



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

September 27, 1989

Docket Nos. 50-313
and 50-368

Mr. T. Gene Campbell
Vice President, Nuclear
Arkansas Power and Light Company
P. O. Box 551
Little Rock, Arkansas 72203

Dear Mr. Campbell:

SUBJECT: ISSUANCE OF AMENDMENT NOS. 127 AND 99 TO FACILITY OPERATING LICENSE
NOS. DPR-51 AND NPF-6 - ARKANSAS NUCLEAR ONE, UNITS 1 AND 2
(TAC NOS. 71750 AND 71751)

The Commission has issued the enclosed Amendment Nos. 127 and 99 to Facility Operating License Nos. DPR-51 and NPF-6 for the Arkansas Nuclear One, Units 1 and 2 (ANO-1&2). These amendments consist of changes to the Technical Specifications (TS) in response to your applications dated December 16, 1988.

The amendments clarify and define which fire barriers are encompassed by the surveillance requirements and action statements of the TS for each unit.

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

Sincerely,

Handwritten signature of C. Craig Harbuck in cursive.

C. Craig Harbuck, Project Manager
Project Directorate IV
Division of Reactor Projects - III,
IV, V and Special Projects
Office of Nuclear Reactor Regulation

Handwritten signature of Chester Poslusny, Jr. in cursive.

Chester Poslusny, Jr., Project Manager
Project Directorate IV
Division of Reactor Projects - III,
IV, V and Special Projects
Office of Nuclear Reactor Regulation

Enclosures:

1. Amendment No. 127 to DPR-51
2. Amendment No. 99 to NPF-6
3. Safety Evaluation

cc w/enclosures:
See next page

8910030430 890927
FDR ADOCK 05000313
F PDC

DFD 1/1

September 2, 1989

Docket Nos. 50-313
and 50-368

Mr. T. Gene Campbell
Vice President, Nuclear
Arkansas Power and Light Company
P. O. Box 551
Little Rock, Arkansas 72203

Dear Mr. Campbell:

SUBJECT: ISSUANCE OF AMENDMENT NOS. 127 AND 99 TO FACILITY OPERATING LICENSE
NOS. DPR-51 AND NPF-6 - ARKANSAS NUCLEAR ONE, UNITS 1 AND 2
(TAC NOS. 71750 AND 71751)

The Commission has issued the enclosed Amendment Nos. 127 and 99 to Facility Operating License Nos. DPR-51 and NPF-6 for the Arkansas Nuclear One, Units 1 and 2 (ANO-1&2). These amendments consist of changes to the Technical Specifications (TS) in response to your applications dated December 16, 1988.

The amendments clarify and define which fire barriers are encompassed by the surveillance requirements and action statements of the TS for each unit.

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

Sincerely,

/s/
C. Craig Harbuck, Project Manager
Project Directorate IV
Division of Reactor Projects - III,
IV, V and Special Projects
Office of Nuclear Reactor Regulation

/s/
Chester Poslusny, Jr., Project Manager
Project Directorate IV
Division of Reactor Projects - III,
IV, V and Special Projects
Office of Nuclear Reactor Regulation

Enclosures:

- 1. Amendment No. 127 to DPR-51
- 2. Amendment No. 99 to NPF-6
- 3. Safety Evaluation

cc w/enclosures:

See next page

DISTRIBUTION:

Docket File

G. Holahan
C. Poslusny (2)
E. Jordan
J. Calvo
PD4 Plant File

NRC PDR
ADR4
C. Harbuck (2)
B. Grimes
ACRS (10)
C. McCracken

Local PDR
F. Hebdon
OGC-Rockville
T. Meek (8)
GPA/PA

PD4 Reading
P. Noonan (2)
D. Hagan
Wanda Jones
ARM/LFMB

LTR NAME: ANO 1&2 AMENDMENT 9/11/89

PD4/LA
PNoonan
09/12/89

PD4/PM
CHarbuck:
09/13/89

PD4/PM
CPoslusny
09/13/89

OGC-Rockville
09/14/89

PD4/DJ
FHebdon
09/27/89

Fix syntax
and language

DFol
/1

Mr. T. Gene Campbell
Arkansas Power & Light Company

Arkansas Nuclear One
Unit Nos. 1 and 2

cc:

Mr. Early Ewing, General Manager
Technical Support and Assessment
Arkansas Nuclear One
P. O. Box 608
Russellville, Arkansas 72801

Mr. Charles B. Brinkman, Manager
Washington Nuclear Operations
Combustion Engineering, Inc.
12300 Twinbrook Parkway, Suite 330
Rockville, Maryland 20852

Mr. Niel Carns, Director
Nuclear Operations
Arkansas Nuclear One
P. O. Box 608
Russellville, Arkansas 72801

Honorable Joe W. Phillips
County Judge of Pope County
Pope County Courthouse
Russellville, Arkansas 72801

Nicholas S. Reynolds, Esq.
Bishop, Cook, Purcell
& Reynolds
1400 L Street, N.W.
Washington, D.C. 20005-3502

Regional Administrator, Region IV
U.S. Nuclear Regulatory Commission
Office of Executive Director for
Operations
611 Ryan Plaza Drive, Suite 1000
Arlington, Texas 76011

Senior Resident Inspector
U.S. Nuclear Regulatory Commission
1 Nuclear Plant Road
Russellville, Arkansas 72801

Ms. Greta Dicus, Director
Division of Environmental Health
Protection
Arkansas Department of Health
4815 West Markam Street
Little Rock, Arkansas 72201

Mr. Robert B. Borsum
Babcock & Wilcox
Nuclear Power Generation Division
Suite 220
1700 Rockville Pike, Suite 525
Rockville, Maryland 20852



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

ARKANSAS POWER AND LIGHT COMPANY

DOCKET NO. 50-313

ARKANSAS NUCLEAR ONE, UNIT 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 127
License No. DPR-51

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by Arkansas Power and Light Company (the licensee) dated December 16, 1988, 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, as amended, 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 license 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.

8910030433 890927
PDR ADOCK 05000313
F DIC

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-51 is hereby amended to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 127, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

3. The license amendment is effective as of its date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION


Frederick J. Hebdon, Director
Project Directorate IV
Division of Reactor Projects - III,
IV, V and Special Projects
Office of Nuclear Reactor Regulation

Attachment:
Changes to the Technical
Specifications

Date of Issuance: September 27, 1989

ATTACHMENT TO LICENSE AMENDMENT NO. 127

FACILITY OPERATING LICENSE NO. DPR-51

DOCKET NO. 50-313

Revise the following pages of the Appendix "A" Technical Specifications with the attached pages. The revised pages are identified by Amendment number and contain vertical lines indicating the area of change.

REMOVE PAGES

ii
11a
66q
110w

INSERT PAGES

ii
11a
66q
110w

<u>SECTION</u>	<u>TITLE</u>	<u>PAGE</u>
3.14	HYDROGEN RECOMBINERS	66e
3.15	FUEL HANDLING AREA VENTILATION SYSTEM	66g
3.16	SHOCK SUPPRESSORS (SNUBBERS)	66i
3.17	FIRE SUPPRESSION WATER SYSTEM	66m
3.18	FIRE SUPPRESSION SPRINKLER SYSTEMS	66n
3.19	CONTROL ROOM AND AUXILIARY CONTROL ROOM HALON SYSTEMS	66o
3.20	FIRE HOSE STATIONS	66p
3.21	FIRE BARRIERS	66q
3.22	REACTOR BUILDING PURGE FILTRATION SYSTEM	66r
3.23	REACTOR BUILDING PURGE VALVES	66t
3.24	EXPLOSIVE GAS MIXTURE	66u
3.25	RADIOACTIVE EFFLUENTS	66v
3.25.1	<u>Radioactive Liquid Effluents</u>	66v
3.25.1.1	Concentration	66v
3.25.1.2	Dose	66w
3.25.1.3	Waste Treatment	66x
3.25.1.4	Liquid Holdup Tanks	66y
3.25.2	<u>Radioactive Gaseous Effluents</u>	66z
3.25.2.1	Dose Rate	66z
3.25.2.2	Dose - Noble Gases	66aa
3.25.2.3	Dose - Iodine-131, Tritium, and Radionuclides in Particulate Form	66bb
3.25.2.4	Gaseous Radwaste Treatment	66cc
3.25.2.5	Gas Storage Tanks	66dd
3.25.3	<u>Total Dose</u>	66ee
3.25.4	<u>Solid Radioactive Waste</u>	66ff
4.	<u>SURVEILLANCE REQUIREMENTS</u>	67
4.1	OPERATIONAL SAFETY ITEMS	67
4.2	REACTOR COOLANT SYSTEM SURVEILLANCE	76
4.3	TESTING FOLLOWING OPENING OF SYSTEM	78
4.4	REACTOR BUILDING	79
4.4.1	<u>Reactor Building Leakage Tests</u>	79
4.4.2	<u>Structural Integrity</u>	85
4.5	EMERGENCY CORE COOLING SYSTEM AND REACTOR BUILDING COOLING SYSTEM PERIODIC TESTING	92
4.5.1	<u>Emergency Core Cooling Systems</u>	92
4.5.2	<u>Reactor Building Cooling Systems</u>	95
4.6	AUXILIARY ELECTRICAL SYSTEM TESTS	100
4.7	REACTOR CONTROL ROD SYSTEM TESTS	102
4.7.1	<u>Control Rod Drive System Functional Tests</u>	102
4.7.2	<u>Control Rod Program Verification</u>	104
4.8	EMERGENCY FEEDWATER PUMP TESTING	105
4.9	REACTIVITY ANOMALIES	106
4.10	CONTROL ROOM EMERGENCY AIR CONDITIONING AND ISOLATION SYSTEM SURVEILLANCE	107
4.11	PENETRATION ROOM VENTILATION SYSTEM SURVEILLANCE	109
4.12	HYDROGEN RECOMBINERS SURVEILLANCE	109b
4.13	EMERGENCY COOLING POND	110a
4.14	RADIOACTIVE MATERIALS SOURCES SURVEILLANCE	110b
4.15	AUGMENTED INSERVICE INSPECTION PROGRAM FOR HIGH ENERGY LINES OUTSIDE OF CONTAINMENT	110c

<u>SECTION</u>	<u>TITLE</u>	<u>PAGE</u>
4.16	SHOCK SUPPRESSORS (SNUBBERS)	110e
4.17	FUEL HANDLING AREA VENTILATION SYSTEM SURVEILLANCE	110h
4.18	STEAM GENERATOR TUBING SURVEILLANCE	110j
4.19	FIRE DETECTION INSTRUMENTATION	110p
4.20	FIRE SUPPRESSION WATER SYSTEM	110q
4.21	SPRINKLER SYSTEM	110t
4.22	CONTROL ROOM AND AUXILIARY CONTROL ROOM HALON SYSTEMS	110u
4.23	FIRE HOSE STATIONS	110v
4.24	FIRE BARRIERS	110w
4.25	REACTOR BUILDING PURGE FILTRATION SYSTEM	110x
4.26	REACTOR BUILDING PURGE VALVES	110z
4.27	DECAY HEAT REMOVAL	110aa
4.28	EXPLOSIVE GAS MIXTURE	110bb
4.29	RADIOACTIVE EFFLUENTS	110cc
4.29.1	<u>Radioactive Liquid Effluents</u>	110cc
4.29.1.1	Concentration	110cc
4.29.1.2	Liquid Holdup Tanks	110gg
4.29.1.3	Liquid Radioactive Effluent Instrumentation	110hh
4.29.2	<u>Radioactive Gaseous Effluents</u>	110jj
4.29.2.1	Dose Rate	110jj
4.29.2.2	Gas Storage Tanks	110mm
4.29.2.3	Radioactive Gaseous Effluent Monitoring Instrumentation	110nn
4.29.3	<u>Dose Calculations for Radioactive Effluents</u>	110rr
4.29.4	<u>Solid Radioactive Waste</u>	110rra
4.30	RADIOLOGICAL ENVIRONMENTAL MONITORING	110ss
4.30.1	<u>Radiological Environmental Monitoring Program Description</u>	110ss
4.30.2	<u>Land Use Census</u>	110zz
4.30.3	<u>Interlaboratory Comparison Program</u>	110bbb
5.	<u>DESIGN FEATURES</u>	111
5.1	SITE	111
5.2	REACTOR BUILDING	112
5.3	REACTOR	114
5.4	NEW AND SPENT FUEL STORAGE FACILITIES	116
6.	<u>ADMINISTRATIVE CONTROLS</u>	117
6.1	RESPONSIBILITY	117
6.2	ORGANIZATION	117
6.3	FACILITY STAFF QUALIFICATIONS	117
6.4	TRAINING	117
6.5	REVIEW AND AUDIT	117
6.6	REPORTABLE OCCURRENCE ACTION	126
6.7	SAFETY LIMIT VIOLATION	126
6.8	PROCEDURES	127
6.9	RECORD RETENTION	128
6.10	RADIATION PROTECTION PROGRAM	129
6.11	HIGH RADIATION AREA	129
6.12	REPORTING REQUIREMENTS	140
6.13	ENVIRONMENTAL QUALIFICATION	147
6.14	OFFSITE DOSE CALCULATION MANUAL (ODCM)	148

3.21 FIRE BARRIERS

Applicability

This specification applies to fire barriers separating safety related fire areas or redundant safe shutdown systems required in the event of a fire.

Objective

To assure that fire barriers separating safety related fire areas or redundant safe shutdown systems perform their separation function.

Specification

- 3.21.1 All fire barriers separating safety related fire areas or redundant safe shutdown systems shall be operable at all times.
- 3.21.2 With one or more of the required fire barriers inoperable, within 1 hour, either:
 - a. Establish a continuous fire watch on at least one side of the affected fire barrier or,
 - b. Verify the operability of smoke and/or heat detection equipment with control room alarm on at least one side of the affected barrier and establish an hourly fire watch patrol.
- 3.21.3 The provisions of Specifications 3.0.3 and 3.0.4 are not applicable.

Bases

The operability of the fire barriers, including fire-rated walls; floors/ceilings; fire doors; fire dampers and penetration seals, ensures that fires will be confined or adequately retarded from spreading to adjacent fire areas or to portions of redundant safe shutdown systems required in the event of a fire within the fire area. This design feature minimizes the possibility of a single fire rapidly involving several areas of the facility prior to detection and extinguishment. The fire barriers are a passive element in the facility fire protection program and are subject to periodic inspections. Safety related fire areas are the Control Room, the Switchgear Rooms, the Battery Rooms, and the Diesel Generator Rooms. Fire barriers also separate lubricating oil storage areas from other areas of the plant. Fire barriers separating redundant safe shutdown systems have been defined by analysis.

During periods of time when the barriers are inoperable, a continuous fire watch or operable detection equipment with an hourly fire watch patrol is required to be maintained in the vicinity of the affected barrier until the barrier is restored to operable status.

4.24 Fire Barriers

Applicability

Applies to surveillance of the fire barriers required operable by Specification 3.21.

Objective

To assure that significant barrier degradation is detected and corrected.

Specification

- 4.24.1 Each of the fire barriers separating safety-related fire areas or redundant safe shutdown systems shall be verified operable by:
- a. Performing a visual inspection of each fire barrier (not including penetration seals) at least once per 18 months.
 - b. Performing a visual inspection of each fire door, fire damper and associated hardware at least one per 18 months.
 - c. Performing a visual inspection of at least ten percent of each type of sealed penetration at least once per 18 months. If a penetration is determined to be inoperable, declare the affected barrier inoperable and perform a visual inspection of an additional ten percent of the degraded type of sealed penetration. This inspection process shall continue until a ten percent sample with no visually apparent adverse degradation has been completed or until all required sealed penetrations of the degraded type have been inspected. Samples shall be selected such that each penetration seal will be inspected at least once per 15 years.
 - d. Prior to returning a fire barrier to operable status following repairs or maintenance by performance of a visual inspection of the affected fire barrier.

Bases

Fire barriers, including penetration seals, fire doors and dampers, are considered operable when the visually observed condition is the same as the as-designed condition. The as-designed condition of each fire barrier is based on a tested configuration or a configuration analyzed to withstand the fire hazards associated with the fire area. "Each type of sealed penetration" means that each penetration is grouped according to whether it is a foam seal, a grout seal, or other type. These are not grouped according to the particular installation detail.



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

ARKANSAS POWER AND LIGHT COMPANY

DOCKET NO. 50-368

ARKANSAS NUCLEAR ONE, UNIT 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 99
License No. NPF-6

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by Arkansas Power and Light Company (the licensee) dated December 16, 1988, 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, as amended, 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 license 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. NPF-6 is hereby amended to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 99, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

3. The license amendment is effective as of its date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION


Frederick J. Heddon, Director
Project Directorate IV
Division of Reactor Projects - III,
IV, V and Special Projects
Office of Nuclear Reactor Regulation

Attachment:
Changes to the Technical
Specifications

Date of Issuance: September 27, 1989

ATTACHMENT TO LICENSE AMENDMENT NO. 99

FACILITY OPERATING LICENSE NO. NPF-6

DOCKET NO. 50-368

Revise the following pages of the Appendix "A" Technical Specifications with the attached pages. The revised pages are identified by Amendment number and contain vertical lines indicating the area of change. The corresponding overleaf pages are also provided to maintain document completeness.

REMOVE PAGES

VIII
3/4 7-37
B 3/4 7-7

INSERT PAGES

VIII
3/4 7-37
B 3/4 7-7

INDEX
 LIMITING CONDITIONS FOR OPERATION AND SURVEILLANCE
 REQUIREMENTS

<u>SECTION</u>	<u>PAGE</u>
<u>3/4.7 PLANT SYSTEMS</u>	
3/4.7.1 TURBINE CYCLE	
Safety Valves.....	3/4 7-1
Emergency Feedwater System.....	3/4 7-5
Condensate Storage Tank.....	3/4 7-7
Activity.....	3/4 7-8
Main Steam Isolation Valves.....	3/4 7-10
3/4.7.2 STEAM GENERATOR PRESSURE/TEMPERATURE LIMITATION.....	3/4 7-14
3/4.7.3 SERVICE WATER SYSTEM.....	3/4 7-15
3/4.7.4 EMERGENCY COOLING POND.....	3/4 7-16
3/4.7.5 FLOOD PROTECTION.....	3/4 7-16a
3/4.7.6 CONTROL ROOM EMERGENCY AIR CONDITIONING AND AIR FILTRATION SYSTEM.....	3/4 7-17
3/4.7.8 SHOCK SUPPRESSORS (SNUBBERS).....	3/4 7-22
3/4.7.9 SEALED SOURCE CONTAMINATION.....	3/4 7-27
3/4.7.10 FIRE SUPPRESSION SYSTEMS	
Fire Suppression Water System.....	3/4 7-29
Spray and/or Sprinkler Systems.....	3/4 7-33
Fire Hose Stations.....	3/4 7-35
3/4.7.11 FIRE BARRIERS.....	3/4 7-37
3/4.7.12 SPENT FUEL POOL STRUCTURAL INTEGRITY.....	3/4 7-38
<u>3/4.8 ELECTRICAL POWER SYSTEMS</u>	
3/4.8.1 A.C. SOURCES	
Operating.....	3/4 8-1
Shutdown.....	3/4 8-5

PLANT SYSTEMS

3/4.7.11 FIRE BARRIERS

LIMITING CONDITION FOR OPERATION

3.7.11 All fire barriers separating safety related fire areas or separating portions of redundant safe shutdown systems required in the event of a fire shall be OPERABLE.

APPLICABILITY: At all times.

ACTION:

- a. With one or more of the above fire barriers inoperable within 1 hour, either;
 1. Establish a continuous fire watch on at least one side of the affected fire barrier, or
 2. Verify the OPERABILITY of the fire detectors with control room alarm on at least one side of the affected barrier and establish an hourly fire watch patrol.
- b. The provisions of Specification 3.0.3 and 3.0.4 are not applicable.

SURVEILLANCE REQUIREMENTS

- 4.7.11 Each of the above required fire barriers, including sealing devices, shall be verified OPERABLE by:
- a. Performing a visual inspection of each fire barrier (not including penetration seals) at least once per 18 months.
 - b. Prior to returning a fire barrier to OPERABLE status following repairs or maintenance by performance of a visual inspection of the affected fire barrier(s).
 - c. Performing a visual inspection of each fire door, fire damper and associated hardware at least once per 18 months.
 - d. Performing a visual inspection of at least ten percent of each type of sealed penetration at least once per 18 months. If the penetration is determined to be inoperable, declare the affected barrier inoperable and perform a visual inspection of an additional ten percent of the degraded type of sealed penetrations. This inspection process shall continue until a ten percent sample with no visually apparent adverse degradation has been completed or until all required sealed penetrations of the degraded type have been inspected. Samples shall be selected such that each penetration seal will be inspected at least once per 15 years.

PLANT SYSTEMS

3/4.7.12 SPENT FUEL POOL STRUCTURAL INTEGRITY

LIMITING CONDITION FOR OPERATION

3.7.12 The structural integrity of the spent fuel pool shall be maintained in accordance with Specification 4.7.12.

APPLICABILITY: Whenever irradiated fuel assemblies are in the spent fuel pool.

ACTION:

- a. With the structural integrity of the spent fuel pool not conforming to the above requirements, in lieu of any other report, prepare and submit a Special Report to the Commission pursuant to Specification 6.9.2 within 30 days of a determination of such non-conformity.
- b. The provisions of Specification 3.0.3 are not applicable.

SURVEILLANCE REQUIREMENTS

4.7.12.1 Inspection Frequencies - The structural integrity of the spent fuel pool shall be determined per the acceptance criteria of Specification 4.7.12.2 at the following frequencies:

- a. At least once per 92 days after the pool is filled with water. If no abnormal degradation or other indications of structural distress are detected during five consecutive inspections, the inspection interval may be extended to at least once per 18 months.
- b. Within 24 hours following any seismic event which actuates or should have actuated the seismic monitoring instrumentation of Specification 3.3.3.3.

4.7.12.2 Acceptance Criteria - The structural integrity of the spent fuel pool shall be determined by a visual inspection of at least the interior and exterior surfaces of the pool, the struts in the tilt pit, the surfaces of the separation walls, and the structural slabs adjoining the pool walls. This visual inspection shall verify no changes in the concrete crack patterns, no abnormal degradation or other signs of structural distress (i.e., cracks, bulges, out of plumbness, leakage, discolorations, efflorescence, etc.).

PLANT SYSTEMS

BASES

3/4.7.11 FIRE BARRIERS

The OPERABILITY of the fire barriers ensure that fires will be confined or adequately retarded from spreading to adjacent fire areas or to portions of redundant safe shutdown systems required in the event of a fire within the fire area. This design feature minimizes the possibility of a single fire rapidly involving several fire areas of the facility prior to detection and extinguishment. The fire barriers are passive elements in the facility fire protection program. Safety-related fire areas are the Control Room, the Switchgear Rooms, the Battery Rooms, and the Diesel Generator Rooms. Fire barriers also separate lubricating oil storage areas from other areas of the plant. Fire barriers separating redundant safe shutdown systems have been defined by analysis.

Fire barriers, including penetration seals, fire doors and dampers, are considered OPERABLE when the visually observed condition is the same as the as-designed condition. The as-designed condition of each fire barrier is based on a tested configuration or a configuration analyzed to withstand the fire hazards associated with the fire areas. "Each type of sealed penetration" means that each penetration is grouped according to whether it is a foam seal, a grout seal, or other type. These are not grouped according to the particular installation detail.

During periods of time when a fire barrier is inoperable, a continuous fire watch or an hourly fire watch with operable detection is required in the vicinity of the affected barrier until the barrier is restored to operable status.

3/4.7.12 SPENT FUEL POOL STRUCTURAL INTEGRITY

The reinforcing steel in the walls of the spent fuel pool was erroneously terminated into the front face instead of the rear face of the adjoining walls during construction of the spent fuel pool. Therefore, the specified structural integrity inspections of the spent fuel pool are required to be performed to ensure that the pool remains safe for use and that it will adequately resist the imposed loadings. If no abnormal degradation is observed during the first five inspections, the inspection interval for subsequent routine inspections may be extended to at least once per 18 months or longer if justified by observed performance of the pool.



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NOS. 127 AND 99 TO

FACILITY OPERATING LICENSE NOS. DPR-51 AND NPF-6

ARKANSAS POWER AND LIGHT COMPANY

ARKANSAS NUCLEAR ONE, UNIT NOS. 1 AND 2

DOCKET NOS. 50-313 AND 50-368

1.0 INTRODUCTION

By letters dated December 16, 1988, Arkansas Power and Light Company (AP&L or the licensee) requested amendments to the Technical Specifications appended to Facility Operating License Nos. DPR-51 and NPF-6 for Arkansas Nuclear One, Units 1 and 2 (ANO-1&2). The proposed amendments would change the Technical Specifications for each unit to clarify and define which fire barriers are encompassed by surveillance requirements and action statements.

2.0 EVALUATION

The modifications to the Arkansas Nuclear One, Unit 1 Technical Specifications (TS) include the following: (1) the title of Sections 3.21 and 4.24 are changed from penetration fire barriers to fire barriers and the terms functional and intact are changed to OPERABLE; (2) Sections 3.21 and 3.21.1 are changed to indicate that these TS cover barriers for both separation of safety-related fire areas and separation of redundant safe shutdown systems required in the event of a fire; (3) Section 3.21.3 is changed to address the applicability of TS 3.0.3 and 3.0.4 for clarification; (4) Section 4.24.1 is modified for clarification; (5) Section 4.24.1.b is added to require the performance of a visual inspection of fire doors and fire dampers once per 18 months; (6) Section 4.24.1.c is added to require that ten percent of each type of sealed penetration be inspected at least once per 18 months and that all penetration seals be inspected once per 15 years. For each of the above changes, appropriate changes to the TS Bases have been made.

The modifications to the Arkansas Nuclear One, Unit 2 TS include the following: (1) the title of Section 3/4.7.11 is changed from penetration fire barriers to fire barriers and the terms functional and intact are changed to OPERABLE; (2) Section 3.7.11 is changed to indicate that the TS covers barriers for both separation of safety-related fire areas and separation of redundant safe shutdown systems required in the event of a fire; (3) Section 3.7.11.a is changed by adding the option to verify the operability of fire detectors with the control room alarm on at least one side of the affected barrier with an hourly fire watch; (4) Section 4.7.11 is changed for clarification; (5) Section 4.7.11.c is added to require the performance of a visual inspection of fire doors and fire dampers once per 18 months; (6) Section 4.7.11.d is added to require that ten percent of each type of sealed penetration be inspected at least once each 18 months and that all penetration seals be inspected once per 15 years. For each of the above changes, appropriate changes to the TS Bases for Section 3/4.7.11 have been made.

3.0 EVALUATION

The staff was originally concerned that all of the fire barriers that were relied upon to satisfy NRC fire protection criteria were not being surveillance tested under the plant TS for each Arkansas Unit. Specifically, the licensee was conducting surveillances on barriers required to satisfy Appendix R to 10 CFR Part 50 but not barriers necessary to conform with Appendix A to Branch Technical Position APCSB 9.5-1. The licensee's TS amendment for each unit corrects this omission and is, therefore, considered acceptable.

The changes related to reliance upon an hourly fire watch patrol and performance of surveillance on fire damper and penetration fire seals are in accordance with the Standard Technical Specifications (STS) and are, considered acceptable for both ANO-1&2.

The remaining changes are editorial in nature and are related to the above revisions. Based on its evaluation the staff concludes that the licensee's proposed TS amendments for Arkansas Nuclear One, Units 1 and 2 conform with the criteria of Appendix A to BTP APCSB 9.5-1 and the STS and are approved.

4.0 ENVIRONMENTAL CONSIDERATION

The amendment involves a change in the installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20 and in surveillance requirements. The staff has determined that the amendment involves no significant increase in the amounts, and no significant change in the types, of any effluents that may be released offsite, and that there is no significant increase in individual or cumulative occupational radiation exposures. The Commission has previously issued a proposed finding that the amendment involves no significant hazards consideration and there has been no public comment on such finding. Accordingly, the amendment meets the eligibility criteria for categorical exclusion set forth in 10 CFR Section 51.22(c)(9). Pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment need be prepared in connection with the issuance of the amendment.

5.0 CONCLUSION

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

Date: September 27, 1989

Principal Contributors:

D. Kubicki
C. Poslusny
C. Harbuck