No. DPR-62
3. Safety Evaluation

cc w/enclosures:
See next page

9001160206 900103
PDR ADDCK 05000324
P PNU

[BSEP AMEND 73017/73018]

LA: PDI
PAnderson
12/4/89

PM: PDII-1
NLe:bd
12/5/89

D: PDII-1
EAdensam
12/11/89

Mr. L. W. Eury
Carolina Power & Light Company

Brunswick Steam Electric Plant
Units 1 and 2

cc:

Mr. Russell B. Starkey, Jr.
Project Manager
Brunswick Nuclear Project
P. O. Box 10429
Southport, North Carolina 28461

Mr. H. A. Cole
Special Deputy Attorney General
State of North Carolina
P. O. Box 629
Raleigh, North Carolina 27602

Mr. R. E. Jones, General Counsel
Carolina Power & Light Company
P. O. Box 1551
Raleigh, North Carolina 27602

Mr. Robert P. Gruber
Executive Director
Public Staff - NCUC
P. O. Box 29520
Raleigh, North Carolina 27626-0520

Ms. Frankie Rabon
Board of Commissioners
P. O. Box 249
Bolivia, North Carolina 28422

Resident Inspector
U. S. Nuclear Regulatory Commission
Star Route 1
P. O. Box 208
Southport, North Carolina 28461

Regional Administrator, Region II
U. S. Nuclear Regulatory Commission
101 Marietta Street, Suite 2900
Atlanta, Georgia 30323

Mr. Dayne H. Brown, Chief
Radiation Protection Branch
Division of Facility Services
N. C. Department of Human Resources
701 Barbour Drive
Raleigh, North Carolina 27603-2008

Mr. J. L. Harness
Plant General Manager
Brunswick Steam Electric Plant
P. O. Box 10429
Southport, North Carolina 28461



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

CAROLINA POWER & LIGHT COMPANY, et al.

DOCKET NO. 50-325

BRUNSWICK STEAM ELECTRIC PLANT, UNIT 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 138
License No. DPR-71

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment filed by Carolina Power & Light Company (the licensee), dated April 28, 1989 and amended November 16, 1989, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter I;
 - B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
 - C. There is reasonable assurance: (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
 - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
 - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.
2. Accordingly, the license is amended by changes to the Technical Specifications, as indicated in the attachment to this license amendment; and paragraph 2.C.(2) of Facility Operating License No. DPR-71 is hereby amended to read as follows:

9001160213 900103
PDR ADOCK 05000324
P PNU

(2) Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 138, are hereby incorporated in the license. Carolina Power & Light Company shall operate the facility in accordance with the Technical Specifications.

- 3. This license amendment is effective as of the date of its issuance and shall be implemented within 60 days of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

Original Signed By:

Elinor G. Adensam, Director
 Project Directorate II-1
 Division of Reactor Projects I/II
 Office of Nuclear Reactor Regulation

Attachment:
 Changes to the Technical
 Specifications

Date of Issuance: January 3, 1990

OFC	A:PD21:DRPR:PM:PD21:DRPR:LPEB:NRR	OGC	D:PD21:DRPR	:	:
NAME	RAnderson	NLe:bd	TGody	EAdensam	:
DATE	07/17/89	07/17/89	07/17/89	07/17/89	12/11/89

OFFICIAL RECORD COPY

ATTACHMENT TO LICENSE AMENDMENT NO. 138

FACILITY OPERATING LICENSE NO. DPR-71

DOCKET NO. 50-325

Replace the following pages of the Appendix A Technical Specifications with the enclosed pages. The revised areas are indicated by marginal lines.

Remove Pages

XIV
XV
XVI
6-1 through 6-30

Insert Pages

XIV
XV
XVI
6-1 through 6-28

INDEX

ADMINISTRATIVE CONTROLS

<u>SECTION</u>	<u>PAGE</u>
<u>6.1 RESPONSIBILITY.....</u>	6-1
<u>6.2 ORGANIZATION</u>	
6.2.1 OFFSITE AND ONSITE ORGANIZATIONS.....	6-1
6.2.2 FACILITY STAFF.....	6-1
6.2.3 ONSITE NUCLEAR SAFETY (ONS)	
Function.....	6-5
Responsibilities.....	6-5
Authority.....	6-5
6.2.4 SHIFT TECHNICAL ADVISOR.....	6-5
<u>6.3 FACILITY STAFF QUALIFICATION.....</u>	6-5
<u>6.4 TRAINING.....</u>	6-5
<u>6.5 REVIEW AND AUDIT</u>	
6.5.1 NUCLEAR SAFETY REVIEWERS.....	6-6
6.5.2 SAFETY EVALUATIONS AND INDEPENDENT REVIEW CONTROL	
Safety Evaluations.....	6-6
Procedures, Tests, and Experiments.....	6-7
Modifications.....	6-7
Operating License/Technical Specifications.....	6-7
6.5.3 PLANT NUCLEAR SAFETY COMMITTEE (PNSC)	
Function.....	6-8
Composition.....	6-8
Alternates.....	6-8
Meeting Frequency.....	6-8
Quorum.....	6-8
Activities.....	6-9
Authority.....	6-10
Records.....	6-10

INDEX

ADMINISTRATIVE CONTROLS

<u>SECTION</u>	<u>PAGE</u>
<u>6.5 REVIEW AND AUDIT (Continued)</u>	
6.5.4 CORPORATE NUCLEAR SAFETY SECTION	
Function.....	6-10
Organization.....	6-10
Review.....	6-11
Records.....	6-12
6.5.5 CORPORATE QUALITY ASSURANCE AUDIT PROGRAM	
Function.....	6-13
Audits.....	6-13
Records.....	6-14
Authority.....	6-14
Personnel.....	6-14
6.5.6 OUTSIDE AGENCY INSPECTION AND AUDIT PROGRAM.....	6-15
<u>6.6 REPORTABLE EVENT ACTION.....</u>	6-15
<u>6.7 SAFETY LIMIT VIOLATION.....</u>	6-15
<u>6.8 PROCEDURES AND PROGRAMS.....</u>	6-16
<u>6.9 REPORTING REQUIREMENTS</u>	
Routine Reports	6-17
Startup Reports.....	6-17
Annual Reports.....	6-18
Personnel Exposure and Monitoring Report.....	6-18
Annual Radiological Environmental Operating Report.....	6-19
Semiannual Radioactive Effluent Release Report.....	6-20
Monthly Operating Reports.....	6-21
Special Reports.....	6-22
Core Operating Limits Report.....	6-22

INDEX

ADMINISTRATIVE CONTROLS

<u>SECTION</u>	<u>PAGE</u>
<u>6.10 RECORD RETENTION.....</u>	<u>6-23</u>
<u>6.11 RADIATION PROTECTION PROGRAM.....</u>	<u>6-25</u>
<u>6.12 HIGH RADIATION AREA.....</u>	<u>6-25</u>
<u>6.13 OFFSITE DOSE CALCULATION MANUAL (ODCM).....</u>	<u>6-26</u>
<u>6.14 PROCESS CONTROL PROGRAM (PCP).....</u>	<u>6-26</u>
<u>6.15 MAJOR CHANGES TO LIQUID, GASEOUS, AND SOLID WASTE TREATMENT SYSTEMS.....</u>	<u>6-27</u>

6.0 ADMINISTRATIVE CONTROLS

6.1 RESPONSIBILITY

6.1.1 The General Manager - Brunswick Plant shall be responsible for overall facility operation and shall delegate in writing the succession to this responsibility during his absence.

6.2 ORGANIZATION

6.2.1 OFFSITE AND ONSITE ORGANIZATIONS

Onsite and offsite organizations shall be established for unit operation and corporate management, respectively. The onsite and offsite organizations shall include the positions for activities affecting the safety of the nuclear power plant.

- a. Lines of authority, responsibility, and communication shall be established and defined for the highest management levels through intermediate levels to and including all operating organization positions. These relationships shall be documented and updated, as appropriate, in the form of organization charts. These organization charts will be documented in the FSAR and updated in accordance with 10CFR50.71(e).
- b. The General Manager - Brunswick Plant shall be responsible for overall unit safe operation and shall have control over those onsite activities necessary for safe operation and maintenance of the plant.
- c. The Senior Vice President - Nuclear Generation shall have corporate responsibility for overall plant nuclear safety and shall take any measures needed to ensure acceptable performance of the staff in operating, maintaining, and providing technical support to the plant to ensure nuclear safety.
- d. The individuals who train the operating staff and those who carry out health physics and quality assurance functions may report to the appropriate onsite manager; however, they shall have sufficient organizational freedom to ensure their independence from operating pressures.

6.2.2 FACILITY STAFF

- a. Each facility on duty shift shall be composed of at least the minimum facility shift crew composition shown in Table 6.2.2-1.
- b. At least one licensed Reactor Operator shall be in the control room when fuel is in the reactor.
- c. When either reactor is in OPERATIONAL CONDITION 1, 2, or 3, at least one licensed Senior Reactor Operator shall be in the control room.

ADMINISTRATIVE CONTROLS

FACILITY STAFF (Continued)

- d. The Shift Operating Supervisors, Shift Foremen, and Senior Control Operators shall hold a senior reactor operator license. The Control Operators shall hold a reactor operator license.
- e. An individual qualified to implement radiation protection procedures shall be onsite when fuel is in either reactor.*
- f. All CORE ALTERATIONS shall be directly supervised by either a licensed Senior Reactor Operator or Senior Reactor Operator Limited to Fuel Handling who has no other concurrent responsibilities during this operation.
- g. A Fire Brigade of at least five members shall be maintained onsite at all times.* The Fire Brigade shall not include the minimum shift crew shown in Table 6.2.2-1 or any personnel required for other essential functions during a fire emergency.
- h. Administrative procedures shall be developed and implemented to limit the working hours of facility staff who perform safety-related functions; e.g., senior reactor operators, reactor operators, health physicists, auxiliary operators, and key maintenance personnel. These procedures shall meet the working hour guidelines published by the Commission in Generic Letter No. 82-12.

* The individual qualified to implement radiation protection procedures and Fire Brigade composition may be less than the minimum requirements for a period of time not to exceed two hours in order to accommodate unexpected absence provided immediate action is taken to fill the required positions.

TABLE 6.2.2-1
MINIMUM FACILITY SHIFT CREW COMPOSITION

WITH UNIT 2 IN CONDITION 1, 2, OR 3		
POSITION	NUMBER OF INDIVIDUALS REQUIRED TO FILL POSITION	
	CONDITIONS 1, 2, & 3	CONDITIONS 4 & 5
SOS	1	1 ^(b)
SRO ^(a)	1	1 ^(b)
RO ^(a)	3	3
AO	3	3
STA	1	1

WITH UNIT 2 IN CONDITION 4 OR 5		
POSITION	NUMBER OF INDIVIDUALS REQUIRED TO FILL POSITION	
	CONDITIONS 1, 2, & 3	CONDITIONS 4 & 5
SOS	1	1 ^(b)
SRO ^(a)	1	1 ^(b)
RO ^(a)	3	2
AO	3	3
STA	1	None

WITH UNIT 2 DE-FUELED		
POSITION	NUMBER OF INDIVIDUALS REQUIRED TO FILL POSITION	
	CONDITIONS 1, 2, & 3	CONDITIONS 4 & 5
SOS	1	1 ^(b)
SRO ^(a)	1	1 ^(b)
RO ^(a)	2	2
AO	3	3
STA	1	None

TABLE 6.2.2-1 (Continued)

MINIMUM FACILITY SHIFT CREW COMPOSITION

TABLE NOTATION

SOS - Shift Operating Supervisor with a Senior Reactor Operators License
SRO - Individual with a Senior Reactor Operators License
RO - Individual with a Reactor Operators License
AO - Auxiliary Operator (non-licensed individual)
STA - Shift Technical Advisor

(a) Assumes each individual is licensed on both plants.

(b) Does not include the licensed Senior Reactor Operator or Senior Reactor Operator Limited to Fuel Handling, supervising CORE ALTERATIONS.

The Shift Crew Composition may be less than the minimum requirements for a period of time not to exceed 2 hours in order to accommodate unexpected absence of on-duty shift crew members provided immediate action is taken to restore the Shift Crew Composition to within the minimum requirements of Table 6.2.2-1.

ADMINISTRATIVE CONTROLS

6.2.3 ONSITE NUCLEAR SAFETY (ONS)

FUNCTION

6.2.3.1 The ONS Unit shall function to examine facility operating characteristics, NRC issues, industry advisories, and other sources which may indicate areas for improving facility safety.

RESPONSIBILITIES

6.2.3.2 The ONS Unit shall be responsible for maintaining surveillance of facility activities to provide independent verification* that these activities are performed correctly and that human errors are reduced as much as practical.

AUTHORITY

6.2.3.3 The ONS Unit shall make detailed recommendations for revised procedures, equipment modifications, or other means of improving facility safety to the Manager - Corporate Nuclear Safety Section.

6.2.4 SHIFT TECHNICAL ADVISOR

6.2.4.1 The Shift Technical Advisor shall serve in an advisory capacity to the Shift Operating Supervisor on matters pertaining to the engineering aspects assuring safe operation of the unit.

6.3 FACILITY STAFF QUALIFICATION

6.3.1 Each member of the facility staff shall meet or exceed the minimum qualifications of ANSI N18.1-1971 for comparable positions, except for (1) the Manager - Environmental & Radiation Control who shall meet or exceed the qualifications of Regulatory Guide 1.8, September 1975 and (2) the Shift Technical Advisor who shall have a bachelor's degree or equivalent in a scientific or engineering discipline with specific training in plant design, and response and analysis of the plant during transients and accidents.

6.4 TRAINING

6.4.1 A retraining and replacement training program for the facility staff shall be maintained under the direction of the Manager - Training (BSEP) and shall meet or exceed the requirements and recommendations of Section 5.5 of ANSI N18.1-1971 and Appendix "A" of 10 CFR Part 55.

6.4.2 A training program for the Fire Brigade shall be maintained under the direction of the Manager - Training (BSEP) and shall meet or exceed the requirements of Section 27 of the NFPA Code-1975.

* Not responsible for sign-off function.

ADMINISTRATIVE CONTROLS

6.5 REVIEW AND AUDIT

6.5.1 NUCLEAR SAFETY REVIEWERS

6.5.1.1 Individuals shall be designated/approved by the General Manager - Brunswick Plant for performing nuclear safety reviews.

6.5.1.2 Individuals designated under Specification 6.5.1.1 above shall have an academic degree in an engineering or related field or equivalent and two years related experience.

6.5.1.3 A list shall be maintained of individuals qualified to perform nuclear safety reviews, including additional individuals whose expertise may be necessary during the reviews to assure that the reviewers collectively possess the background and qualifications in the disciplines necessary and important to the specific review.

6.5.1.4 The list specified in Specification 6.5.1.3 above shall include the disciplines for which each individual is qualified.

6.5.1.5 For those cases where interdisciplinary reviews are required, as many individuals as necessary shall be used to perform the nuclear review function.

6.5.1.6 One of the two nuclear safety reviewers shall be an individual other than the original preparer or the individual approving the action.

6.5.2 SAFETY EVALUATIONS AND INDEPENDENT REVIEW CONTROL

SAFETY EVALUATIONS

6.5.2.1 A safety evaluation shall be prepared for each of the following:

- a. Changes to procedures required by Specification 6.8, or changes to other procedures that affect nuclear safety.
- b. Proposed tests or experiments that affect nuclear safety.
- c. Proposed modifications to plant systems or equipment that affect nuclear safety.
- d. Proposed changes to the Technical Specifications.
- e. Proposed changes to the Operating License.

6.5.2.2 Two nuclear safety reviews of the item and safety evaluation(s) prepared in accordance with Specification 6.5.2.1 above shall be performed prior to approval and implementation.

6.5.2.3 The item and associated safety evaluation(s) shall be examined in order to determine whether an interdisciplinary review is required in accordance with Specification 6.5.1.5 above.

ADMINISTRATIVE CONTROLS

PROCEDURES, TESTS, AND EXPERIMENTS

6.5.2.4 The safety evaluation prepared in accordance with Specifications 6.5.2.1.a and 6.5.2.1.b above shall include a written determination, with basis, of whether or not the procedures, proposed tests and experiments, and changes thereto constitute an unreviewed safety question as defined in 10 CFR 50.59, or whether they involve a change to the Technical Specifications.

6.5.2.5 Following the nuclear safety review, the procedures required by Specification 6.8, other procedures that affect nuclear safety, proposed tests or experiments, and changes thereto (other than editorial or typographical) which have been determined to not involve an unreviewed safety question as defined in 10 CFR 50.59 or change to the Technical Specifications shall be approved prior to implementation by the General Manager - Brunswick Plant or his previously designated alternate.

MODIFICATIONS

6.5.2.6 The safety evaluation prepared in accordance with Specification 6.5.2.1.c above shall include a written determination, with basis, of whether or not the proposed modification is a change in the facility as described in the safety analysis report, involves a change to the Technical Specifications, or constitutes an unreviewed safety question as defined in 10 CFR 50.59.

6.5.2.7 Following the nuclear safety review, proposed modifications which have been determined to not involve an unreviewed safety question as defined in 10 CFR 50.59 or a change to the Technical Specifications shall be approved by the General Manager - Brunswick Plant or his previously designated alternate.

OPERATING LICENSE/TECHNICAL SPECIFICATIONS

6.5.2.8 The safety evaluation prepared in accordance with Specifications 6.5.2.1.d and 6.5.2.1.e above shall include a written preliminary determination, with basis, of whether or not the proposed Operating License/Technical Specification change(s) is a change in the facility as described in the safety analysis report.

6.5.2.9 Following the nuclear safety review of the safety evaluation prepared in accordance with Specifications 6.5.2.1.d and 6.5.2.1.e above and the associated proposed action, the request shall be:

- a. Reviewed by the Plant Nuclear Safety Committee in accordance with Specification 6.5.3.8.
- b. Reviewed by the Corporate Nuclear Safety Section in accordance with Specification 6.5.4.9.

ADMINISTRATIVE CONTROLS

6.5.3 PLANT NUCLEAR SAFETY COMMITTEE (PNSC)

FUNCTION

6.5.3.1 As an effective means for the regular review, overview, evaluation, and maintenance of plant operational safety, a Plant Nuclear Safety Committee (PNSC) shall be established.

6.5.3.2 The PNSC shall function through the utilization of subcommittees, audits, investigations, reports, and/or performance of reviews as a group.

COMPOSITION

6.5.3.3 The PNSC shall be composed of the:

Chairman	General Manager - Brunswick Plant*
Member:	Manager - Technical Support
Member:	Manager - Operations
Member:	Manager - Maintenance
Member:	Manager - Environmental & Radiation Control
Member:	Technical Assistant to Plant General Manager
Member:	Manager - QA/QC
Member:	Manager - Regulatory Compliance

ALTERNATES

6.5.3.4 All alternate members shall be appointed in writing by the PNSC Chairman to serve on a temporary basis; however, no more than two alternates shall participate as members at any one time.

6.5.3.5 All alternates, shall as a minimum, meet equivalent qualification criteria as specified for professional-technical personnel in Section 4.4 of ANSI N18.1-1971.

MEETING FREQUENCY

6.5.3.6 The PNSC shall meet at least once per calendar month and as convened by the PNSC Chairman or his designated alternate.

QUORUM

6.5.3.7 The minimum quorum of the PNSC necessary for the performance of the PNSC activities of the Technical Specifications shall consist of the PNSC Chairman or his designated alternate and four members including alternates. No more than two alternates shall be counted toward meeting the minimum quorum requirement.

* Or designated alternate.

ADMINISTRATIVE CONTROLS

ACTIVITIES

6.5.3.8 The PNSC activities shall include the following:

- a. Review of all procedures required by Specification 6.8 and changes thereto (and any other procedures and changes thereto), any of which constitute an unreviewed safety question or involve a change to the Technical Specifications, prior to implementation.
- b. Review of all proposed tests or experiments that constitute an unreviewed safety question or involve a change to the Technical Specifications, prior to implementation.
- c. Review of all proposed modifications that constitute an unreviewed safety question or involve a change to the Technical Specifications, prior to implementation.
- d. Review of all proposed changes to the Technical Specifications or Operating License, prior to implementation.
- e. Review of reports on violations of Technical Specifications including reports covering evaluation and recommendations to prevent recurrence to the Manager - Brunswick Nuclear Project and to the Manager - Corporate Nuclear Safety Section.
- f. Performance of special reviews, investigations (or analyses), and reports thereon as requested by the Manager - Corporate Nuclear Safety Section.
- g. Review of all REPORTABLE EVENTS.
- h. Review of facility operations to detect potential nuclear safety hazards.
- i. Annual review of the Security Plan.
- j. Annual review of the Emergency Plan.
- k. Review of accidental, unplanned, or uncontrolled radioactive release including the preparation of reports covering evaluation, recommendations and disposition of the corrective action to prevent recurrence and the forwarding of these reports to the Manager - Brunswick Nuclear Project and the Manager - Corporate Nuclear Safety Section.
- l. Review of changes to the PROCESS CONTROL PROGRAM and the OFFSITE DOSE CALCULATION MANUAL.

ADMINISTRATIVE CONTROLS

AUTHORITY

6.5.3.9 If there is a disagreement between recommendations of a majority of the PNSC and the actions contemplated by the General Manager - Brunswick Plant, the PNSC shall provide written notification within 24 hours to the Manager - Brunswick Nuclear Project and the Vice President - Nuclear Services. The course determined by the General Manager - Brunswick Plant to be the most conservative shall be followed.

RECORDS

6.5.3.10 The PNSC shall maintain written minutes of each PNSC meeting that, at a minimum, document the results of all PNSC activities performed under the provisions of these Technical Specifications. Copies shall be provided to the Manager - Brunswick Nuclear Project and the Manager - Corporate Nuclear Safety Section.

6.5.4 CORPORATE NUCLEAR SAFETY SECTION

FUNCTION

6.5.4.1 The Corporate Nuclear Safety Section (CNSS) of the Nuclear Services Department shall function to provide independent review of significant plant changes, tests, and procedures; verify that REPORTABLE EVENTS are investigated in a timely manner and corrected in a manner that reduces the probability of recurrence of such events; and detect trends that may not be apparent to a day-to-day observer.

ORGANIZATION

6.5.4.2 The individuals assigned responsibility for independent reviews shall be specified in technical disciplines. These individuals shall collectively have the experience and competence required to review activities in the following areas:

- a. nuclear power plant operations
- b. nuclear engineering
- c. chemistry and radiochemistry
- d. metallurgy
- e. non-destructive testing
- f. instrumentation and control
- g. radiological safety
- h. mechanical and electrical engineering
- i. administrative controls

ADMINISTRATIVE CONTROLS

ORGANIZATION (Continued)

- j. seismic and environmental
- k. quality assurance practices
- l. Other appropriate fields associated with the unique characteristics of the nuclear power plant.

6.5.4.3 The Manager - Corporate Nuclear Safety Section shall have an academic degree in an engineering or related field and, in addition, shall have a minimum of ten years related experience, of which a minimum of five years shall be in the operation and/or design of nuclear power plants.

6.5.4.4 The independent safety review program reviewers shall have an academic degree in an engineering or related field or equivalent and, in addition, shall have a minimum of five years related experience.

6.5.4.5 An individual may possess competence in more than one specialty area. If sufficient expertise is not available within the Corporate Nuclear Safety Section, competent individuals from other Carolina Power & Light Company organizations or outside consultants shall be utilized in performing independent reviews and investigations.

6.5.4.6 At least three individuals, qualified as discussed in 6.5.4.4 above, shall review each item submitted under the requirements of Section 6.5.4.9.

6.5.4.7 Independent safety reviews shall be performed by individuals not directly involved with the activity under review or responsible for the activity under review.

6.5.4.8 The Corporate Nuclear Safety Section independent safety review program shall be conducted in accordance with written, approved procedures.

REVIEW

6.5.4.9 The Corporate Nuclear Safety Section shall perform reviews of the following:

- a. The safety evaluations for 1) changes to procedures required by Specification 6.8, 2) modifications of equipment or systems, and 3) tests or experiments that constitute a change to the safety analysis report to verify that such actions did not constitute an unreviewed safety question or involve a change to the Technical Specifications. Implementation may proceed prior to completion of this review.
- b. Proposed changes to procedures required by Specification 6.8, and proposed modifications that constitute an unreviewed safety question as defined in 10 CFR 50.59 or a change to the Technical Specifications, prior to implementation.

ADMINISTRATIVE CONTROLS

REVIEW (Continued)

- c. Proposed tests or experiments that involve an unreviewed safety question as defined in 10 CFR 50.59 or a change to the Technical Specifications, prior to implementation.
- d. Proposed changes to the Technical Specifications and Operating License.
- e. Violations of applicable codes, regulations, orders, Technical Specifications, license requirements, and internal procedures or instructions having nuclear safety significance.
- f. Significant operating abnormalities or deviations from normal and expected performance of plant safety-related structures, systems, or components.
- g. Reportable events.
- h. Reports and minutes of the PNSC.
- i. Any other matter involving safe operation of the nuclear power plant that the Manager - Corporate Nuclear Safety Section deems appropriate for consideration or which is referred to the Manager - Corporate Nuclear Safety Section by the on-site operating organization or other functional organizational units within Carolina Power & Light Company.

6.5.4.10 Review of items considered under 6.5.4.9(e) through (i) above shall include the results of any investigations made and the recommendations resulting from these investigations to prevent or reduce the probability of recurrence of the event.

RECORDS

6.5.4.11 Records of Corporate Nuclear Safety Section reviews, including recommendations and concerns, shall be prepared and distributed as indicated below:

- a. Copies of documented reviews shall be retained in the CNSS files.
- b. Recommendations and concerns shall be submitted to the General Manager - Brunswick Plant and Manager - Brunswick Nuclear Project, within 14 days of completion of the review.
- c. A summation of Corporate Nuclear Safety Section's recommendations and concerns shall be submitted to the Chairman/President; Executive Vice President - Power Supply; Senior Vice President - Nuclear Generation; Vice President - Nuclear Services; Manager - Brunswick Nuclear Project; General Manager - Brunswick Plant; and others, appropriate, at least once every two months.

ADMINISTRATIVE CONTROLS

6.5.5 CORPORATE QUALITY ASSURANCE AUDIT PROGRAM

FUNCTION

6.5.5.1 The Quality Assurance Auditing Unit (QAAU) of the Corporate Quality Assurance Department shall function to perform audits of facility activities specified in Specification 6.5.5.2.

AUDITS

6.5.5.2 Audits of facility activities shall be performed by the QAAU. These audits shall encompass:

- a. The conformance of facility operation to provisions contained within the Technical Specifications and applicable license conditions at least once per 12 months.
- b. The training and qualifications of the entire facility staff at least once per 12 months.
- c. The results of actions taken to correct deficiencies occurring in facility equipment, structures, systems, or methods of operation that affect nuclear safety at least once per 6 months.
- d. The verification of compliance and implementation of the requirements of the Quality Assurance Program to meet the criteria of Appendix "B", 10 CFR 50, at least once per 24 months.
- e. The Emergency Plan and implementing procedures at least once per 12 months.
- f. The Security Plan and implementing procedures at least once per 12 months.
- g. The Facility Fire Protection Program and implementing procedures at least once per 12 months.
- h. The radiological environmental monitoring program and the results thereof at least once per 12 months.
- i. The OFFSITE DOSE CALCULATIONAL MANUAL and implementing procedures at least once per 24 months.
- j. The PROCESS CONTROL PROGRAM and implementing procedures for processing and packaging of radioactive wastes at least once per 24 months.

ADMINISTRATIVE CONTROLS

AUDITS (Continued)

- k. The performance of activities required by the Quality Assurance Program to meet the provisions of Regulatory Guide 1.21, Revision 1, June 1974, and Regulatory Guide 4.1, Revision 1, April 1975, at least once per 12 months.
- l. Any other area of facility operation considered appropriate by the Manager - Quality Assurance Services Section.

6.5.5.3 Personnel performing the quality assurance audits shall have access to the plant operating records.

RECORDS

6.5.5.4 Records of audits shall be prepared and retained.

6.5.5.5 Audit reports encompassed by 6.5.5.2 above shall be prepared, approved by the Manager - Quality Assurance Services Section, and forwarded to the Executive Vice President - Power Supply; Senior Vice President - Nuclear Generation; Manager - Brunswick Nuclear Project; Vice President - Nuclear Services; General Manager - Brunswick Plant; and others, as appropriate, within 30 days after completion of the audit.

AUTHORITY

6.5.5.6 The Manager - Quality Assurance Services Section under the Manager - Corporate Quality Assurance shall be responsible for the following:

- a. The administering of the Corporate Quality Assurance Audit Program.
- b. The approval of the individual(s) selected to conduct quality assurance audits.

PERSONNEL

6.5.5.7 Audit personnel shall be independent of the area audited.

6.5.5.8 Selection of personnel for auditing assignments shall be based on experience or training that establishes that their qualifications are commensurate with the complexity or special nature of the activities to be audited. In selecting audit personnel, consideration shall be given to special abilities, specialized technical training, prior pertinent experience, personal characteristics, and education.

6.5.5.9 Qualified outside consultants or other individuals independent from those personnel directly involved in plant operation shall be used to augment the audit teams when necessary.

ADMINISTRATIVE CONTROLS

6.5.6 OUTSIDE AGENCY INSPECTION AND AUDIT PROGRAM

6.5.6.1 An independent fire protection and loss prevention inspection and audit shall be performed at least once per 12 months utilizing either qualified offsite licensee personnel or an outside fire protection firm.

6.5.6.2 An inspection and audit of the fire protection and loss prevention program shall be performed by an outside qualified fire consultant at intervals no greater than 36 months.

6.6 REPORTABLE EVENT ACTION

6.6.1 The following actions shall be taken for REPORTABLE EVENTS:

- a. The Commission shall be notified and a report submitted pursuant to the requirements of Section 50.73 to 10 CFR Part 50, and
- b. Each REPORTABLE EVENT shall be reviewed by the Plant Nuclear Safety Committee - Brunswick Plant and shall be submitted to the Manager - Corporate Nuclear Safety Section and the Manager - Brunswick Nuclear Project.

6.7 SAFETY LIMIT VIOLATION

6.7.1 The following actions shall be taken in the event a Safety Limit is violated:

- a. The facility shall be placed in at least HOT SHUTDOWN within two hours.
- b. The NRC Operations Center shall be notified by telephone as soon as possible and in all cases within one hour. The Manager - Brunswick Nuclear Project and the Manager - Corporate Nuclear Safety Section shall be notified within 24 hours.
- c. A Safety Limit Violation Report shall be prepared. The report shall be reviewed by the General Manager - Brunswick Plant. This report shall describe (1) applicable circumstances preceding the violation, (2) effects of the violation upon facility components, systems, or structures, and (3) corrective action taken to prevent recurrence.
- d. The Safety Limit Violation Report shall be submitted to the Commission, the Manager - Brunswick Nuclear Project, and the Manager - Corporate Nuclear Safety Section within 14 days of the violation.

ADMINISTRATIVE CONTROLS

6.8 PROCEDURES AND PROGRAMS

6.8.1 Written procedures shall be established, implemented, and maintained covering the activities referenced below:

- a. The applicable procedures recommended in Appendix "A" of Regulatory Guide 1.33, November 1972.
- b. Refueling operations.
- c. Surveillance and test activities of safety related equipment.
- d. Security Plan implementation.
- e. Emergency Plan implementation.
- f. Fire Protection Program implementation.
- g. OFFSITE DOSE CALCULATION MANUAL implementation.
- h. PROCESS CONTROL PROGRAM implementation.
- i. Quality Assurance Program for effluent and environmental monitoring using the guidance in Regulatory Guide 1.21, Revision 1, June 1974, and Regulatory Guide 4.1, Revision 1, April 1975.

6.8.2 Temporary changes to procedures of Specification 6.8.1 above, any other procedures that affect nuclear safety, and proposed tests or experiments may be made provided:

- a. The intent of the original procedure, proposed test or experiment is not altered.
- b. The change is approved by two members of the plant management staff, at least one of whom holds a Senior Reactor Operator License on the unit affected.
- c. The change is documented, reviewed pursuant to Specifications 6.5.2.1 and 6.5.2.2 and approved by the General Manager - Brunswick Plant or his previously designated alternate within 14 days of implementation.

6.8.3 The following programs shall be established, implemented, and maintained:

a. Primary Coolant Sources Outside Containment

A program to reduce leakage from those portions of systems outside containment that could contain highly radioactive fluids during a serious transient or accident to as low as practical levels. The program shall include the following:

ADMINISTRATIVE CONTROLS

PROCEDURES AND PROGRAMS (Continued)

1. Preventive maintenance and periodic visual inspection requirements, and
2. Integrated leak test requirements for each system at refueling cycle intervals or less.

b. In-Plant Radiation Monitoring

A program which will ensure the capability to accurately determine the airborne iodine concentration in vital areas under accident conditions. This program shall include the following:

1. Training of personnel,
2. Procedures for monitoring, and
3. Provisions for maintenance of sampling and analysis equipment.

c. Post-Accident Sampling

A program which will ensure the capability to obtain and analyze reactor coolant, radioactive iodines and particulates in plant gaseous effluents, and containment atmosphere samples under accident conditions. The program shall include the following:

1. Training of personnel,
2. Procedures for sampling and analysis, and
3. Provisions for maintenance of sampling and analysis equipment.

6.9 REPORTING REQUIREMENTS

ROUTINE REPORTS

6.9.1 In addition to the applicable reporting requirements of Title 10, Code of Federal Regulations, the following reports shall be submitted to the Regional Administrator of the Regional Office unless otherwise noted.

STARTUP REPORTS

6.9.1.1 A summary report of plant startup and power escalation testing shall be submitted following (1) receipt of an operating license, (2) amendment to the license involving a planned increase in power level, (3) installation of fuel that has a different design or has been manufactured by a different fuel supplier, and (4) modifications that may have significantly altered the nuclear, thermal, or hydraulic performance of the plant.

ADMINISTRATIVE CONTROLS

STARTUP REPORTS (Continued)

6.9.1.2 The startup report shall address each of the tests identified in the FSAR and shall include a description of the measured values of the operating conditions or characteristics obtained during the test program and a comparison of these values with design predictions and specifications. Any corrective actions that were required to obtain satisfactory operation shall also be described. Any additional specific details required in license conditions based on other commitments shall be included in this report.

6.9.1.3 Startup reports shall be submitted within (1) 90 days following completion of the startup test program, (2) 90 days following resumption or commencement of commercial power operation, (3) 9 months following initial criticality, whichever is earliest. If the Startup Report does not cover all three events, i.e., initial criticality, completion of startup test program, and resumption or commencement of commercial power operation, supplementary reports shall be submitted at least every three months until all three events have been completed.

ANNUAL REPORTS^{1/}

6.9.1.4 Annual reports covering the activities of the unit as described below during the previous calendar year shall be submitted prior to March 1 of each year. The initial report shall be submitted prior to March 1 of the year following initial criticality.

PERSONNEL EXPOSURE AND MONITORING REPORT^{2/}

6.9.1.5 Reports required on an annual basis shall include a tabulation of the number of station, utility, and other personnel, including contractors, receiving exposures greater than 100 mrem/yr and their associated man-rem exposure according to work and job functions^{2/}, e.g., reactor operations and surveillance, inservice inspection, routine maintenance, special maintenance (describe maintenance), waste processing, and refueling. The dose assignments to various duty functions may be estimated, based on pocket dosimeter, TLD, or film badge measurements. Small exposures totalling less than 20 percent of the individual total dose need not be accounted for. In the aggregate, at least 80 percent of the total whole body dose received from external sources shall be assigned to specific major work functions.

^{1/} A single submittal may be made for a multiple unit station. The submittal should combine those sections that are common to all units at the station.

^{2/} This tabulation supplements the requirements of §20.407 of 10 CFR Part 20.

ADMINISTRATIVE CONTROLS

ANNUAL RADIOLOGICAL ENVIRONMENTAL OPERATING REPORT^{3/}

6.9.1.6 Routine radiological environmental operating reports covering the operation of the facility during the previous calendar year shall be submitted prior to May 1 of each year.

6.9.1.7 The Annual Radiological Environmental Operating Report shall include the following:

- a. Summaries, interpretations, and an analysis of trends of the results of the radiological environmental surveillance activities for the report period, including a comparison with pre-operational studies, with operational controls (as appropriate), and with previous environmental surveillance reports, and an assessment of the observed impact of the plant operation on the environment.
- b. Results of land uses censuses required by Specification 3.12.2.
- c. Results of analysis of all radiological environmental samples and of all environmental radiation measurements taken during the period pursuant to the locations specified in the table and figures in the OFFSITE DOSE CALCULATION MANUAL, as well as summarized and tabulated results of these analyses and measurements in the format of Table 3 in the Radiological Assessment Branch Technical Position, Revision 1, November 1979. In the event that some individual results are not available for inclusion with the report, the report shall be submitted noting and explaining the reasons for the missing results. The missing data should be submitted as soon as possible in a supplementary report.
- d. A summary description of the radiological environmental monitoring program.
- e. At least two legible maps^{4/} covering all sampling locations keyed to a table giving distances and directions from the centerline of one reactor.
- f. The results of licensee participation in the Interlaboratory Comparison Program, required by Specification 3.12.3.

^{3/} A single submittal may be made for a multiple unit station.

^{4/} One map shall cover stations near the SITE BOUNDARY; a second map shall include the more distant stations.

ADMINISTRATIVE CONTROLS

ANNUAL RADIOLOGICAL ENVIRONMENTAL OPERATING REPORT (Continued)

- g. Discussion of all deviations from the sampling schedule of Table 3.12.1-1.
- h. Discussion of all analyses in which the LLD required by Table 4.12.1-1 was not achievable.

SEMIANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT^{5/}

6.9.1.8 Routine radioactive effluent release reports covering the operation of the facility during the previous 6 months of operation shall be submitted within the time periods specified in Specifications 6.9.1.9 and 6.9.1.10 below.

6.9.1.9 The portion of the Semiannual Radioactive Effluent Release Reports to be submitted within 60 days after January 1 and July 1 of each year shall include the following:

- a. A summary of the quantities of radioactive liquid and gaseous effluents and solid waste released from the facility as outlined in Regulatory Guide 1.21, "Measuring, Evaluating, and Reporting Radioactivity in Solid Wastes and Releases of Radioactivity Materials in Liquid and Gaseous Effluents from Light-Water-Cooled Nuclear Power Plants," Revision 1, June 1974, with data summarized on a quarterly basis similar to the format of Appendix B thereof.
- b. The information specified below for each class of solid waste (as defined by 10 CFR Part 61, when implemented) shipped offsite during the report period:
 - 1. Container volume,
 - 2. Total curie quantity (specify whether determined by measurement or estimate),
 - 3. Principal radionuclides (specify whether determined by measurement or estimate),
 - 4. Source of waste and processing employed (e.g., dewatered spent resin, compacted dry waste, evaporator bottoms),
 - 5. Type of container (e.g., LSA, Type A, Type B, Large Quantity), and

^{5/} A single submittal may be made for a multiple unit station. The submittal should combine those sections that are common to all units at the station.

ADMINISTRATIVE CONTROLS

SEMIANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT (Continued)

6. Solidification agent or absorbent (e.g., cement, urea formaldehyde).
- c. A list of description of unplanned releases from the site to UNRESTRICTED AREAS of radioactive materials in gaseous and liquid effluents made during the reporting period.
- d. Any changes made during the reporting period to the PROCESS CONTROL PROGRAM (PCP) or the OFFSITE DOSE CALCULATION MANUAL (ODCM), as well as a listing of new locations for dose calculations and/or environmental monitoring identified by the land use census pursuant to Specification 3.12.2.
- e. A summary of radioactivity released from the site by incineration of radioactive waste oil.

6.9.1.10 The portion of the Semiannual Radioactive Effluent Release Report to be submitted within 90 days after January 1 of each year shall include the following:

- a. An annual summary of hourly meteorological data collected over the previous calendar year. This annual summary may be either in the form of an hour-by-hour listing on magnetic tape of wind speed, wind direction, atmospheric stability, and precipitation (if measured), or in the form of joint frequency distributions of wind speed, wind direction, and atmospheric stability.^{6/}
- b. An assessment of the radiation doses due to the radioactive liquid and gaseous effluents released from the station during the previous calendar year.

MONTHLY OPERATING REPORTS

6.9.1.11 Routine reports of operating statistics and shutdown experience, including documentation of all challenges to main steam system safety/relief valves, shall be submitted on a monthly basis to the Director, Office of Resource Management, U. S. Nuclear Regulatory Commission, Washington, D.C. 20555, with a copy to the Regional Administrator of the Regional Office no later than the 15th of each month following the calendar month covered by the report.

^{6/} In lieu of submission with the Semiannual Radioactive Effluent Release Report, the licensee has the option of retaining this summary of required meteorological data in a file that shall be provided to the NRC upon request.

ADMINISTRATIVE CONTROLS

SPECIAL REPORTS

6.9.2 Special reports shall be submitted to the Regional Administrator of the Regional Office within the time period specified for each report. These reports shall be submitted covering the activities identified below pursuant to the requirements of the applicable reference specification.

- a. Inoperable Seismic Monitoring Instrumentation, Specification 3.3.5.1.
- b. Seismic event analysis, Specification 4.3.5.1.2.
- c. Accident Monitoring Instrumentation, Specification 3.3.5.3.
- d. Fire detection instrumentation, Specification 3.3.5.7.
- e. Reactor coolant specific activity analysis, Specification 3.4.5.
- f. ECCS actuation, Specifications 3.5.3.1 and 3.5.3.2.
- g. Fire suppression systems, Specifications 3.7.7.1, 3.7.7.2, 3.7.7.3, and 3.7.7.5.
- h. Fire barrier penetration, Specification 3.7.8.
- i. Liquid Effluents Dose, Specification 3.11.1.2.
- j. Liquid Radwaste Treatment, Specification 3.11.1.3.
- k. Dose - Noble Gases, Specification 3.11.2.2.
- l. Dose - Iodine-131, Iodine-133, Tritium, and Radionuclides in Particulate Form, Specification 3.11.2.3.
- m. Gaseous Radwaste Treatment, Specification 3.11.2.4.
- n. Ventilation Exhaust Treatment, Specification 3.11.2.5.
- o. Total Dose, Specification 3.11.4.
- p. Monitoring Program, Specification 3.12.1.b.
- q. Primary Containment Structural Integrity, Specification 4.6.1.4.2

CORE OPERATING LIMITS REPORT

6.9.3.1 Core operating limits shall be established prior to each reload cycle, or prior to any remaining portion of a reload cycle, for the following:

- a. The AVERAGE PLANAR LINEAR HEAT GENERATION RATES (APLHGR) for Specification 3.2.1.

ADMINISTRATIVE CONTROLS

CORE OPERATING LIMITS REPORT (Continued)

- b. The K_f core flow adjustment factor for Specification 3.2.3.1.
- c. The MINIMUM CRITICAL POWER RATIO (MCPR) for Specifications 3.2.3.1 and 3.2.3.2.

and shall be documented in the CORE OPERATING LIMITS REPORT.

6.9.3.2 The analytical methods used to determine the core operating limits shall be those previously reviewed and approved by the NRC, specifically those described in the following documents.

- a. NEDE-24011-P-A, "General Electric Standard Application for Reactor Fuel" (latest approved version).
- b. The May 18, 1984 and October 22, 1984 NRC Safety Evaluation Reports for the Brunswick Reload Methodologies described in:
 - 1. Topical Report NF-1583.01, "A Description and Validation of Steady-State Analysis Methods for Boiling Water Reactors," February 1983.
 - 2. Topical Report NF-1583.02, "Methods of RECORD," February 1983.
 - 3. Topical Report NF-1583.03, "Methods of PRESTO-B," February 1983.
 - 4. Topical Report NF-1583.04, "Verification of CP&L Reference BWR Thermal-Hydraulic Methods Using the FIBWR Code," May 1983.

6.9.3.3 The core operating limits shall be determined such that all applicable limits (e.g., fuel thermal-mechanical limits, core thermal-hydraulic limits, ECCS limits, nuclear limits such as shutdown margin, transient analysis limits, and accident analysis limits) of the safety analysis are met.

6.9.3.4 The CORE OPERATING LIMITS REPORT, including any mid-cycle revisions or supplements shall be provided, upon issuance for each reload cycle, to the NRC Document Control Desk with copies to the Regional Administrator and Resident Inspector.

6.10 RECORD RETENTION

Facility records shall be retained in accordance with ANSI-N45.2.9-1974.

6.10.1 The following records shall be retained for at least five years:

- a. Records and logs of facility operation covering time interval at each power level.

ADMINISTRATIVE CONTROLS

RECORDS RETENTION (Continued)

- b. Records and logs of principal maintenance activities, inspections, repair and replacement of principal items of equipment related to nuclear safety.
- c. All REPORTABLE EVENTS.
- d. Records of surveillance activities, inspections, and calibrations required by these Technical Specifications.
- e. Records of changes made to Operating Procedures.
- f. Records of radioactive shipments.
- g. Records of sealed source and fission detector leak tests and results.
- h. Records of annual physical inventory of all sealed source material of record.

6.10.2 The following records shall be retained for the duration of the Facility Operating License:

- a. Records and drawing changes reflecting facility design modifications made to systems and equipment described in the Final Safety Analysis Report.
- b. Records of new and irradiated fuel inventory, fuel transfers and assembly burnup histories.
- c. Records of facility radiation and contamination surveys.
- d. Records of radiation exposure for all individuals entering radiation control areas.
- e. Records of gaseous and liquid radioactive material released to the environs.
- f. Records of transient or operational cycles for those facility components identified in Table 5.7.1-1.
- g. Records of reactor tests and experiments.
- h. Records of training and qualification for current members of the plant staff.
- i. Records of inservice inspections performed pursuant to these Technical Specifications.
- j. Records of Quality Assurance activities required by the QA Manual.

ADMINISTRATIVE CONTROLS

RECORDS RETENTION (Continued)

- k. Records of reviews performed for changes made to procedures or equipment or reviews of tests and experiments pursuant to 10 CFR 50.59.
- l. Records of the service lives of all hydraulic and mechanical snubbers referenced in Section 3.7.5 including the data at which the service life commences and associated installation and maintenance records.
- m. Records of analyses required by the radiological environmental monitoring program.
- n. Records of (1) meetings of the PNSC, (2) meetings of the previous off-site review organization, the Company Nuclear Safety Committee (CNSC), (3) the independent reviews performed by the Corporate Nuclear Safety Section, and (4) the independent reviews performed by the Corporate Quality Assurance Audit Program, Quality Assurance Auditing Unit.

6.11 RADIATION PROTECTION PROGRAM

6.11.1 Procedures for personnel radiation protection shall be prepared consistent with the requirements of 10 CFR Part 20 and shall be approved, maintained and adhered to for all operations involving personnel radiation exposure.

6.12 HIGH RADIATION AREA

6.12.1 In lieu of the "Control Device" or "alarm signal" required by paragraph 20.203(c)(2) of 10 CFR 20, each high radiation area in which the intensity of radiation is 1000 mrem/hr or less shall be barricaded and conspicuously posted as a high radiation area and entrance thereto shall be controlled by requiring issuance of a Radiation Work Permit (RWP)*. Any individual or group of individuals permitted to enter such areas shall be provided with or accompanied by one or more of the following:

- a. A radiation monitoring device which continuously indicates the radiation dose rate in the area.
- b. A radiation monitoring device which continuously integrates the radiation dose rate in the area and alarms when a preset integrated dose is received. Entry into such areas with this monitoring device may be made after the dose rate levels in the area have been established and personnel have been made knowledgeable of them.

* Health Physics personnel or personnel escorted by Health Physics personnel shall be exempt from the RWP issuance requirement during the performance of their assigned radiation protection duties, provided they comply with approved radiation protection procedures for entry into high radiation areas.

ADMINISTRATIVE CONTROLS

HIGH RADIATION AREA (Continued)

- c. An individual qualified in radiation protection procedures who is equipped with a radiation dose rate monitoring device. This individual shall be responsible for providing positive control over the activities within the area and shall perform periodic radiation surveillance at the frequency specified by the facility Health Physicist in the Radiation Work Permit.

6.12.2 The requirements of 6.12.1 above shall also apply to each high radiation area in which the intensity of radiation is greater than 1000 mrem/hr. In addition, locked doors shall be provided to prevent unauthorized entry into such areas and the keys shall be maintained under the administrative control of the Operations Shift Foreman on duty and/or the Radiation Control Supervisor.

6.13 OFFSITE DOSE CALCULATION MANUAL (ODCM)

6.13.1 The OFFSITE DOSE CALCULATION MANUAL (ODCM) shall be approved by the Commission prior to implementation.

6.13.2 Licensee initiated changes to the ODCM:

- a. Shall be submitted to the Commission in the Semiannual Radioactive Effluent Release Report for the period in which the change(s) was made effective. This submittal shall contain:
 1. Sufficiently detailed information to totally support rationale without benefit of additional or supplemental information. Information submitted should consist of a package of those pages of the ODCM to be changed with each page numbered and provided with an approval and date box, together with appropriate analyses or evaluations justifying the change(s);
 2. A determination that the change will not reduce the accuracy or reliability of dose calculations or setpoint determinations; and,
 3. Documentation of the fact that the change has been reviewed and found acceptable by the PNSC.
- b. Shall become effective upon review and acceptance by the PNSC.

6.14 PROCESS CONTROL PROGRAM (PCP)

6.14.1 The PROCESS CONTROL PROGRAM (PCP) shall be approved by the Commission prior to implementation.

6.14.2 Licensee initiated changes to the PCP:

ADMINISTRATIVE CONTROLS

PROCESS CONTROL PROGRAM (PCP) (Continued)

- a. Shall be submitted to the Commission in the Semiannual Radioactive Effluent Release Report for the period in which the change(s) was made. This submittal shall contain:
 1. Sufficiently detailed information to totally support the rationale for the change without benefit of additional or supplemental information;
 2. A determination that the change did not reduce the overall conformance of the solidification waste product to existing criteria for solid wastes; and
 3. Documentation of the fact that the change has been reviewed and found acceptable by the PNSC.
- b. Shall become effective upon review and acceptance by the PNSC.

6.15 MAJOR CHANGES TO LIQUID, GASEOUS, AND SOLID WASTE TREATMENT SYSTEMS^{7/}

6.15.1 Licensee initiated major changes to the radioactive waste systems (liquid, gaseous, and solid):

- a. Shall be reported to the Commission in the Semiannual Radioactive Effluent Release Report for the period in which the evaluation was reviewed by the PNSC. The discussion of each change shall contain:
 1. A summary of the evaluation that led to the determination that the change could be made in accordance with 10 CFR Part 50.59;
 2. Sufficient detailed information to totally support the reason for the change without benefit of additional or supplemental information;
 3. A detailed description of the equipment, components, and processes involved and the interfaces with other plant systems;
 4. An evaluation of the change that shows the predicted release of radioactive materials in liquid and gaseous effluents and/or quantity of solid waste that differ from those previously predicted in the license application and amendments thereto;
 5. An evaluation of the change that shows the expected maximum exposure to an individual in the UNRESTRICTED AREA and to the general population that differ from those previously estimated in the license application and amendments thereto;

^{7/} Licensees may choose to submit the information called for in this Specification as part of the annual FSAR update.

ADMINISTRATIVE CONTROLS

MAJOR CHANGES TO LIQUID, GASEOUS, AND SOLID WASTE TREATMENT SYSTEMS
(Continued)

6. A comparison of the predicted releases of radioactive materials, in liquid and gaseous effluents and in solid waste, to the actual releases for the period prior to when the changes are to be made;
 7. An estimate of the exposure to plant operating personnel as a result of the change; and
 8. Documentation of the fact that the change was reviewed and found acceptable to the PNSC.
- b. Shall become effective upon review and acceptance by the PNSC.



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

CAROLINA POWER & LIGHT COMPANY, et al.

DOCKET NO. 50-324

BRUNSWICK STEAM ELECTRIC PLANT, UNIT 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 170
License No. DPR-62

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment filed by Carolina Power & Light Company (the licensee), dated April 28, 1989 and November 16 1989, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter I;
 - B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
 - C. There is reasonable assurance: (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
 - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
 - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment; and paragraph 2.C.(2) of Facility Operating License No. DPR-62 is hereby amended to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 170, are hereby incorporated in the license. Carolina Power & Light Company shall operate the facility in accordance with the Technical Specifications.

- 3. This license amendment is effective as of the date of its issuance and shall be implemented within 60 days of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

Elinor G. Adensam, Director
Project Directorate II-1
Division of Reactor Projects I/II
Office of Nuclear Reactor Regulation

Attachment:
Changes to the Technical
Specifications

Date of Issuance: January 3, 1990

OFC	'A:PD21:DRPR:PM:PD21:DRPR:LPEB:NRR	OGC	:D:PD21:DRPR :	:	:
NAME	:PAnderson	:NLe:bd	:TGody	:EAdensam	:
DATE	:07/5/89	:07/7/89	:07/10/89	:07/12/89 +	:07/11/89

OFFICIAL RECORD COPY

12/14/89

ATTACHMENT TO LICENSE AMENDMENT NO. 170

FACILITY OPERATING LICENSE NO. DPR-62

DOCKET NO. 50-324

Replace the following pages of the Appendix A Technical Specifications with the enclosed pages. The revised areas are indicated by marginal lines.

Remove Pages

XIV
XV
XVI
6-1 through 6-30

Insert Pages

XIV
XV
XVI
6-1 through 6-28

INDEX

ADMINISTRATIVE CONTROLS

<u>SECTION</u>	<u>PAGE</u>
<u>6.1 RESPONSIBILITY</u>	6-1
<u>6.2 ORGANIZATION</u>	
6.2.1 OFFSITE AND ONSITE ORGANIZATIONS.....	6-1
6.2.2 FACILITY STAFF.....	6-1
6.2.3 ONSITE NUCLEAR SAFETY (ONS)	
Function.....	6-5
Responsibilities.....	6-5
Authority.....	6-5
6.2.4 SHIFT TECHNICAL ADVISOR.....	6-5
<u>6.3 FACILITY STAFF QUALIFICATION</u>	6-5
<u>6.4 TRAINING</u>	6-5
<u>6.5 REVIEW AND AUDIT</u>	
6.5.1 NUCLEAR SAFETY REVIEWERS.....	6-6
6.5.2 SAFETY EVALUATIONS AND INDEPENDENT REVIEW CONTROL	
Safety Evaluations.....	6-6
Procedures, Tests, and Experiments.....	6-7
Modifications.....	6-7
Operating License/Technical Specifications.....	6-7
6.5.3 PLANT NUCLEAR SAFETY COMMITTEE (PNSC)	
Function.....	6-8
Composition.....	6-8
Alternates.....	6-8
Meeting Frequency.....	6-8
Quorum.....	6-8
Activities.....	6-9
Authority.....	6-10
Records.....	6-10

INDEX

ADMINISTRATIVE CONTROLS

<u>SECTION</u>	<u>PAGE</u>
<u>6.5 REVIEW AND AUDIT (Continued)</u>	
6.5.4 CORPORATE NUCLEAR SAFETY SECTION	
Function.....	6-10
Organization.....	6-10
Review.....	6-11
Records.....	6-12
6.5.5 CORPORATE QUALITY ASSURANCE AUDIT PROGRAM	
Function.....	6-13
Audits.....	6-13
Records.....	6-14
Authority.....	6-14
Personnel.....	6-14
6.5.6 OUTSIDE AGENCY INSPECTION AND AUDIT PROGRAM.....	6-15
<u>6.6 REPORTABLE EVENT ACTION.....</u>	6-15
<u>6.7 SAFETY LIMIT VIOLATION.....</u>	6-15
<u>6.8 PROCEDURES AND PROGRAMS.....</u>	6-16
<u>6.9 REPORTING REQUIREMENTS</u>	
Routine Reports	6-17
Startup Reports.....	6-17
Annual Reports.....	6-18
Personnel Exposure and Monitoring Report.....	6-18
Annual Radiological Environmental Operating Report.....	6-19
Semiannual Radioactive Effluent Release Report.....	6-20
Monthly Operating Reports.....	6-21
Special Reports.....	6-22
Core Operating Limits Report.....	6-22

INDEX

ADMINISTRATIVE CONTROLS

<u>SECTION</u>	<u>PAGE</u>
6.10 <u>RECORD RETENTION</u>	6-23
6.11 <u>RADIATION PROTECTION PROGRAM</u>	6-25
6.12 <u>HIGH RADIATION AREA</u>	6-25
6.13 <u>OFFSITE DOSE CALCULATION MANUAL (ODCM)</u>	6-26
6.14 <u>PROCESS CONTROL PROGRAM (PCP)</u>	6-26
6.15 <u>MAJOR CHANGES TO LIQUID, GASEOUS, AND SOLID WASTE TREATMENT SYSTEMS</u>	6-27

6.0 ADMINISTRATIVE CONTROLS

6.1 RESPONSIBILITY

6.1.1 The General Manager - Brunswick Plant shall be responsible for overall facility operation and shall delegate in writing the succession to this responsibility during his absence.

6.2 ORGANIZATION

6.2.1 OFFSITE AND ONSITE ORGANIZATIONS

Onsite and offsite organizations shall be established for unit operation and corporate management, respectively. The onsite and offsite organizations shall include the positions for activities affecting the safety of the nuclear power plant.

- a. Lines of authority, responsibility, and communication shall be established and defined for the highest management levels through intermediate levels to and including all operating organization positions. These relationships shall be documented and updated, as appropriate, in the form of organization charts. These organization charts will be documented in the FSAR and updated in accordance with 10CFR50.71(e).
- b. The General Manager - Brunswick Plant shall be responsible for overall unit safe operation and shall have control over those onsite activities necessary for safe operation and maintenance of the plant.
- c. The Senior Vice President - Nuclear Generation shall have corporate responsibility for overall plant nuclear safety and shall take any measures needed to ensure acceptable performance of the staff in operating, maintaining, and providing technical support to the plant to ensure nuclear safety.
- d. The individuals who train the operating staff and those who carry out health physics and quality assurance functions may report to the appropriate onsite manager; however, they shall have sufficient organizational freedom to ensure their independence from operating pressures.

6.2.2 FACILITY STAFF

- a. Each facility on duty shift shall be composed of at least the minimum facility shift crew composition shown in Table 6.2.2-1.
- b. At least one licensed Reactor Operator shall be in the control room when fuel is in the reactor.
- c. When either reactor is in OPERATIONAL CONDITION 1, 2, or 3, at least one licensed Senior Reactor Operator shall be in the control room.

ADMINISTRATIVE CONTROLS

FACILITY STAFF (Continued)

- d. The Shift Operating Supervisors, Shift Foremen, and Senior Control Operators shall hold a senior reactor operator license. The Control Operators shall hold a reactor operator license.
- e. An individual qualified to implement radiation protection procedures shall be onsite when fuel is in either reactor.*
- f. All CORE ALTERATIONS shall be directly supervised by either a licensed Senior Reactor Operator or Senior Reactor Operator Limited to Fuel Handling who has no other concurrent responsibilities during this operation.
- g. A Fire Brigade of at least five members shall be maintained onsite at all times.* The Fire Brigade shall not include the minimum shift crew shown in Table 6.2.2-1 or any personnel required for other essential functions during a fire emergency.
- h. Administrative procedures shall be developed and implemented to limit the working hours of facility staff who perform safety-related functions; e.g., senior reactor operators, reactor operators, health physicists, auxiliary operators, and key maintenance personnel. These procedures shall meet the working hour guidelines published by the Commission in Generic Letter No. 82-12.

* The individual qualified to implement radiation protection procedures and Fire Brigade composition may be less than the minimum requirements for a period of time not to exceed two hours in order to accommodate unexpected absence provided immediate action is taken to fill the required positions.

TABLE 6.2.2-1

MINIMUM FACILITY SHIFT CREW COMPOSITION

WITH UNIT 1 IN CONDITION 1, 2, OR 3		
POSITION	NUMBER OF INDIVIDUALS REQUIRED TO FILL POSITION	
	CONDITIONS 1, 2, & 3	CONDITIONS 4 & 5
SOS	1	1 ^(b)
SRO ^(a)	1	1 ^(b)
RO ^(a)	3	3
AO	3	3
STA	1	1

WITH UNIT 1 IN CONDITION 4 OR 5		
POSITION	NUMBER OF INDIVIDUALS REQUIRED TO FILL POSITION	
	CONDITIONS 1, 2, & 3	CONDITIONS 4 & 5
SOS	1	1 ^(b)
SRO ^(a)	1	1 ^(b)
RO ^(a)	3	2
AO	3	3
STA	1	None

WITH UNIT 1 DE-FUELED		
POSITION	NUMBER OF INDIVIDUALS REQUIRED TO FILL POSITION	
	CONDITIONS 1, 2, & 3	CONDITIONS 4 & 5
SOS	1	1 ^(b)
SRO ^(a)	1	1 ^(b)
RO ^(a)	2	2
AO	3	3
STA	1	None

TABLE 6.2.2-1 (Continued)

MINIMUM FACILITY SHIFT CREW COMPOSITION

TABLE NOTATION

SOS - Shift Operating Supervisor with a Senior Reactor Operators License
SRO - Individual with a Senior Reactor Operators License
RO - Individual with a Reactor Operators License
AO - Auxiliary Operator (non-licensed individual)
STA - Shift Technical Advisor

(a) Assumes each individual is licensed on both plants.

(b) Does not include the licensed Senior Reactor Operator or Senior Reactor Operator Limited to Fuel Handling, supervising CORE ALTERATIONS.

The Shift Crew Composition may be less than the minimum requirements for a period of time not to exceed 2 hours in order to accommodate unexpected absence of on-duty shift crew members provided immediate action is taken to restore the Shift Crew Composition to within the minimum requirements of Table 6.2.2-1.

ADMINISTRATIVE CONTROLS

6.2.3 ONSITE NUCLEAR SAFETY (ONS)

FUNCTION

6.2.3.1 The ONS Unit shall function to examine facility operating characteristics, NRC issues, industry advisories, and other sources which may indicate areas for improving facility safety.

RESPONSIBILITIES

6.2.3.2 The ONS Unit shall be responsible for maintaining surveillance of facility activities to provide independent verification* that these activities are performed correctly and that human errors are reduced as much as practical.

AUTHORITY

6.2.3.3 The ONS Unit shall make detailed recommendations for revised procedures, equipment modifications, or other means of improving facility safety to the Manager - Corporate Nuclear Safety Section.

6.2.4 SHIFT TECHNICAL ADVISOR

6.2.4.1 The Shift Technical Advisor shall serve in an advisory capacity to the Shift Operating Supervisor on matters pertaining to the engineering aspects assuring safe operation of the unit.

6.3 FACILITY STAFF QUALIFICATION

6.3.1 Each member of the facility staff shall meet or exceed the minimum qualifications of ANSI N18.1-1971 for comparable positions, except for (1) the Manager - Environmental & Radiation Control who shall meet or exceed the qualifications of Regulatory Guide 1.8, September 1975 and (2) the Shift Technical Advisor who shall have a bachelor's degree or equivalent in a scientific or engineering discipline with specific training in plant design, and response and analysis of the plant during transients and accidents.

6.4 TRAINING

6.4.1 A retraining and replacement training program for the facility staff shall be maintained under the direction of the Manager - Training (BSEP) and shall meet or exceed the requirements and recommendations of Section 5.5 of ANSI N18.1-1971 and Appendix "A" of 10 CFR Part 55.

6.4.2 A training program for the Fire Brigade shall be maintained under the direction of the Manager - Training (BSEP) and shall meet or exceed the requirements of Section 27 of the NFPA Code-1975.

* Not responsible for sign-off function.

ADMINISTRATIVE CONTROLS

6.5 REVIEW AND AUDIT

6.5.1 NUCLEAR SAFETY REVIEWERS

6.5.1.1 Individuals shall be designated/approved by the General Manager - Brunswick Plant for performing nuclear safety reviews.

6.5.1.2 Individuals designated under Specification 6.5.1.1 above shall have an academic degree in an engineering or related field or equivalent and two years related experience.

6.5.1.3 A list shall be maintained of individuals qualified to perform nuclear safety reviews, including additional individuals whose expertise may be necessary during the reviews to assure that the reviewers collectively possess the background and qualifications in the disciplines necessary and important to the specific review.

6.5.1.4 The list specified in Specification 6.5.1.3 above shall include the disciplines for which each individual is qualified.

6.5.1.5 For those cases where interdisciplinary reviews are required, as many individuals as necessary shall be used to perform the nuclear review function.

6.5.1.6 One of the two nuclear safety reviewers shall be an individual other than the original preparer or the individual approving the action.

6.5.2 SAFETY EVALUATIONS AND INDEPENDENT REVIEW CONTROL

SAFETY EVALUATIONS

6.5.2.1 A safety evaluation shall be prepared for each of the following:

- a. Changes to procedures required by Specification 6.8, or changes to other procedures that affect nuclear safety.
- b. Proposed tests or experiments that affect nuclear safety.
- c. Proposed modifications to plant systems or equipment that affect nuclear safety.
- d. Proposed changes to the Technical Specifications.
- e. Proposed changes to the Operating License.

6.5.2.2 Two nuclear safety reviews of the item and safety evaluation(s) prepared in accordance with Specification 6.5.2.1 above shall be performed prior to approval and implementation.

6.5.2.3 The item and associated safety evaluation(s) shall be examined in order to determine whether an interdisciplinary review is required in accordance with Specification 6.5.1.5 above.

ADMINISTRATIVE CONTROLS

PROCEDURES, TESTS, AND EXPERIMENTS

6.5.2.4 The safety evaluation prepared in accordance with Specifications 6.5.2.1.a and 6.5.2.1.b above shall include a written determination, with basis, of whether or not the procedures, proposed tests and experiments, and changes thereto constitute an unreviewed safety question as defined in 10 CFR 50.59, or whether they involve a change to the Technical Specifications.

6.5.2.5 Following the nuclear safety review, the procedures required by Specification 6.8, other procedures that affect nuclear safety, proposed tests or experiments, and changes thereto (other than editorial or typographical) which have been determined to not involve an unreviewed safety question as defined in 10 CFR 50.59 or change to the Technical Specifications shall be approved prior to implementation by the General Manager - Brunswick Plant or his previously designated alternate.

MODIFICATIONS

6.5.2.6 The safety evaluation prepared in accordance with Specification 6.5.2.1.c above shall include a written determination, with basis, of whether or not the proposed modification is a change in the facility as described in the safety analysis report, involves a change to the Technical Specifications, or constitutes an unreviewed safety question as defined in 10 CFR 50.59.

6.5.2.7 Following the nuclear safety review, proposed modifications which have been determined to not involve an unreviewed safety question as defined in 10 CFR 50.59 or a change to the Technical Specifications shall be approved by the General Manager - Brunswick Plant or his previously designated alternate.

OPERATING LICENSE/TECHNICAL SPECIFICATIONS

6.5.2.8 The safety evaluation prepared in accordance with Specifications 6.5.2.1.d and 6.5.2.1.e above shall include a written preliminary determination, with basis, of whether or not the proposed Operating License/Technical Specification change(s) is a change in the facility as described in the safety analysis report.

6.5.2.9 Following the nuclear safety review of the safety evaluation prepared in accordance with Specifications 6.5.2.1.d and 6.5.2.1.e above and the associated proposed action, the request shall be:

- a. Reviewed by the Plant Nuclear Safety Committee in accordance with Specification 6.5.3.8.
- b. Reviewed by the Corporate Nuclear Safety Section in accordance with Specification 6.5.4.9.

ADMINISTRATIVE CONTROLS

6.5.3 PLANT NUCLEAR SAFETY COMMITTEE (PNSC)

FUNCTION

6.5.3.1 As an effective means for the regular review, overview, evaluation, and maintenance of plant operational safety, a Plant Nuclear Safety Committee (PNSC) shall be established.

6.5.3.2 The PNSC shall function through the utilization of subcommittees, audits, investigations, reports, and/or performance of reviews as a group.

COMPOSITION

6.5.3.3 The PNSC shall be composed of the:

Chairman:	General Manager - Brunswick Plant*
Member:	Manager - Technical Support
Member:	Manager - Operations
Member:	Manager - Maintenance
Member:	Manager - Environmental & Radiation Control
Member:	Technical Assistant to Plant General Manager
Member:	Manager - QA/QC
Member:	Manager - Regulatory Compliance

ALTERNATES

6.5.3.4 All alternate members shall be appointed in writing by the PNSC Chairman to serve on a temporary basis; however, no more than two alternates shall participate as members at any one time.

6.5.3.5 All alternates, shall as a minimum, meet equivalent qualification criteria as specified for professional-technical personnel in Section 4.4 of ANSI N18.1-1971.

MEETING FREQUENCY

6.5.3.6 The PNSC shall meet at least once per calendar month and as convened by the PNSC Chairman or his designated alternate.

QUORUM

6.5.3.7 The minimum quorum of the PNSC necessary for the performance of the PNSC activities of the Technical Specifications shall consist of the PNSC Chairman or his designated alternate and four members including alternates. No more than two alternates shall be counted toward meeting the minimum quorum requirement.

* Or designated alternate.

ADMINISTRATIVE CONTROLS

ACTIVITIES

6.5.3.8 The PNSC activities shall include the following:

- a. Review of all procedures required by Specification 6.8 and changes thereto (and any other procedures and changes thereto), any of which constitute an unreviewed safety question or involve a change to the Technical Specifications, prior to implementation.
- b. Review of all proposed tests or experiments that constitute an unreviewed safety question or involve a change to the Technical Specifications, prior to implementation.
- c. Review of all proposed modifications that constitute an unreviewed safety question or involve a change to the Technical Specifications, prior to implementation.
- d. Review of all proposed changes to the Technical Specifications or Operating License, prior to implementation.
- e. Review of reports on violations of Technical Specifications including reports covering evaluation and recommendations to prevent recurrence to the Manager - Brunswick Nuclear Project and to the Manager - Corporate Nuclear Safety Section.
- f. Performance of special reviews, investigations (or analyses), and reports thereon as requested by the Manager - Corporate Nuclear Safety Section.
- g. Review of all REPORTABLE EVENTS.
- h. Review of facility operations to detect potential nuclear safety hazards.
- i. Annual review of the Security Plan.
- j. Annual review of the Emergency Plan.
- k. Review of accidental, unplanned, or uncontrolled radioactive release including the preparation of reports covering evaluation, recommendations and disposition of the corrective action to prevent recurrence and the forwarding of these reports to the Manager - Brunswick Nuclear Project and the Manager - Corporate Nuclear Safety Section.
- l. Review of changes to the PROCESS CONTROL PROGRAM and the OFFSITE DOSE CALCULATION MANUAL.

ADMINISTRATIVE CONTROLS

AUTHORITY

6.5.3.9 If there is a disagreement between recommendations of a majority of the PNSC and the actions contemplated by the General Manager - Brunswick Plant, the PNSC shall provide written notification within 24 hours to the Manager - Brunswick Nuclear Project and the Vice President - Nuclear Services. The course determined by the General Manager - Brunswick Plant to be the most conservative shall be followed.

RECORDS

6.5.3.10 The PNSC shall maintain written minutes of each PNSC meeting that, at a minimum, document the results of all PNSC activities performed under the provisions of these Technical Specifications. Copies shall be provided to the Manager - Brunswick Nuclear Project and the Manager - Corporate Nuclear Safety Section.

6.5.4 CORPORATE NUCLEAR SAFETY SECTION

FUNCTION

6.5.4.1 The Corporate Nuclear Safety Section (CNSS) of the Nuclear Services Department shall function to provide independent review of significant plant changes, tests, and procedures; verify that REPORTABLE EVENTS are investigated in a timely manner and corrected in a manner that reduces the probability of recurrence of such events; and detect trends that may not be apparent to a day-to-day observer.

ORGANIZATION

6.5.4.2 The individuals assigned responsibility for independent reviews shall be specified in technical disciplines. These individuals shall collectively have the experience and competence required to review activities in the following areas:

- a. nuclear power plant operations
- b. nuclear engineering
- c. chemistry and radiochemistry
- d. metallurgy
- e. non-destructive testing
- f. instrumentation and control
- g. radiological safety
- h. mechanical and electrical engineering
- i. administrative controls

ADMINISTRATIVE CONTROLS

ORGANIZATION (Continued)

- j. seismic and environmental
- k. quality assurance practices
- l. Other appropriate fields associated with the unique characteristics of the nuclear power plant.

6.5.4.3 The Manager - Corporate Nuclear Safety Section shall have an academic degree in an engineering or related field and, in addition, shall have a minimum of ten years related experience, of which a minimum of five years shall be in the operation and/or design of nuclear power plants.

6.5.4.4 The independent safety review program reviewers shall have an academic degree in an engineering or related field or equivalent and, in addition, shall have a minimum of five years related experience.

6.5.4.5 An individual may possess competence in more than one specialty area. If sufficient expertise is not available within the Corporate Nuclear Safety Section, competent individuals from other Carolina Power & Light Company organizations or outside consultants shall be utilized in performing independent reviews and investigations.

6.5.4.6 At least three individuals, qualified as discussed in 6.5.4.4 above, shall review each item submitted under the requirements of Section 6.5.4.9.

6.5.4.7 Independent safety reviews shall be performed by individuals not directly involved with the activity under review or responsible for the activity under review.

6.5.4.8 The Corporate Nuclear Safety Section independent safety review program shall be conducted in accordance with written, approved procedures.

REVIEW

6.5.4.9 The Corporate Nuclear Safety Section shall perform reviews of the following:

- a. The safety evaluations for 1) changes to procedures required by Specification 6.8, 2) modifications of equipment or systems, and 3) tests or experiments that constitute a change to the safety analysis report to verify that such actions did not constitute an unreviewed safety question or involve a change to the Technical Specifications. Implementation may proceed prior to completion of this review.
- b. Proposed changes to procedures required by Specification 6.8, and proposed modifications that constitute an unreviewed safety question as defined in 10 CFR 50.59 or a change to the Technical Specifications, prior to implementation.

ADMINISTRATIVE CONTROLS

REVIEW (Continued)

- c. Proposed tests or experiments that involve an unreviewed safety question as defined in 10 CFR 50.59 or a change to the Technical Specifications, prior to implementation.
- d. Proposed changes to the Technical Specifications and Operating License.
- e. Violations of applicable codes, regulations, orders, Technical Specifications, license requirements, and internal procedures or instructions having nuclear safety significance.
- f. Significant operating abnormalities or deviations from normal and expected performance of plant safety-related structures, systems, or components.
- g. Reportable events.
- h. Reports and minutes of the PNSC.
- i. Any other matter involving safe operation of the nuclear power plant that the Manager - Corporate Nuclear Safety Section deems appropriate for consideration or which is referred to the Manager - Corporate Nuclear Safety Section by the on-site operating organization or other functional organizational units within Carolina Power & Light Company.

6.5.4.10 Review of items considered under 6.5.4.9(e) through (i) above shall include the results of any investigations made and the recommendations resulting from these investigations to prevent or reduce the probability of recurrence of the event.

RECORDS

6.5.4.11 Records of Corporate Nuclear Safety Section reviews, including recommendations and concerns, shall be prepared and distributed as indicated below:

- a. Copies of documented reviews shall be retained in the CNSS files.
- b. Recommendations and concerns shall be submitted to the General Manager - Brunswick Plant and Manager - Brunswick Nuclear Project, within 14 days of completion of the review.
- c. A summation of Corporate Nuclear Safety Section's recommendations and concerns shall be submitted to the Chairman/President; Executive Vice President - Power Supply; Senior Vice President - Nuclear Generation; Vice President - Nuclear Services; Manager - Brunswick Nuclear Project; General Manager - Brunswick Plant; and others, appropriate, at least once every two months.

ADMINISTRATIVE CONTROLS

6.5.5 CORPORATE QUALITY ASSURANCE AUDIT PROGRAM

FUNCTION

6.5.5.1 The Quality Assurance Auditing Unit (QAAU) of the Corporate Quality Assurance Department shall function to perform audits of facility activities specified in Specification 6.5.5.2.

AUDITS

6.5.5.2 Audits of facility activities shall be performed by the QAAU. These audits shall encompass:

- a. The conformance of facility operation to provisions contained within the Technical Specifications and applicable license conditions at least once per 12 months.
- b. The training and qualifications of the entire facility staff at least once per 12 months.
- c. The results of actions taken to correct deficiencies occurring in facility equipment, structures, systems, or methods of operation that affect nuclear safety at least once per 6 months.
- d. The verification of compliance and implementation of the requirements of the Quality Assurance Program to meet the criteria of Appendix "B", 10 CFR 50, at least once per 24 months.
- e. The Emergency Plan and implementing procedures at least once per 12 months.
- f. The Security Plan and implementing procedures at least once per 12 months.
- g. The Facility Fire Protection Program and implementing procedures at least once per 12 months.
- h. The radiological environmental monitoring program and the results thereof at least once per 12 months.
- i. The OFFSITE DOSE CALCULATIONAL MANUAL and implementing procedures at least once per 24 months.
- j. The PROCESS CONTROL PROGRAM and implementing procedures for processing and packaging of radioactive wastes at least once per 24 months.

ADMINISTRATIVE CONTROLS

AUDITS (Continued)

- k. The performance of activities required by the Quality Assurance Program to meet the provisions of Regulatory Guide 1.21, Revision 1, June 1974, and Regulatory Guide 4.1, Revision 1, April 1975, at least once per 12 months.
- l. Any other area of facility operation considered appropriate by the Manager - Quality Assurance Services Section.

6.5.5.3 Personnel performing the quality assurance audits shall have access to the plant operating records.

RECORDS

6.5.5.4 Records of audits shall be prepared and retained.

6.5.5.5 Audit reports encompassed by 6.5.5.2 above shall be prepared, approved by the Manager - Quality Assurance Services Section, and forwarded to the Executive Vice President - Power Supply; Senior Vice President - Nuclear Generation; Manager - Brunswick Nuclear Project; Vice President - Nuclear Services; General Manager - Brunswick Plant; and others, as appropriate, within 30 days after completion of the audit.

AUTHORITY

6.5.5.6 The Manager - Quality Assurance Services Section under the Manager - Corporate Quality Assurance shall be responsible for the following:

- a. The administering of the Corporate Quality Assurance Audit Program.
- b. The approval of the individual(s) selected to conduct quality assurance audits.

PERSONNEL

6.5.5.7 Audit personnel shall be independent of the area audited.

6.5.5.8 Selection of personnel for auditing assignments shall be based on experience or training that establishes that their qualifications are commensurate with the complexity or special nature of the activities to be audited. In selecting audit personnel, consideration shall be given to special abilities, specialized technical training, prior pertinent experience, personal characteristics, and education.

6.5.5.9 Qualified outside consultants or other individuals independent from those personnel directly involved in plant operation shall be used to augment the audit teams when necessary.

ADMINISTRATIVE CONTROLS

6.5.6 OUTSIDE AGENCY INSPECTION AND AUDIT PROGRAM

6.5.6.1 An independent fire protection and loss prevention inspection and audit shall be performed at least once per 12 months utilizing either qualified offsite licensee personnel or an outside fire protection firm.

6.5.6.2 An inspection and audit of the fire protection and loss prevention program shall be performed by an outside qualified fire consultant at intervals no greater than 36 months.

6.6 REPORTABLE EVENT ACTION

6.6.1 The following actions shall be taken for REPORTABLE EVENTS:

- a. The Commission shall be notified and a report submitted pursuant to the requirements of Section 50.73 to 10 CFR Part 50, and
- b. Each REPORTABLE EVENT shall be reviewed by the Plant Nuclear Safety Committee - Brunswick Plant and shall be submitted to the Manager - Corporate Nuclear Safety Section and the Manager - Brunswick Nuclear Project.

6.7 SAFETY LIMIT VIOLATION

6.7.1 The following actions shall be taken in the event a Safety Limit is violated:

- a. The facility shall be placed in at least HOT SHUTDOWN within two hours.
- b. The NRC Operations Center shall be notified by telephone as soon as possible and in all cases within one hour. The Manager - Brunswick Nuclear Project and the Manager - Corporate Nuclear Safety Section shall be notified within 24 hours.
- c. A Safety Limit Violation Report shall be prepared. The report shall be reviewed by the General Manager - Brunswick Plant. This report shall describe (1) applicable circumstances preceding the violation, (2) effects of the violation upon facility components, systems, or structures, and (3) corrective action taken to prevent recurrence.
- d. The Safety Limit Violation Report shall be submitted to the Commission, the Manager - Brunswick Nuclear Project, and the Manager - Corporate Nuclear Safety Section within 14 days of the violation.

ADMINISTRATIVE CONTROLS

6.8 PROCEDURES AND PROGRAMS

6.8.1 Written procedures shall be established, implemented, and maintained covering the activities referenced below:

- a. The applicable procedures recommended in Appendix "A" of Regulatory Guide 1.33, November 1972.
- b. Refueling operations.
- c. Surveillance and test activities of safety related equipment.
- d. Security Plan implementation.
- e. Emergency Plan implementation.
- f. Fire Protection Program implementation.
- g. OFFSITE DOSE CALCULATION MANUAL implementation.
- h. PROCESS CONTROL PROGRAM implementation.
- i. Quality Assurance Program for effluent and environmental monitoring using the guidance in Regulatory Guide 1.21, Revision 1, June 1974, and Regulatory Guide 4.1, Revision 1, April 1975.

6.8.2 Temporary changes to procedures of Specification 6.8.1 above, any other procedures that affect nuclear safety, and proposed tests or experiments may be made provided:

- a. The intent of the original procedure, proposed test or experiment is not altered.
- b. The change is approved by two members of the plant management staff, at least one of whom holds a Senior Reactor Operator License on the unit affected.
- c. The change is documented, reviewed pursuant to Specifications 6.5.2.1 and 6.5.2.2 and approved by the General Manager - Brunswick Plant or his previously designated alternate within 14 days of implementation.

6.8.3 The following programs shall be established, implemented, and maintained:

- a. Primary Coolant Sources Outside Containment

A program to reduce leakage from those portions of systems outside containment that could contain highly radioactive fluids during a serious transient or accident to as low as practical levels. The program shall include the following:

ADMINISTRATIVE CONTROLS

PROCEDURES AND PROGRAMS (Continued)

1. Preventive maintenance and periodic visual inspection requirements, and
 2. Integrated leak test requirements for each system at refueling cycle intervals or less.
- b. In-Plant Radiation Monitoring

A program which will ensure the capability to accurately determine the airborne iodine concentration in vital areas under accident conditions. This program shall include the following:

1. Training of personnel,
 2. Procedures for monitoring, and
 3. Provisions for maintenance of sampling and analysis equipment.
- c. Post-Accident Sampling

A program which will ensure the capability to obtain and analyze reactor coolant, radioactive iodines and particulates in plant gaseous effluents, and containment atmosphere samples under accident conditions. The program shall include the following:

1. Training of personnel,
2. Procedures for sampling and analysis, and
3. Provisions for maintenance of sampling and analysis equipment.

6.9 REPORTING REQUIREMENTS

ROUTINE REPORTS

6.9.1 In addition to the applicable reporting requirements of Title 10, Code of Federal Regulations, the following reports shall be submitted to the Regional Administrator of the Regional Office unless otherwise noted.

STARTUP REPORTS

6.9.1.1 A summary report of plant startup and power escalation testing shall be submitted following (1) receipt of an operating license, (2) amendment to the license involving a planned increase in power level, (3) installation of fuel that has a different design or has been manufactured by a different fuel supplier, and (4) modifications that may have significantly altered the nuclear, thermal, or hydraulic performance of the plant.

ADMINISTRATIVE CONTROLS

STARTUP REPORTS (Continued)

6.9.1.2 The startup report shall address each of the tests identified in the FSAR and shall include a description of the measured values of the operating conditions or characteristics obtained during the test program and a comparison of these values with design predictions and specifications. Any corrective actions that were required to obtain satisfactory operation shall also be described. Any additional specific details required in license conditions based on other commitments shall be included in this report.

6.9.1.3 Startup reports shall be submitted within (1) 90 days following completion of the startup test program, (2) 90 days following resumption or commencement of commercial power operation, (3) 9 months following initial criticality, whichever is earliest. If the Startup Report does not cover all three events, i.e., initial criticality, completion of startup test program, and resumption or commencement of commercial power operation, supplementary reports shall be submitted at least every three months until all three events have been completed.

ANNUAL REPORTS^{1/}

6.9.1.4 Annual reports covering the activities of the unit as described below during the previous calendar year shall be submitted prior to March 1 of each year. The initial report shall be submitted prior to March 1 of the year following initial criticality.

PERSONNEL EXPOSURE AND MONITORING REPORT^{2/}

6.9.1.5 Reports required on an annual basis shall include a tabulation of the number of station, utility, and other personnel, including contractors, receiving exposures greater than 100 mrem/yr and their associated man-rem exposure according to work and job functions^{2/}, e.g., reactor operations and surveillance, inservice inspection, routine maintenance, special maintenance (describe maintenance), waste processing, and refueling. The dose assignments to various duty functions may be estimated, based on pocket dosimeter, TLD, or film badge measurements. Small exposures totalling less than 20 percent of the individual total dose need not be accounted for. In the aggregate, at least 80 percent of the total whole body dose received from external sources shall be assigned to specific major work functions.

^{1/} A single submittal may be made for a multiple unit station. The submittal should combine those sections that are common to all units at the station.

^{2/} This tabulation supplements the requirements of §20.407 of 10 CFR Part 20.

ADMINISTRATIVE CONTROLS

ANNUAL RADIOLOGICAL ENVIRONMENTAL OPERATING REPORT^{3/}

6.9.1.6 Routine radiological environmental operating reports covering the operation of the facility during the previous calendar year shall be submitted prior to May 1 of each year.

6.9.1.7 The Annual Radiological Environmental Operating Report shall include the following:

- a. Summaries, interpretations, and an analysis of trends of the results of the radiological environmental surveillance activities for the report period, including a comparison with pre-operational studies, with operational controls (as appropriate), and with previous environmental surveillance reports, and an assessment of the observed impact of the plant operation on the environment.
- b. Results of land uses censuses required by Specification 3.12.2.
- c. Results of analysis of all radiological environmental samples and of all environmental radiation measurements taken during the period pursuant to the locations specified in the table and figures in the OFFSITE DOSE CALCULATION MANUAL, as well as summarized and tabulated results of these analyses and measurements in the format of Table 3 in the Radiological Assessment Branch Technical Position, Revision 1, November 1979. In the event that some individual results are not available for inclusion with the report, the report shall be submitted noting and explaining the reasons for the missing results. The missing data should be submitted as soon as possible in a supplementary report.
- d. A summary description of the radiological environmental monitoring program.
- e. At least two legible maps^{4/} covering all sampling locations keyed to a table giving distances and directions from the centerline of one reactor.
- f. The results of licensee participation in the Interlaboratory Comparison Program, required by Specification 3.12.3.

^{3/} A single submittal may be made for a multiple unit station.

^{4/} One map shall cover stations near the SITE BOUNDARY; a second map shall include the more distant stations.

ADMINISTRATIVE CONTROLS

ANNUAL RADIOLOGICAL ENVIRONMENTAL OPERATING REPORT (Continued)

- g. Discussion of all deviations from the sampling schedule of Table 3.12.1-1.
- h. Discussion of all analyses in which the LLD required by Table 4.12.1-1 was not achievable.

SEMIANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT^{5/}

6.9.1.8 Routine radioactive effluent release reports covering the operation of the facility during the previous 6 months of operation shall be submitted within the time periods specified in Specifications 6.9.1.9 and 6.9.1.10 below.

6.9.1.9 The portion of the Semiannual Radioactive Effluent Release Reports to be submitted within 60 days after January 1 and July 1 of each year shall include the following:

- a. A summary of the quantities of radioactive liquid and gaseous effluents and solid waste released from the facility as outlined in Regulatory Guide 1.21, "Measuring, Evaluating, and Reporting Radioactivity in Solid Wastes and Releases of Radioactivity Materials in Liquid and Gaseous Effluents from Light-Water-Cooled Nuclear Power Plants," Revision 1, June 1974, with data summarized on a quarterly basis similar to the format of Appendix B thereof.
- b. The information specified below for each class of solid waste (as defined by 10 CFR Part 61, when implemented) shipped offsite during the report period:
 - 1. Container volume,
 - 2. Total curie quantity (specify whether determined by measurement or estimate),
 - 3. Principal radionuclides (specify whether determined by measurement or estimate),
 - 4. Source of waste and processing employed (e.g., dewatered spent resin, compacted dry waste, evaporator bottoms),
 - 5. Type of container (e.g., LSA, Type A, Type B, Large Quantity), and

^{5/} A single submittal may be made for a multiple unit station. The submittal should combine those sections that are common to all units at the station.

ADMINISTRATIVE CONTROLS

SEMIANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT (Continued)

6. Solidification agent or absorbent (e.g., cement, urea formaldehyde).
- c. A list of description of unplanned releases from the site to UNRESTRICTED AREAS of radioactive materials in gaseous and liquid effluents made during the reporting period.
- d. Any changes made during the reporting period to the PROCESS CONTROL PROGRAM (PCP) or the OFFSITE DOSE CALCULATION MANUAL (ODCM), as well as a listing of new locations for dose calculations and/or environmental monitoring identified by the land use census pursuant to Specification 3.12.2.
- e. A summary of radioactivity released from the site by incineration of radioactive waste oil.

6.9.1.10 The portion of the Semiannual Radioactive Effluent Release Report to be submitted within 90 days after January 1 of each year shall include the following:

- a. An annual summary of hourly meteorological data collected over the previous calendar year. This annual summary may be either in the form of an hour-by-hour listing on magnetic tape of wind speed, wind direction, atmospheric stability, and precipitation (if measured), or in the form of joint frequency distributions of wind speed, wind direction, and atmospheric stability.^{6/}
- b. An assessment of the radiation doses due to the radioactive liquid and gaseous effluents released from the station during the previous calendar year.

MONTHLY OPERATING REPORTS

6.9.1.11 Routine reports of operating statistics and shutdown experience, including documentation of all challenges to main steam system safety/relief valves, shall be submitted on a monthly basis to the Director, Office of Resource Management, U. S. Nuclear Regulatory Commission, Washington, D.C. 20555, with a copy to the Regional Administrator of the Regional Office no later than the 15th of each month following the calendar month covered by the report.

^{6/} In lieu of submission with the Semiannual Radioactive Effluent Release Report, the licensee has the option of retaining this summary of required meteorological data in a file that shall be provided to the NRC upon request.

ADMINISTRATIVE CONTROLS

SPECIAL REPORTS

6.9.2 Special reports shall be submitted to the Regional Administrator of the Regional Office within the time period specified for each report. These reports shall be submitted covering the activities identified below pursuant to the requirements of the applicable reference specification.

- a. Inoperable Seismic Monitoring Instrumentation, Specification 3.3.5.1.
- b. Seismic event analysis, Specification 4.3.5.1.2.
- c. Accident Monitoring Instrumentation, Specification 3.3.5.3.
- d. Fire detection instrumentation, Specification 3.3.5.7.
- e. Reactor coolant specific activity analysis, Specification 3.4.5.
- f. ECCS actuation, Specifications 3.5.3.1 and 3.5.3.2.
- g. Fire suppression systems, Specifications 3.7.7.1, 3.7.7.2, 3.7.7.3, and 3.7.7.5.
- h. Fire barrier penetration, Specification 3.7.8.
- i. Liquid Effluents Dose, Specification 3.11.1.2.
- j. Liquid Radwaste Treatment, Specification 3.11.1.3.
- k. Dose - Noble Gases, Specification 3.11.2.2.
- l. Dose - Iodine-131, Iodine-133, Tritium, and Radionuclides in Particulate Form, Specification 3.11.2.3.
- m. Gaseous Radwaste Treatment, Specification 3.11.2.4.
- n. Ventilation Exhaust Treatment, Specification 3.11.2.5.
- o. Total Dose, Specification 3.11.4.
- p. Monitoring Program, Specification 3.12.1.b.
- q. Primary Containment Structural Integrity, Specification 4.6.1.4.2.

CORE OPERATING LIMITS REPORT

6.9.3.1 Core operating limits shall be established prior to each reload cycle, or prior to any remaining portion of a reload cycle, for the following:

- a. The AVERAGE PLANAR LINEAR HEAT GENERATION RATES (APLHGR) for Specification 3.2.1 including core flow and core power adjustments.

ADMINISTRATIVE CONTROLS

CORE OPERATING LIMITS REPORT (Continued)

- b. The core flow and core power adjustments for Specification 3.2.2.1.
- c. The MINIMUM CRITICAL POWER RATIO (MCPR) for Specifications 3.2.2.1 and 3.2.2.2.
- d. The rod block monitor upscale trip setpoint and allowable value for Specification 3.3.4.

and shall be documented in the CORE OPERATING LIMITS REPORT.

6.9.3.2 The analytical methods used to determine the core operating limits shall be those previously reviewed and approved by the NRC, specifically those described in the following documents.

- a. NEDE-24011-P-A, "General Electric Standard Application for Reactor Fuel" (latest approved version).
- b. The May 18, 1984 and October 22, 1984 NRC Safety Evaluation Reports for the Brunswick Reload Methodologies described in:
 - 1. Topical Report NF-1583.01, "A Description and Validation of Steady-State Analysis Methods for Boiling Water Reactors," February 1983.
 - 2. Topical Report NF-1583.02, "Methods of RECORD," February 1983.
 - 3. Topical Report NF-1583.03, "Methods of PRESTO-B," February 1983.
 - 4. Topical Report NF-1583.04, "Verification of CP&L Reference BWR Thermal-Hydraulic Methods Using the FIBWR Code," May 1983.

6.9.3.3 The core operating limits shall be determined such that all applicable limits (e.g., fuel thermal-mechanical limits, core thermal-hydraulic limits, ECCS limits, nuclear limits such as shutdown margin, transient analysis limits, and accident analysis limits) of the safety analysis are met.

6.9.3.4 The CORE OPERATING LIMITS REPORT, including any mid-cycle revisions or supplements shall be provided, upon issuance for each reload cycle, to the NRC Document Control Desk with copies to the Regional Administrator and Resident Inspector.

6.10 RECORD RETENTION

Facility records shall be retained in accordance with ANSI-N45.2.9-1974.

6.10.1 The following records shall be retained for at least five years:

- a. Records and logs of facility operation covering time interval at each power level.

ADMINISTRATIVE CONTROLS

RECORDS RETENTION (Continued)

- b. Records and logs of principal maintenance activities, inspections, repair and replacement of principal items of equipment related to nuclear safety.
- c. All REPORTABLE EVENTS.
- d. Records of surveillance activities, inspections, and calibrations required by these Technical Specifications.
- e. Records of changes made to Operating Procedures.
- f. Records of radioactive shipments.
- g. Records of sealed source and fission detector leak tests and results.
- h. Records of annual physical inventory of all sealed source material of record.

6.10.2 The following records shall be retained for the duration of the Facility Operating License:

- a. Records and drawing changes reflecting facility design modifications made to systems and equipment described in the Final Safety Analysis Report.
- b. Records of new and irradiated fuel inventory, fuel transfers and assembly burnup histories.
- c. Records of facility radiation and contamination surveys.
- d. Records of radiation exposure for all individuals entering radiation control areas.
- e. Records of gaseous and liquid radioactive material released to the environs.
- f. Records of transient or operational cycles for those facility components identified in Table 5.7.1-1.
- g. Records of reactor tests and experiments.
- h. Records of training and qualification for current members of the plant staff.
- i. Records of inservice inspections performed pursuant to these Technical Specifications.
- j. Records of Quality Assurance activities required by the QA Manual.

ADMINISTRATIVE CONTROLS

RECORDS RETENTION (Continued)

- k. Records of reviews performed for changes made to procedures or equipment or reviews of tests and experiments pursuant to 10 CFR 50.59.
- l. Records of the service lives of all hydraulic and mechanical snubbers referenced in Section 3.7.5 including the data at which the service life commences and associated installation and maintenance records.
- m. Records of analyses required by the radiological environmental monitoring program.
- n. Records of (1) meetings of the PNSC, (2) meetings of the previous off-site review organization, the Company Nuclear Safety Committee (CNSC), (3) the independent reviews performed by the Corporate Nuclear Safety Section, and (4) the independent reviews performed by the Corporate Quality Assurance Audit Program, Quality Assurance Auditing Unit.

6.11 RADIATION PROTECTION PROGRAM

6.11.1 Procedures for personnel radiation protection shall be prepared consistent with the requirements of 10 CFR Part 20 and shall be approved, maintained and adhered to for all operations involving personnel radiation exposure.

6.12 HIGH RADIATION AREA

6.12.1 In lieu of the "Control Device" or "alarm signal" required by paragraph 20.203(c)(2) of 10 CFR 20, each high radiation area in which the intensity of radiation is 1000 mrem/hr or less shall be barricaded and conspicuously posted as a high radiation area and entrance thereto shall be controlled by requiring issuance of a Radiation Work Permit (RWP)*. Any individual or group of individuals permitted to enter such areas shall be provided with or accompanied by one or more of the following:

- a. A radiation monitoring device which continuously indicates the radiation dose rate in the area.
- b. A radiation monitoring device which continuously integrates the radiation dose rate in the area and alarms when a preset integrated dose is received. Entry into such areas with this monitoring device may be made after the dose rate levels in the area have been established and personnel have been made knowledgeable of them.

* Health Physics personnel or personnel escorted by Health Physics personnel shall be exempt from the RWP issuance requirement during the performance of their assigned radiation protection duties, provided they comply with approved radiation protection procedures for entry into high radiation areas.

ADMINISTRATIVE CONTROLS

HIGH RADIATION AREA (Continued)

- c. An individual qualified in radiation protection procedures who is equipped with a radiation dose rate monitoring device. This individual shall be responsible for providing positive control over the activities within the area and shall perform periodic radiation surveillance at the frequency specified by the facility Health Physicist in the Radiation Work Permit.

6.12.2 The requirements of 6.12.1 above shall also apply to each high radiation area in which the intensity of radiation is greater than 1000 mrem/hr. In addition, locked doors shall be provided to prevent unauthorized entry into such areas and the keys shall be maintained under the administrative control of the Operations Shift Foreman on duty and/or the Radiation Control Supervisor.

6.13 OFFSITE DOSE CALCULATION MANUAL (ODCM)

6.13.1 The OFFSITE DOSE CALCULATION MANUAL (ODCM) shall be approved by the Commission prior to implementation.

6.13.2 Licensee initiated changes to the ODCM:

- a. Shall be submitted to the Commission in the Semiannual Radioactive Effluent Release Report for the period in which the change(s) was made effective. This submittal shall contain:
 - 1. Sufficiently detailed information to totally support rationale without benefit of additional or supplemental information. Information submitted should consist of a package of those pages of the ODCM to be changed with each page numbered and provided with an approval and date box, together with appropriate analyses or evaluations justifying the change(s);
 - 2. A determination that the change will not reduce the accuracy or reliability of dose calculations or setpoint determinations; and,
 - 3. Documentation of the fact that the change has been reviewed and found acceptable by the PNSC.
- b. Shall become effective upon review and acceptance by the PNSC.

6.14 PROCESS CONTROL PROGRAM (PCP)

6.14.1 The PROCESS CONTROL PROGRAM (PCP) shall be approved by the Commission prior to implementation.

6.14.2 Licensee initiated changes to the PCP:

ADMINISTRATIVE CONTROLS

PROCESS CONTROL PROGRAM (PCP) (Continued)

- a. Shall be submitted to the Commission in the Semiannual Radioactive Effluent Release Report for the period in which the change(s) was made. This submittal shall contain:
 1. Sufficiently detailed information to totally support the rationale for the change without benefit of additional or supplemental information;
 2. A determination that the change did not reduce the overall conformance of the solidification waste product to existing criteria for solid wastes; and
 3. Documentation of the fact that the change has been reviewed and found acceptable by the PNSC.
- b. Shall become effective upon review and acceptance by the PNSC.

6.15 MAJOR CHANGES TO LIQUID, GASEOUS, AND SOLID WASTE TREATMENT SYSTEMS^{7/}

6.15.1 Licensee initiated major changes to the radioactive waste systems (liquid, gaseous, and solid):

- a. Shall be reported to the Commission in the Semiannual Radioactive Effluent Release Report for the period in which the evaluation was reviewed by the PNSC. The discussion of each change shall contain:
 1. A summary of the evaluation that led to the determination that the change could be made in accordance with 10 CFR Part 50.59;
 2. Sufficient detailed information to totally support the reason for the change without benefit of additional or supplemental information;
 3. A detailed description of the equipment, components, and processes involved and the interfaces with other plant systems;
 4. An evaluation of the change that shows the predicted release of radioactive materials in liquid and gaseous effluents and/or quantity of solid waste that differ from those previously predicted in the license application and amendments thereto;
 5. An evaluation of the change that shows the expected maximum exposure to an individual in the UNRESTRICTED AREA and to the general population that differ from those previously estimated in the license application and amendments thereto;

^{7/} Licensees may choose to submit the information called for in this Specification as part of the annual FSAR update.

ADMINISTRATIVE CONTROLS

MAJOR CHANGES TO LIQUID, GASEOUS, AND SOLID WASTE TREATMENT SYSTEMS
(Continued)

6. A comparison of the predicted releases of radioactive materials, in liquid and gaseous effluents and in solid waste, to the actual releases for the period prior to when the changes are to be made;
 7. An estimate of the exposure to plant operating personnel as a result of the change; and
 8. Documentation of the fact that the change was reviewed and found acceptable to the PNSC.
- b. Shall become effective upon review and acceptance by the PNSC.



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
SUPPORTING AMENDMENT NO. 138 TO FACILITY OPERATING LICENSE NO. DPR-71
AND AMENDMENT NO. 170 TO FACILITY OPERATING LICENSE NO. DPR-62
CAROLINA POWER & LIGHT COMPANY, et al.
BRUNSWICK STEAM ELECTRIC PLANT, UNITS 1 AND 2
DOCKET NOS. 50-325 AND 50-324

1.0 INTRODUCTION

By letters dated April 28, 1989 and November 16, 1989, Carolina Power & Light Company submitted requests for changes to the Brunswick Steam Electric Plant, Units 1 and 2, Technical Specifications (TS). The proposed changes would: (1) delete the organization charts (Figures 6.2.1-1, 6.2.2-1, and 6.2.2.-1) from the plant and replace them with a narrative description of the offsite and onsite organizations' functional requirements in TS and (2) remove Section 6.2.1 and the plant operations staff qualifications in Section 6.2.2. References to Figures 6.2.1-1, 6.2.2-1 and 6.2.2-2 from TS Sections 6.2.1, 6.2.2 and 6.3. In addition, the proposed changes include the following organization changes: 1) Revise TS Section 6.0, Administrative Controls, to reflect changes in organization names and individual titles; (these changes were the result of a recent licensee reorganization and other management changes), and (2) revise TS Section 6.5.4.9 to meet the requirements of 10 CFR 50.72 and 10 CFR 50.73. Guidance for the deletion of organization charts from the TS was provided to the licensee by Generic Letter 88-06, dated March 22, 1988.

2.0 EVALUATION

Consistent with the guidance provided in the Standard Technical Specifications, Specifications 6.2.1 and 6.2.2 of the administrative control requirements have referenced offsite and onsite organization charts that are provided as figures in these sections. On a plant specific basis, these organization charts have been provided by applicants and included in the TS issued with the operating license. Subsequent restructuring of either the offsite or onsite organizations has required licensees to submit a license amendment for NRC approval to reflect the desired changes in these organizations. As a consequence, organizational changes have necessitated the need to request an amendment of the operating license.

Because of these limitations on organizational structure, the nuclear industry has highlighted this as an area for improvement in the TS. Carolina Power & Light Company proposed changes to remove organization charts from the Shearon Harris Nuclear Power Plant TS under the lead-plant concept that included the endorsement of the proposed changes by the Westinghouse Owners Group. In its review of the Shearon Harris proposal, the staff concluded that most of the essential elements of offsite and onsite organization charts are captured by other regulatory requirements, notably, Appendix B to 10 CFR Part 50. However, there are aspects of the organizational structure that are important to ensure that the administrative control requirements of 10 CFR 50.36 would be met and that would not be retained with the removal of the organizational charts. The applicable regulatory requirements are those administrative controls that are necessary to ensure safe operation of the facility. Therefore, those aspects of organization charts for Shearon Harris that were essential for conformance with regulatory requirements were added (1) to Specification 6.2.1 to define functional requirements for the offsite and onsite organizations and (2) to Specification 6.2.2 to define qualification requirements of the unit staff.

By letter dated January 27, 1988, the staff issued Amendment No. 3 to Facility Operating License NPF-63 for the Shearon Harris Nuclear Power Plant that incorporated these changes into their TS. Subsequently, the staff developed guidance on an acceptable format for license amendment requests to remove the organization charts from TS. Generic Letter 88-06 provided this guidance to all power reactor licensees.

The licensee's proposed changes to its TS are in accordance with the guidance provided by Generic Letter 88-06 and address the items listed below.

- (1) Specifications 6.2.1, 6.2.2 and 6.3 were revised to delete the references to Figure 6.2.1-1, 6.2.2-1 and 6.2.2-2. that were removed from the TS.
- (2) Functional requirements of the offsite and onsite organizations were defined and added to Specification 6.2.1, and they are consistent with the guidance provided in Generic Letter 88-06. The specification notes that implementation of these requirements is being updated in the plant FSAR as required by 10 CFR 50.71(e).
- (3) The senior reactor operator and reactor operator license qualified positions of the unit staff were added to Specification 6.2.2. This requirement was not identified on the organization chart; however, the licensee is adding this requirement to TS following the removal of the organization chart for the operations unit staff.
- (4) Consistent with requirements to document the offsite and onsite organization relationships in the form of organization charts, the licensee has confirmed that this documentation has been designated for inclusion in the next update of the FSAR and QA program.

- (5) Specification 6.2.1, referenced the figure for the organization charts being removed from TS and has been revised to define the requirements that were identified by these charts.

On the basis of its review of the above items, the staff concludes that the licensee has provided an acceptable response to these items as addressed in the NRC guidance on removing organization charts from the administrative control requirements of the TS. Furthermore, the staff finds that these changes are consistent with the staff's generic finding on the acceptability of such changes as noted in Generic Letter 88-06. Accordingly, the staff finds the proposed changes to be acceptable.

The staff has also reviewed the following licensee proposed changes to TS Section 6.C, Administrative Controls:

Change "Director - Training" to read "Manager - Training (BSEP)."

Change "Vice President - Brunswick Nuclear Project" to read "Manager - Brunswick Nuclear Project."

Change "Vice President - Corporate Nuclear Safety and Research" to read "Vice President - Nuclear Services."

Change "Chairman/President and Chief Executive Officer" to read "Chairman/President."

Change "Executive Vice President - Power Supply and Engineering and Construction" to read "Executive Vice President - Power Supply."

Add "Senior Vice President - Nuclear Generation".

Change "Director- QA/QC" to read "Manager - QA/QC"

Remove "Director - Administrative Support" from the list of Plant Nuclear Safety Committee members, and the quorum requirement to be adjusted accordingly.

Change "Director - Regulatory Compliance" to read "Manager - Regulatory Compliance."

Change "Assistant to Plant General Manager" to read "Technical Assistant to Plant General Manager."

Change title "Performance Evaluation Unit (PEU)" in Sections 6.5.5 and 6.10.2 to read "Quality Assurance Auditing Unit (QAAU)."

Revise Technical Specification 6.5.4.9, item e to become new 6.5.4.9 items e, f, and g, and "events requiring 24-hour written notification" to "reportable events" as required by 10 CFR 50.72 and 10 CFR 50.73.

The staff finds that:

- (1) Job titles for certain plant and corporate managers were changed as the results of a recent CP&L organizational change; however, their duties and qualifications remain the same as before.
- (2) Reducing the quorum of the Plant Nuclear Safety Committee (PNSC) by two members will not change the function of the PNSC and, therefore, will not affect the margin of safety. The technical expertise within the PNSC remains the same as before.
- (3) Updating of TS section 6.5.4.9 to reflect the current 10 CFR 50.72 and 10 CFR 50.73 reporting requirements will not affect the margin of safety. This change will supersede the old requirement of 24-hour written notification.
- (4) Certain TS pages were updated to reflect the issuance of Amendments 131 and 134 for Brunswick Unit 1 and Amendments 161, 164 and 168 for Brunswick Unit 2. These amendments revised Section 6.0 of the TS by adding requirements regarding: (1) the Core Operating Limits Report, (2) the incineration of waste oil, and (3) the maximum expanded operating domain (Unit 2 only).

Because of the above findings, the staff has concluded that the proposed changes to the BSEP Technical Specification Section 6.0 and updating of TS section 6.5.4.9 are acceptable.

3.0 ENVIRONMENTAL CONSIDERATIONS

These amendments as requested by CP&L letter dated April 28, 1989, and updated by CP&L letter dated November 16, 1989, relate to changes in recordkeeping, or administrative procedures or requirements. Accordingly, these amendments meet the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(10). Pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment need be prepared in connection with the issuance of these amendments.

4.0 CONCLUSION

The Commission made a proposed determination that this amendment involves no significant hazards consideration which was published in the Federal Register (54 FR 25368) on June 14, 1989. The Commission consulted with the State of North Carolina. No public comments were received, and the State of North Carolina did not have any comments. The November 16, 1989, letter provided minor changes that did not change the initial determination of no significant hazard consideration as published in the Federal Register.

On the basis of the considerations discussed above, the staff concludes that: (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, (2) such activities will be conducted in compliance with the Commission's regulations, and (3) the issuance of the amendments will not be inimical to the common defense and security or to the health and safety of the public.

Principal Contributors: Thomas G. Dunning
Ngoc B. Le

Dated: January 3, 1990

AMENDMENT NO. 138 TO FACILITY OPERATING LICENSE NO. DPR-71 - BRUNSWICK, UNIT 1
AMENDMENT NO. 170 TO FACILITY OPERATING LICENSE NO. DPR-62 - BRUNSWICK, UNIT 2

Docket File

NRC PDR

Local PDR

PDII-1 Reading

S. Varga (14E4)

G. Lainas

E. Adensam

P. Anderson

E. Tourigny

N. Le

L. Spessard (MNBB 3701)

OGC

D. Hagan (MNBB 3302)

E. Jordan (MNBB 3302)

B. Grimes (9A2)

T. Hill(8) (P1-137)

W. Jones (P-130A)

J. Calvo (11F23)

T. Gody (10A19)

T. Dunning (11F-23)

ACRS (10)

GPA/PA

ARM/LFMB

cc: Licensee/Applicant Service List