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Docket No. 50-368

OCT 09 1980

Mr. William Cavanaugh, III
 Vice President, Generation
 and Construction
 Arkansas Power & Light Company
 P. O. Box 551
 Little Rock, Arkansas 72203

Dear Mr. Cavanaugh:

On September 19, 1980 we authorized by telefax the change in the Technical Specifications for Arkansas Nuclear One, Unit 2, as requested in your letter of September 16, 1980. The license amendment, our evaluation, and the Federal Register Notice regarding your September 16, 1980 request are enclosed. The amendment was effective on September 19, 1980.

The Amendment revised the Appendix A Technical Specifications by specifying that the two independent containment cooling groups shall be operable with at least one operational cooling unit per group. The Appendix A Technical Specifications had previously required that the two independent containment cooling groups shall be operable with two operational cooling units in one group and at least one operational cooling unit in the second group. The revision also increased the frequency of verifying the service water flow rate of the containment cooling groups from once every 31 days to once every 14 days with chlorination of the service water whenever the water temperature is between 60 and 80 degrees Fahrenheit.

In our discussions with you regarding these matters, you committed at our request, to augment the flow verification test of the containment cooling groups at an increased frequency of once per two (2) days for a period of two weeks following the return of the containment cooling units to service.

Copies of the Safety Evaluation and the Notice of Issuance are also enclosed.

Sincerely,

Original signed by:

Robert A. Clark, Chief
 Operating Reactors Branch #3
 Division of Licensing

Enclosures:

1. Amendment No. to Facility
Operating License No. NPF-6
2. Safety Evaluation
3. Notice of Issuance *See attached yellow for previous concurrences

57

cc w/ encls:
 See next page

OFFICE SURNAME
 DATE

DL:ORB#3
 PKreutzer
 10/8/80

DL:ORB#3
PKreutzer
 RAClark
 10/9/80

8011030077

Docket No. 50-368

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 Vice President, Generation
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 P. O. Box 551
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The Amendment revised the Appendix A Technical Specifications by specifying that the two independent containment cooling groups shall be operable with at least one operational cooling unit per group. The revision also increased the frequency of verifying the service water flow rate of the containment cooling groups from once every 37 days to once every 14 days with chlorination of the service water whenever the water temperature is between 60 and 80 degrees Fahrenheit.

In our discussions with you regarding these matters, you committed at our request, to augment the flow verification test of the containment cooling groups at an increased frequency of once per two (2) days for a period of two weeks following the return of the containment cooling units to service.

Copies of the Safety Evaluation and the Notice of Issuance are also enclosed.

Sincerely,

Robert A. Clark, Chief
 Operating Reactors Branch #3
 Division of Licensing

Enclosures:

- Amendment No. to Facility Operating License No. NPF-6
- Safety Evaluation Notice of Issuance

OFFICE	ORB#3:D: PMKreutzer	ORB#3:DL LEngle	ORB#3:DL RAClark	AS:OR-DI TNovak	OELD + notice
SURNAME	pmk	JL	Clark	Novak	M. Potaschuld
DATE	9/30/80	10/11/80	10/15/80	10/12/80	10/3/80

Concur in letter re amendment and Fed. Reg. notice subject to change in letter

cc w/ enclosures:
 free next page



UNITED STATES
 NUCLEAR REGULATORY COMMISSION
 WASHINGTON, D.C. 20555
 October 9, 1980

DISTRIBUTION:
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 PMKreutzer

Docket No. 50-368

Docketing and Service Section
 Office of the Secretary of the Commission

SUBJECT: ARKANSAS NUCLEAR ONE, UNIT 2

Two signed originals of the Federal Register Notice identified below are enclosed for your transmittal to the Office of the Federal Register for publication. Additional conformed copies (12) of the Notice are enclosed for your use.

- Notice of Receipt of Application for Construction Permit(s) and Operating License(s).
- Notice of Receipt of Partial Application for Construction Permit(s) and Facility License(s): Time for Submission of Views on Antitrust Matters.
- Notice of Availability of Applicant's Environmental Report.
- Notice of Proposed Issuance of Amendment to Facility Operating License.
- Notice of Receipt of Application for Facility License(s); Notice of Availability of Applicant's Environmental Report; and Notice of Consideration of Issuance of Facility License(s) and Notice of Opportunity for Hearing.
- Notice of Availability of NRC Draft/Final Environmental Statement.
- Notice of Limited Work Authorization.
- Notice of Availability of Safety Evaluation Report.
- Notice of Issuance of Construction Permit(s).
- Notice of Issuance of Facility Operating License(s) or Amendment(s).
- Other: Amendment No. 16

Referenced documents have been provided PDR

Division of Licensing, ORB#3
 Office of Nuclear Reactor Regulation

Enclosure:
 As Stated

OFFICE →	ORB#3:DL				
SURNAME →	PMKreutzer/JL				
DATE →	10/10/80				



UNITED STATES
NUCLEAR REGULATORY COMMISSION

WASHINGTON, D. C. 20555

October 9, 1980

Docket No. 50-368

Mr. William Cavanaugh, III
Vice President, Generation
and Construction
Arkansas Power & Light Company
P. O. Box 551
Little Rock, Arkansas 72203

Dear Mr. Cavanaugh:

On September 19, 1980 we authorized by telefax the change in the Technical Specifications for Arkansas Nuclear One, Unit 2, as requested in your letter of September 16, 1980. The license amendment, our evaluation, and the Federal Register Notice regarding your September 16, 1980 request are enclosed. The amendment was effective on September 19, 1980.

The Amendment revised the Appendix A Technical Specifications by specifying that the two independent containment cooling groups shall be operable with at least one operational cooling unit per group. The Appendix A Technical Specifications had previously required that the two independent containment cooling groups shall be operable with two operational cooling units in one group and at least one operational cooling unit in the second group. The revision also increased the frequency of verifying the service water flow rate of the containment cooling groups from once every 31 days to once every 14 days with chlorination of the service water whenever the water temperature is between 60 and 80 degrees Fahrenheit.

In our discussions with you regarding these matters, you committed at our request, to augment the flow verification test of the containment cooling groups at an increased frequency of once per two (2) days for a period of two weeks following the return of the containment cooling units to service.

Copies of the Safety Evaluation and the Notice of Issuance are also enclosed.

Sincerely,

A handwritten signature in black ink that reads "Robert A. Clark".

Robert A. Clark, Chief
Operating Reactors Branch #3
Division of Licensing

Enclosures:

1. Amendment No. 16 to Facility
Operating License No. NPF-6
2. Safety Evaluation
3. Notice of Issuance

cc w/encls:
See next page

8011030077

Arkansas Power & Light Company

cc:

Mr. David C. Trimble
Manager, Licensing
Arkansas Power & Light Company
P. O. Box 551
Little Rock, Arkansas 72203

Mr. James P. O'Hanlon
General Manager
Arkansas Nuclear One
P. O. Box 608
Russellville, Arkansas 72801

Mr. William Johnson
U. S. Nuclear Regulatory Commission
P. O. Box 2090
Russellville, Arkansas 72801

Mr. Robert B. Borsum
Babcock & Wilcox
Nuclear Power Generation Division
Suite 420, 7735 Old Georgetown Road
Bethesda, Maryland 20014

Nick Reynolds
c/o DeBevoise & Liberman
1200 Seventeenth St. N.W.
Washington, D.C. 20036

Arkansas Polytechnic College
Russellville, Arkansas 72801

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

Mr. Paul F. Levy, Director
Arkansas Department of Energy
3000 Kavanaugh
Little Rock, Arkansas 72205

Mr. Charles B. Brinkman
Manager - Washington Nuclear
Operations
C-E Power Systems
4253 Cordell Avenue, Suite A-1
Bethesda, Maryland 20014

Director, Technical Assessment
Division
Office of Radiation Programs
(AW-459)
U. S. Environmental Protection Agency
Crystal Mall #2
Arlington, Virginia 20460

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

cc w/enclosure(s) and incoming
dtd.: 9/16/80
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 AND LIGHT COMPANY

DOCKET NO. 50-368

ARKANSAS NUCLEAR ONE, UNIT 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 16
License No. NPF-6

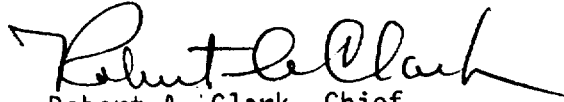
1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by Arkansas Power and Light Company (the licensee) dated September 16, 1980, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act) and the Commission's 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. NPF-6 is hereby amended as follows. The second paragraph of 2.C.(2) has not changed.

(2) Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 16, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

3. This license amendment is effective as of September 19, 1980.

FOR THE NUCLEAR REGULATORY COMMISSION


Robert A. Clark, Chief
Operating Reactors Branch #3
Division of Licensing

Attachment:
Changes to the
Technical Specifications

Date of Issuance: October 9, 1980

ATTACHMENT TO LICENSE AMENDMENT NO. 16

FACILITY OPERATING LICENSE NO. NPF-6

DOCKET NO. 50-368

Replace the following pages of the Appendix "A" Technical Specifications with the enclosed 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.

Pages

3/4 6-14

3/4 6-15

B 3/4 6-4

CONTAINMENT SYSTEMS

SURVEILLANCE REQUIREMENTS (Continued)

- d. At least once per 18 months, during shutdown, by:
 - 1. Verifying that each automatic valve in the flow path actuates to its correct position on a CSAS test signal.
 - 2. Verifying that each sodium hydroxide addition pump starts automatically on a CSAS test signal.

- e. At least once per 5 years by verifying the flow rate through each component and pipe section in each sodium hydroxide injection path from the tank to the containment spray pump discharge piping to be at least 14 gpm.

CONTAINMENT SYSTEMS

CONTAINMENT COOLING SYSTEM

LIMITING CONDITION FOR OPERATION

3.6.2.3 Two independent containment cooling groups shall be OPERABLE with at least one operational cooling unit in each group.

APPLICABILITY: MODES 1, 2, 3, and 4.

ACTION:

- a. With one group of the above required containment cooling units inoperable and both containment spray systems OPERABLE, restore the inoperable group of cooling units to OPERABLE status within 7 days or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.
- b. With two groups of the above required containment cooling units inoperable and both containment spray systems OPERABLE, restore at least one group of cooling units to OPERABLE status within 72 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours. Restore both above required groups of cooling units to OPERABLE status within 7 days of initial loss or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.
- c. With one group of the above required containment cooling units inoperable and one containment spray system inoperable, restore the inoperable spray system to OPERABLE status within 72 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours. Restore the inoperable group of containment cooling units to OPERABLE status within 7 days of initial loss or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.
- d. With any cooling unit of the above required groups inoperable because its associated fan is inoperable, verify that the OPERABLE cooling unit in that group has a service water flow rate \geq 1250 gpm through its cooling coils or restore the inoperable cooling unit to OPERABLE status within 72 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

CONTAINMENT SYSTEMS

SURVEILLANCE REQUIREMENTS

4.6.2.3 Each containment cooling group shall be demonstrated OPERABLE:

- a. At least once per 14 days by:
 1. Verifying a service water flow rate of ≥ 1250 gpm to each group of cooling units.
 2. Chlorinating the service water during the surveillance in 4.6.2.3.a.1 above, whenever service water temperature is between 60°F and 80°F .
- b. At least once per 31 days by:
 1. Starting (unless already operating) each operational cooling unit from the control room.
 2. Verifying that each operational cooling unit operates for at least 15 minutes.
- c. At least once per 18 months by verifying that each cooling unit starts automatically on a CCAS test signal.

CONTAINMENT SYSTEMS

BASES

3/4.6.2 DEPRESSURIZATION AND COOLING SYSTEMS

3/4.6.2.1 CONTAINMENT SPRAY SYSTEM

The OPERABILITY of the containment spray system ensures that containment depressurization and cooling capability will be available in the event of a LOCA. The pressure reduction and resultant lower containment leakage rate are consistent with the assumptions used in the accident analyses.

The containment spray system and the containment cooling system are redundant to each other in providing post accident cooling of the containment atmosphere. However, the containment spray system also provides a mechanism for removing iodine from the containment atmosphere and therefore the time requirements for restoring an inoperable spray system to OPERABLE status have been maintained consistent with that assigned other inoperable ESF equipment.

3/4.6.2.2 SODIUM HYDROXIDE ADDITION SYSTEM

The OPERABILITY of the sodium hydroxide addition system ensures that sufficient NaOH is added to the containment spray in the event of a LOCA. The limits on NaOH volume and concentration ensure a pH value of between 8.9 and 11.0 for the solution recirculated within containment after a LOCA. This pH band minimizes the evolution of iodine and minimizes the effect of chloride and caustic stress corrosion on mechanical systems and components. The contained water volume limit includes an allowance for water not usable because of tank discharge line location or other physical characteristics. These assumptions are consistent with the iodine removal efficiency assumed in the accident analyses.

3/4.6.2.3 CONTAINMENT COOLING SYSTEM

The OPERABILITY of the containment cooling system ensures that 1) the containment air temperature will be maintained within limits during normal operation, and 2) adequate heat removal capacity is available when operated in conjunction with the containment spray systems during post-LOCA conditions.

CONTAINMENT SYSTEMS

BASES

The containment cooling system and the containment spray system are redundant to each other in providing post accident cooling of the containment atmosphere. As a result of this redundancy in cooling capability, the allowable out of service time requirements for the containment cooling system have been appropriately adjusted. However, the allowable out of service time requirements for the containment spray system have been maintained consistent with that assigned other inoperable ESF equipment since the containment spray system also provides a mechanism for removing iodine from the containment atmosphere.

Service water chlorination is performed during containment cooler surveillance to prevent buildup of Asian clams in the coolers when service water is pumped through the cooling coils. This is performed when service water temperature is between 60°F and 80°F since in this water temperature range Asian clams can spawn and produce larva which could pass through service water system strainers.

3/4.6.3 CONTAINMENT ISOLATION VALVES

The OPERABILITY of the containment isolation valves ensures that the containment atmosphere will be isolated from the outside environment in the event of a release of radioactive material to the containment atmosphere or pressurization of the containment. Containment isolation within the time limits specified ensures that the release of radioactive material to the environment will be consistent with the assumptions used in the analyses for a LOCA.

3/4.6.4 COMBUSTIBLE GAS CONTROL

The OPERABILITY of the equipment and systems required for the detection and control of hydrogen gas ensures that this equipment will be available to maintain the hydrogen concentration within containment below its flammable limit during post-LOCA conditions. Either recombiner unit is capable of controlling the expected hydrogen generation associated with 1) zirconium-water reactions, 2) radiolytic decomposition of water, and 3) corrosion of metals within containment. These hydrogen control systems are consistent with the recommendations of Regulatory Guide 1.7 "Control of Combustible Gas Concentrations in Containment Following a LOCA", March 1971.

The containment recirculation units are provided to ensure adequate mixing of the containment atmosphere following a LOCA. This mixing action will prevent localized accumulations of hydrogen from exceeding the flammable limit.



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

SUPPORTING AMENDMENT NO. 16

ARKANSAS POWER AND LIGHT COMPANY

ARKANSAS NUCLEAR ONE, UNIT 2

DOCKET NO. 50-368

Introduction:

By letter dated September 16, 1980, the Arkansas Power and Light Company (the licensee) requested a change to the Technical Specifications for Arkansas Nuclear One, Unit 2 (ANO-2). The proposed change would allow reduced service water flow through the containment cooling units.

The containment cooling units (fan coolers) at ANO-2 are used for both normal and post-accident operations. During normal operation chilled water from the plant's chilled water system is pumped through the containment cooling units (CCU). Following an accident, the chilled water system is automatically isolated, service water valves are opened, and service water is pumped through the CCU. The CCU has two separate sets of tubing for the chilled water and the service water. The two sets of tubing do not interface.

ANO-2 Technical Specification 4.6.2.3.a.3 requires that a specified minimum flow of service water through the CCU be demonstrated operable every 31 days. On September 3, 1980, ANO-2 was shut down due to inadequate service water flow to the CCU. The cause of inadequate flow was determined to be due to an intrusion of Asian Clams, Corbicula sp., into the CCU.

The Asian Clam is a bivalve mollusc found abundantly in the warm fresh-waters of the United States. The Asian Clam is monoecious (bi-sexual), incubatory and precocious in reaching sexual maturity. This hardy clam reproduces prolifically when water temperatures range from 62 to 75 degrees Fahrenheit.

Larvae discharged from adult clams are about 1/50 of an inch in diameter and are passively carried by water movement. Stagnant, or low flow areas provide suitable conditions for the larvae to grow into valved clams. Valved larvae are greater than 1/32 inch in size and grow to mature adult clams (1.2 inches in size) in approximately 36 to 42 months.

At ANO-2, service water suction is taken from Lake Dardanelle and is strained before entering the plant. Differential pressure measurements are checked on the intake screens once per shift to prevent buildup of adult clams.

Apparently, during a pervious surveillance test of the CCU, Asian Clam larvae present in the service water were pumped with the water into the CCU. Upon completion of the surveillance test, some water was left stagnant in the CCU. The larvae present matured into valved clams inside the heat exchanger tubes, affixing themselves to the tube walls, and thus causing flow blockage in the CCU.

Significant effort has been expended in cleaning the CCU. Flow rates have been increased significantly, but not yet to the 2500 gallons per minute (gpm) limit required by Technical Specification 4.6.2.3.a.3. Some flow blockage still exists as a result of remaining clams. Accordingly, in its letter of September 16, 1980, the licensee proposed a Technical Specification change to allow for reduced service water flow through the CCU.

Discussion

There are four CCU at the ANO-2 facility. The CCU are arranged in two groups with two CCU per group. Each group is powered by a different safety grade electrical power source. ANO-2 Technical Specifications 3.6.2.3 currently requires, as a minimum, "two independent containment cooling groups shall be Operable with two cooling units in one group and at least one cooling unit in the second group." Surveillance requirements of Specification 4.6.2.3 currently requires a minimum service water flow rate of 2500 gpm for each group containing two cooling units and 1250 gpm for each group containing one cooling unit.

The licensee's letter of September 16, 1980, stated that due to the remaining clams and their associated flow blockage, the minimum flow of 2500 gpm cannot be obtained in either group. However, if a single containment cooling unit in each group is isolated, a flow of 1250 gpm can be obtained through a single containment cooling unit. Therefore, the licensee proposed to modify the ANO-2 Technical Specification so that only one CCU would be required in each group. Information was submitted by the licensee in a letter dated September 11, 1980 stating that a flow of 1250 gpm for a single CCU would provide sufficient cooling to meet design basis requirements.

The licensee has stated, and we concur, that changing the ANO-2 Technical Specifications to permit only two CCUs (one per group) will not affect the plant's safety analysis. The previous worst case design basis accident (DBA) assumed the failure of the diesel generator that served the train that had two CCUs. This would leave only one CCU and a single containment spray train for containment cooling. Transient response analyses by the licensee using the COPATTA computer code showed that the peak containment pressure and temperature limits were not exceeded by the worst case DBA. We have verified the licensee's results by confirmatory analysis.

The worst case DBA with the proposed Technical Specifications again assumes the failure of a diesel generator. Again this results in the case with only a single CCU and a single containment spray train available to provide containment cooling. Obviously the containment transient response would be identical to the previous case.

Although the licensee has stated that a single CCU per group will provide adequate cooling capability, the licensee can only obtain this flow rate by isolating the adjacent CCU in each group. We concur with the licensee that it would not be sound engineering judgement to isolate one CCU in order to increase the flow through the other unit to a value greater than 1250 gpm. If both CCUs are left open, the combined service water flow and heat removal capability would be expected to increase. Therefore, the proposed Technical Specifications will only require a minimum service water flow of 1250 gpm through each group rather than for each CCU on a group. The proposed Technical Specification change will also increase the frequency of verifying the service water flow rate from once every 31 days to once every 14 days. This will provide additional assurance that the minimum service water flow rate will be available if needed.

In the course of our review of the proposed Technical Specification change it became apparent that some of the information in Section 6.2 of the ANO-2 FSAR was inconsistent with information in Section 9. In particular, Section 6.2 of the FSAR states that the design flow for each containment cooling unit is 2600 gpm while Section 9 and the Technical Specifications are based on 1250 gpm per containment cooling unit. We discussed this inconsistency with the licensee, who stated that the 1250 gpm design value, which is used as the basis for the proposed Technical Specification change, is the correct value. The licensee received confirmation of the 1250 gpm design value in a letter from its system designer (Bechtel Corporation). In addition, the specifications for the ANO-1 containment cooling units were checked. These units are essentially identical to the ANO-2 containment cooling units. The design flow for the ANO-1 containment cooling units is 1200 gpm. This also confirms that the 1250 gpm value, rather than the FSAR value of 2600 gpm, is correct. We asked for and received a commitment from the licensee, to provide a letter in the near future documenting and verifying the correct design information for the containment cooling system.

Based on the licensee's September 16, 1980 submittal, and in our subsequent discussions with the licensee, a program for eradication of the Asian Clams (molluscs) includes heat treatment and flushing operations of the CCU. Piping upstream of the ten-inch header to the isolation valve has been flushed and visual inspection indicates there are few clams remaining in the headers. The licensee will heat treat the system from the isolation valve in the 10 inch header, downstream to and including the coolers. Water at a temperature of 130 degrees Fahrenheit will be used to heat the system. Flushing of the system subsequent to heat treatment will be performed prior to restart.

Based on available information, the heat treatment will result in 100 percent mortality of the molluscs. Further flow restrictions due to continued growth of the existing mollusc population will not occur. Flow reduction may occur due to possible sloughing off of individual valves from molluscs killed by heat treatment from areas not presently restricting flow, and movement of these valves to the CCU heat exchanger tubes. The licensee's proposed flushing sequence subsequent to the heat treatment but prior to station startup should remove most of the detached dead molluscs and lessen the possibility of blockage due to

valve movement. It is reasonable to assume that decay of the molluscs will be a gradual process over a number of days resulting in the gradual sloughing off of valves from any molluscs remaining in the system. At our request, the licensee by letter dated September 22, 1980, committed to perform a flow verification test at an increased frequency of once per two days for the first 14 days of station operation to assess whether flow through the CCU is decreasing due to the movement of valves from dead molluscs. If these valves restrict flow, this reduction should be gradual and readily observed during the augmented monitoring program.

The licensee has stated that effective control procedures resulting in complete mortality to both valved and non-valved larvae will commence prior to restart after the next scheduled refueling outage. In the interim, continuous chlorination to control non-valved larvae will be performed during surveillance testing. Valved larvae introduced during surveillance testing between now and the next scheduled fuel load may become established in the CCU. However, it takes approximately one year to mature to a size sufficient to block CCU heat exchanger tubes. Therefore, no significant reduction in flow across the CCU is expected due to maturation of the valved larvae between now and when complete cleaning of the CCU is performed during the next scheduled refueling operation (March 1981).

The licensee has proposed a program of continuous chlorination during the augmented 14 day surveillance testing to eliminate the possibility of future infestations of Asiatic clams in the CCUs. The continuous chlorination procedure will substantially reduce the introduction of live mollusc larvae but will not eliminate it entirely. Chlorination will kill non-valved larvae but will not result in mortality to valved larvae.

The licensee is presently evaluating long term effective control procedures for complete mortality to both valved and non-valved larvae. The long term control procedures will be effective after the next scheduled refueling operation.

Evaluation

As stated above, the proposed Technical Specification will not jeopardize containment integrity by exceeding the containment design pressure nor will it increase the calculated post DBA Peak Containment Pressure in the most limiting case. Off-site dose consequences as a result of containment leakage post DBA will not exceed the dose projections of the original design basis calculations for ANO-2 and will be identical to projected doses using the existing Technical Specification in the most limiting case.

In addition, augmented surveillance testing with chlorination will assure mortality for non-valved larvae and the introduction of any additional valved larvae will not cause any significant reduction in flow across the CCU's between now and the March, 1981 refueling operations.

Thus, the proposed Technical Specification change does not constitute a significant hazard to the health and safety of the public, in the most limiting case, the margin of safety is not reduced; and, therefore, we find it 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.

Conclusion

We have concluded, based on the considerations discussed above, that: (1) because the amendment does not involve a significant increase in the probability or 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 of Issuance: October 9, 1980

UNITED STATES NUCLEAR REGULATORY COMMISSIONDOCKET NO. 50-368ARKANSAS POWER AND LIGHT COMPANYARKANSAS NUCLEAR ONE, UNIT 2NOTICE OF ISSUANCE OF AMENDMENT TO FACILITY OPERATING LICENSE

The U. S. Nuclear Regulatory Commission (the Commission) has issued Amendment No. 16 to Facility Operating License No. NPF-6 issued to Arkansas Power and Light Company for Operation of Arkansas Nuclear One, Unit 2 (the facility) located at the licensee's site in Pope County, Arkansas. The amendment was effective as of September 19, 1980.

The amendment revised the Appendix A Technical Specifications by specifying that the two independent containment cooling groups shall be operable with at least one operational cooling unit per group. The Appendix A Technical Specifications had previously required that the two independent containment cooling groups shall be operable with two operational cooling units in one group and at least one operational cooling unit in the second group. The revision also increased the frequency of verifying the service water flow rate of the containment cooling groups from once every 31 days to once every 14 days with chlorination of the service water whenever the water temperature is between 60 and 80 degrees Fahrenheit.

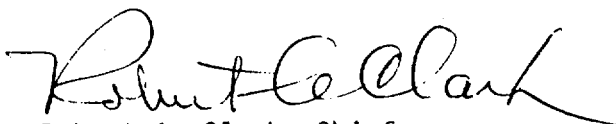
The application for the amendment complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations. The Commission has made appropriate findings as required by the Act and the Commission's rules and regulations in 10 CFR Chapter 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 this amendment will not result in any significant environmental impact and that pursuant to 10 CFR Section 51.5(d)(4) an environmental impact statement or negative declaration and environmental impact appraisal need not be prepared in connection with the issuance of this amendment.

For further details with respect to this action, see (1) the application for amendment dated September 16, 1980, (2) the Commission's letter to the licensee dated September 19, 1980 (3) Amendment No. 16 to Facility Operating License No. NPF-6, and (4) the Commission's related Safety Evaluation. These items are available for public inspection at the Commission's Public Document Room at 1717 H Street, N. W., Washington, D. C. 20555 and the Arkansas Polytechnic College, Russellville, Arkansas 72801. A copy of items (2), (3), and (4) may be obtained upon request addressed to the U. S. Nuclear Regulatory Commission, Washington, D. C. 20555, Attention: Director, Division of Licensing.

Dated at Bethesda, Maryland this 9th day of October 1980.

FOR THE NUCLEAR REGULATORY COMMISSION



Robert A. Clark, Chief
Operating Reactors Branch #3
Division of Licensing