DISTRIBUTION:
Docket
NRC PDR
Local PDR
ORB#2 Rdg.
VStello
KRGoller/TJCarter
RDiggs
RSnaider
Attorney, OELD
OI&E (5)
BJones (4)
BScharf (10)
JMMcGough
BHarless
DEisenhut
ACRS (16)
OPA, Clare Miles
DRoss
TBAbernathy
JRBuchanan
Gray File

Docket No.: 50-313

MAR 15 1977

Arkansas Power & Light Company
ATTN: Mr. J. D. Phillips
Senior Vice President
Production, Transmission and
Engineering
Sixth and Pine Streets
Pine Bluff, Arkansas 71601

Gentlemen:

The Commission has issued the enclosed Amendment No. 20 to Facility Operating License No. DPR-51 for Arkansas Nuclear One - Unit No. 1. This amendment revises the provisions of the technical specifications in response to a portion of your request dated January 13, 1977. The remainder of your request will be evaluated at a later date.

This amendment changes the technical specifications regarding scheduling of post-operational inspections of primary nozzle-to-vessel welds. These inspections are performed in accordance with Section XI of the ASME Boiler and Pressure Vessel Code.

Copies of our related Safety Evaluation and Notice of Issuance also are enclosed.

Sincerely,

Original signed by
Don K. Davis for
Dennis L. Ziemann, Chief
Operating Reactors Branch #2
Division of Operating Reactors

Enclosures:
1. Amendment No. 20 to License No. DPR-51
2. Safety Evaluation
3. Notice

cc w/enclosures:
See next page

313
Const. 1
GD

OFFICE ▶	ORB#2:DOR	ORB#2:DOR	OELD	C-ORB#2:DOR	DOR:EB/OT	
SURNAME ▶	RDiggs	RSnaider	Kiefer	DZiemann	LShao	
DATE ▶	2/25/77	3/1/77	3/9/77	3/15/77	3/1/77	

NRC Form 318 (2-76) NRCM 02040 ☆U.S. GOVERNMENT PRINTING OFFICE: 1976—634—782

cc w/enclosures:
Horace Jewell, Esquire
House, Holms & Jewell
1550 Tower Building
Little Rock, Arkansas 72201

Phillip K. Lyon, Esquire
House, Holms & Jewell
1550 Tower Building
Little Rock, Arkansas 72201

Mr. Donald Rueter
Manager, Licensing
Arkansas Power & Light Company
Post Office Box 551
Little Rock, Arkansas 72201

Arkansas Polytechnic College
Russellville, Arkansas 72801

Chief, Energy Systems Analyses
Branch (AW-459)
Office of Radiation Programs
U. S. Environmental Protection
Agency
Room 645, East Tower
401 M Street, S. W.
Washington, D. C. 20460

U. S. Environmental Protection
Agency
Region VI Office
ATTN: EIS COORDINATOR
1201 Elm Street
First International Building
Dallas, Texas 75270

Honorable Ermil Grant
Acting County Judge of Pope County
Pope County Courthouse
Russellville, Arkansas 72801

cc w/enclosures and copy of AP&L
filing dtd. 1/13/77:
Director, Bureau of Environmental
Health Services
4815 West Markham Street
Little Rock, Arkansas 72201

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

ARKANSAS POWER & LIGHT COMPANY

DOCKET NO. 50-313

ARKANSAS NUCLEAR ONE - UNIT NO. 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 20
License No. DPR-51

1. The Nuclear Regulatory Commission (the Commission) has found that:

   A. The application for amendment by Arkansas Power & Light Company (the licensee) dated January 13, 1977, 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-51 is hereby amended to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 20, are hereby incorporated in this license. The licensee shall operate the facility in accordance with the Technical Specifications.

3. This license amendment is effective as of the date of its issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

Dennis L. Ziemann, Chief
Operating Reactors Branch #2
Division of Operating Reactors

Attachment:
Changes to the Technical
Specifications

Date of Issuance: March 15, 1977

ATTACHMENT TO LICENSE AMENDMENT NO. 20

FACILITY OPERATING LICENSE NO. DPR-51

DOCKET NO. 50-313

Replace existing pages 76 and 77 of the Appendix A portion of the Technical Specifications with the attached revised pages bearing the same numbers. The changed areas on the revised pages are identified by a marginal line.

4.2 REACTOR COOLANT SYSTEM SURVEILLANCE

Applicability

Applies to the surveillance of the reactor coolant system pressure boundary.

Objective

To assure the continued integrity of the reactor coolant system pressure boundary.

Specification

4.2.1 Prior to initial unit operation, an ultrasonic test survey shall be made of reactor coolant system pressure boundary welds as required to establish preoperational integrity and baseline data for future inspections.

4.2.2 Post operational inspections of components shall be made in accordance with the methods and intervals indicated in IS-242 and IS-261 of Section XI of the ASME Boiler and Pressure Vessel Code, 1971, including 1972 Summer Addenda, except as follows:

S-261 Item	Component	Exception
1.4	Primary Nozzle to Vessel Welds	1 RC inlet nozzle to be inspected at approximately 3 1/3 years of the inspection interval. All four RC inlet nozzles to be inspected at or near the end of the inspection interval. At approximately 6 2/3 years of the inspection interval, both RC outlet nozzles will be inspected. At approximately 3 1/3 years of the inspection interval, one core flood nozzle will be inspected and one core flood nozzle will be inspected at or near the end of the inspection interval.
3.3	Safe Ends on Heat Exchanger	Not Applicable
4.1	Vessel Safe End Welds	Not Applicable
4.2	Valve Pressure Retaining Bolting Larger than 2"	Not Applicable
4.9	Integrally Welded Supports	Not Applicable
6.1	Valve Body Welds	Not Applicable
6.3	Valve to Safe End Welds	Not Applicable

IS-261 Item	Component	Exception
6.4	Bolting 2ø	Not Applicable
6.6	Integrally Welded Valve Supports	Not Applicable

4.2.3 The structural integrity of the reactor coolant system boundary shall be maintained at the level required by the original acceptance standards throughout the life of the station. Any evidence, as a result of the tests outlined in Table IS-261 of Section XI of the code, that defects have developed or grown, shall be investigated.

4.2.4 To assure the structural integrity of the reactor internals throughout the life of the unit, the two sets of main internals bolts (connecting the core barrel to the core support shield and to the lower grid cylinder) shall remain in place and under tension. This will be verified by visual inspection to determine that the welded bolt locking caps remain in place. All locking caps will be inspected after hot functional testing and whenever the internals are removed from the vessel during a refueling or maintenance shutdown. The core barrel to core support shield caps will be inspected each refueling shutdown.

4.2.5 Sufficient records of each inspection shall be kept to allow comparison and evaluation of future inspections.

4.2.6 Complete surface and volumetric examination of the reactor coolant pump flywheels will be conducted coincident with refueling or maintenance shutdowns such that within a 10 year period after start-up all four reactor coolant pump flywheels will be examined.

4.2.7 Reactor vessel specimens shall be removed and examined, to determine changes in material properties, at specimen exposure (E>1Mey) equivalent to 3, 9.5, 16 and 22.5 Effective Full Power Years (EFPY) of operation. This withdrawal schedule may be modified to coincide with those refueling outages or plant shutdowns, when the reactor head is removed, most closely approaching the withdrawal schedule. Results of these examinations shall be used to update Technical Specification 3.1.2. Specimens not subjected to destructive testing after the first 0.93 EFPY of Cycle 1 may be removed and stored during the remainder of Cycle 1, but shall be re-installed prior to Cycle 2.

Bases

The surveillance program has been developed to comply with Section XI of the ASME Boiler and Pressure Vessel Code Inservice Inspection of Nuclear Reactor Coolant Systems, 197[illegible], including 1972 Summer Addenda edition.

The number of reactor vessel specimens and the frequencies for removing and testing these specimens are provided to assure compliance with the requirements of Appendix H to 10 CFR Part 50.

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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

SUPPORTING AMENDMENT NO. 20 TO FACILITY OPERATING LICENSE NO. DPR-51

ARKANSAS POWER & LIGHT COMPANY

ARKANSAS NUCLEAR ONE - UNIT 1

DOCKET NO. 50-313

Introduction

By letter dated January 13, 1977, the Arkansas Power & Light Company (AP&L) proposed a license amendment to modify the Arkansas Nuclear One, Unit 1 (ANO-1) technical specification scheduling of post-operational inspections of primary nozzle-to-vessel welds. The proposed changes would allow more flexible scheduling of inspections and would more closely conform to the requirements of Section XI of the ASME Boiler and Pressure Vessel Code (hereinafter referred to as Section XI).

Discussion and Evaluation

The winter 1971 Addenda to Section XI revised Section XI Paragraph IS-242, which specifies the inspection program governing primary nozzle-to-vessel welds, to read as follows:

> IS-242 Inspection Program
>
> It is intended that the inservice examinations be performed during normal plant outages such as refueling shutdowns or maintenance shutdowns occurring during the inspection interval. Except as specified in IS-251 for examination categories A, B, E-2, I-2, J-2, L-1, L-2, M-1, and M-2, at least 25 percent of the required examinations shall have been completed by the expiration of one-third of the inspection interval (with credit for no more than 33-1/3 percent if additional examinations are completed) and at least 50 percent shall have been completed by the expiration of two-thirds of the inspection interval (with credit for no more than 66-2/3 percent). The remaining required examinations shall be completed by the end of the inspection interval.

The primary nozzle-to-vessel welds, which are classified as Table IS-251 examination category D, "Pressure-Containing Nozzles in Vessels", are to be inspected in accordance with the above paragraph. However, the present ANO-1 Technical Specification 4.2.2 is more rigid and specifically requires inspection of one reactor coolant inlet nozzle after approximately 3-1/3 years operation, both reactor coolant outlet nozzles after approximately 6-2/3 years, and one core flood nozzle after 3-1/3 years operation. Such rigidity is not required, especially since paragraph IS-242, quoted above, notes that inspections are intended to be performed during normal plant outages. The present specification could require scheduling special outages to conform to the inspection intervals whereas the revised wording would allow the flexibility intended by IS-242 such that the required inspections could be performed prior to the 3-1/3 and 6-2/3 year intervals.

Therefore, because the proposed wording: (1) will not revise the inspection method or acceptance criteria of inspection results; (2) does not modify the requirement for inspection within the specified inspection interval (10 years), and; (3) provides desired operational flexibility without sacrificing the health and safety of the public; we conclude that the proposed change is acceptable.

The bases to Technical Specification 4.2 have been changed to reflect AP&L's adoption of revisions to Section XI through the 1972 Summer Addenda. This includes the aforementioned change to Paragraph IS-242 and is, therefore, acceptable.

Environmental Consideration

We have determined that the amendment does not authorize a change in effluent types or total amounts nor an increase in power level and will not result in any significant environmental impact. Having made this determination, we have further concluded that the amendment involves an action which is insignificant from the standpoint of environmental impact and pursuant to 10 CFR §51.5(d)(4) that an environmental impact statement or negative declaration and environmental impact appraisal need not be prepared in connection with the issuance of this amendment.

Conclusions

We have concluded, based on the considerations discussed above, that: (1) because the amendment does not involve a significant increase in the probability of consequences of accidents previously considered and does not involve a significant decrease in a safety margin, the amendment does not involve a significant hazards consideration, (2) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, and (3) such activities will be conducted in compliance with the Commission's regulations and the issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public.

Date: March 15, 1977

UNITED STATES NUCLEAR REGULATORY COMMISSION

DOCKET NO. 50-313

ARKANSAS POWER & LIGHT COMPANY

NOTICE OF ISSUANCE OF AMENDMENT TO FACILITY OPERATING LICENSE

The U. S. Nuclear Regulatory Commission (the Commission) has issued Amendment No. 20 to Facility Operating License No. DPR-51, issued to Arkansas Power & Light Company (the licensee), which revised Technical Specifications for operation of Arkansas Nuclear One - Unit No. 1 (the facility) located in Pope County, Arkansas. The amendment is effective as of its date of issuance.

This amendment authorized changes in the Technical Specifications concerning scheduling of post-operational inspections of primary nozzle-to-vessel welds to make them consistent with Section XI of ASME Boiler and Pressure Vessel Code.

The application for the amendment complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations. The Commission has made appropriate findings as required by the Act and the Commission's rules and regulations in 10 CFR Chapter I, which are set forth in the license amendment. Prior public notice of this amendment was not required since the amendment does not involve a significant hazards consideration.

The Commission has determined that the issuance of the amendment will not result in any significant environmental impact and that pursuant to 10 CFR §51.5(d)(4) an environmental impact statement or negative declaration and environmental impact appraisal need not be prepared in connection with issuance of this amendment.

For further details with respect to this action, see (1) the application for amendment dated January 13, 1977, (2) Amendment No. 20 to Facility Operating License No. DPR-51 and (3) the Commission's related Safety Evaluation. All of these items are available for public inspection at the Commission's Public Document Room, 1717 H Street, N.W., Washington, D. C. and at the Arkansas Polytechnic College, Russellville, Arkansas, 72801. A single copy of items (2) and (3) may be obtained upon request addressed to the U. S. Nuclear Regulatory Commission, Washington, D. C. 20555, Attention: Director, Division of Operating Reactors.

Dated at Bethesda, Maryland, this 15 day of March , 1977.

FOR THE NUCLEAR REGULATORY COMMISSION

Don K Davis

Don K. Davis, Acting Chief
Operating Reactors Branch #2
Division of Operating Reactors