

September 7, 1979

Docket No. 50-368

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MEMORANDUM FOR: Darrell G. Eisenhut, Acting Director, Division of Operating Reactors, Office of Nuclear Reactor Regulation

FROM: Domenic B. Vassallo, Acting Director, Division of Project Management, Office of Nuclear Reactor Regulation

SUBJECT: TRANSFER OF ARKANSAS NUCLEAR ONE, UNIT 2 TO OPERATING REACTORS BRANCH NO. 4

Effective on the date of this memorandum, the safety project management responsibility for Arkansas Nuclear One, Unit 2 is transferred from LWR Branch No. 1, Division of Project Management, to Operating Reactors Branch No. 4, Division of Operating Reactors.

The licensee, Arkansas Power & Light Company, received a facility operating license (NPF-6) on July 18, 1978. NPF-6 authorized the licensee to load fuel and maintain the plant in Mode 5 (cold shutdown condition).

Amendment No. 1 to NPF-6, issued on September 1, 1978, authorized full power operation at 2815 MWt. However, the facility was temporarily restricted from operating at full power until certain tests and other items noted in the license conditions were completed to the written satisfaction of IE and NRR.

Amendment No. 2 to NPF-6, issued on September 22, 1978, temporarily suspended Technical Specification 3.4.1 which allows only one hour operation without reactor core flow in Modes 3, 4 and 5. The temporary suspension was granted for one 36 hour period valid through October 9, 1978, to allow repairs to be completed on a decay heat suction valve prior to initial criticality.

Amendment No. 3 to NPF-6, issued on October 4, 1978, revised Technical Specification 4.5.4.3.b to specify that the flow rate for each of the containment recirculation fans be at least equal to 4500 cubic feet per minute.

Amendment No. 4 to NPF-6, issued on October 17, 1978, corrected a typographical error in the Appendix B Technical Specifications.

Amendment No. 5 to NPF-6, issued on November 13, 1978, modified the Technical Specifications dealing with the plant organizational structure. (The corresponding modifications were also made to the Unit 1 Technical Specifications).

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Amendment No. 6 to NPF-6, issued on November 18, 1978, provided one-time relief from Technical Specification 3.3.1.1.b to allow non-nuclear heatup operation within only one diesel generator and two offsite power systems available before repairs were completed on the second diesel generator which experienced mechanical failure on November 9, 1978. The relief was granted for no longer than three weeks from the date of issuance of Amendment No. 6.

Amendment No. 7 to NPF-6, issued on December 1, 1978, modified or removed three conditions to NPF-6 that had restricted the facility from going critical and operating at full power. Amendment No. 7 also modified or removed other license conditions involving acceptable completion of certain conduit penetration fire barrier testing; correction of an implementation date for an action required by the fire protection program; completion of acceptable changes needed for protection from degraded offsite power voltage; and modification of the schedule for the remaining actions needed to complete the review of three core protection calculator system positions.

Amendment No. 8 to NPF-6, issued on February 23, 1979, incorporated the "Arkansas Nuclear One Industrial Security Plan, January 11, 1979" into NPF-6. (This document was also incorporated into the Unit 1 operating license).

Amendment No. 9 to NPF-6, issued on March 19, 1979, changed Technical Specification 3.6.1.4 by reducing the minimum initial containment temperature and pressure to 50 degrees Fahrenheit and a negative 3.0 pounds per square inch gauge, respectively. Also, the steam generator low water level trip setpoint specified in Technical Specification Tables 2.2-1 and 3.3-4 was changed to a value of greater than or equal to 46.5 percent.

Amendment No. 10 to NPF-6, issued on March 30, 1979, temporarily suspended Technical Specification 3.6.1.6 which requires that the purge supply and exhaust system isolation valves be closed in Modes 1, 2, 3 and 4. The temporary suspension was granted for one 30-hour period to allow two eight-hour purging operations in Modes 3 and 4 only.

Amendment No. 11 to NPF-6, issued on May 3, 1979, modified the Appendices A and B Technical Specifications dealing with the licensee's management organization structure. (The corresponding modifications were also made to the Unit 1 Appendices A and B Technical Specifications.)

Amendment No. 12 to NPF-6, issued on June 12, 1979, modified a condition to NPF-6 by removing the restrictions on making any software changes on the core protection calculator system based on our approval of the licensee's change procedures. Also, the Technical Specifications were changed to include a Nuclear Software Expert as a member of the licensee's Plant Safety Committee. Amendment No. 12 also removed another condition regarding implementation of redundant valve position indication in the control room which had been verified to be completed in accordance with previously approved design modifications.

The current status of items requiring further staff action and the organizations responsible for completing these items are identified in Enclosure 1. Lists of generic problems and regulatory guides used during the licensing review with references to the locations where relevant information or evaluations of record may be found, are included in Enclosure 2.

Enclosure 3 is a DSE memorandum which summarizes the environmental status of the project and transfers the environmental project management responsibility from DSE to DOR. Enclosure 4 is the service list for the plant. Enclosure 5 is the licensee's list for direct distribution of amendments, etc. Enclosure 6 is a list of documents that are relevant to plant operations subsequent to the issuance of NPF-6.

By copy of this memo, DSS, IE, MPA, ELD, ADM, Regulatory Files, Public Information and Public Proceedings are being notified of the following safety personnel changes which are to be effective on the date of this memorandum. Enclosure 3 lists the environmental personnel changes.

	<u>From</u>	<u>To</u>
Project Manager	L. Engle	G. Vissing
* Branch Chief	J. Stolz	R. Reid
Assistant Director	S. Varga	W. Gammill
Licensing Assistant	E. Hylton	R. Ingram

D. Vassallo
 Domenic B. Vassallo, Acting Director
 Division of Project Management
 Office of Nuclear Reactor Regulation

Enclosures:

1. Current Status of Items Requiring Staff Action
2. Current Status of Generic Review Items
3. DSE Transfer Memorandum
4. Facility Service List
5. Licensee's Distribution List
6. Relevant Documents

A-AD/DOR
J. Miller

A/D-RS:DSS
 RDenise
 8/22/79

AD-E:DSS
 J. Knight
 8/23/79

YA/D-PS:DSS
[Signature]
 8/23/79

A-AD/EP:DOR
 LShao
 8/27/79

LWR#1:DPM
 E. Hylton
 9/4/79

LWR#1:DPM
 L. Engle
 9/4/79

LWR#1:DPM
 J. Stolz
 9/4/79

AD-LWR:DPM
 S. Varga
 9/4/79

A-D-800 Task Force
 D. Ross
 8/16/79

OFFICE	ORB#4: DOR	ORB#4: DOR	C-ORB#4: DOR	A-AD-APP: DOR	A-D: DPM	A-D: DOR
NAME	S. Wokey:rf	G. [Signature]	[Signature]	W. Gammill	D. Vassallo	[Signature]
DATE	8/23/79	8/16/79	9/4/79	9/4/79	9/7/79	9/5/79

CURRENT STATUS OF ITEMS REQUIRING STAFF ACTIONARKANSAS NUCLEAR ONE, UNIT 2DOCKET NO. 50-368FACILITY OPERATING LICENSE NPF-6

The current status of the items requiring further staff action and the organizations responsible for completing these items are as follows:

1. Fuel Performance

License Condition 2.C(3)(a) stipulates that the licensee shall, prior to startup for the cycle of operation in which burnups greater than 20,000 megawatt days per ton of uranium are expected to be obtained, provide for Commission review and obtain Commission approval of revised fission gas release calculations and other affected analyses utilizing fission gas release calculational methodology approved for burnups greater than 20,000 megawatt days per ton of uranium. This matter is discussed further in Section 4.2.1 of Supplement No. 2 to the Safety Evaluation Report (SER).

The Core Performance Branch (DSS) will review any topical report submitted and will prepare the input to a SER. The assigned plant specific review for this matter will be performed by the Reactor Safety Branch (DOR). Management responsibility for this matter will be carried out by Operating Reactors Branch No. 4 (DOR).

2. Instrument Trip Setpoints Drift Allowance

License Condition 2.C(3)(d) stipulates that the licensee shall submit for Commission review certain information for each reactor protection system and engineered safety feature instrumentation channel for incorporation in the Technical Specifications (TS). A document was submitted by the licensee on February 28, 1979.

The Plant Systems Branch (DOR) will maintain primary review responsibility for this matter. A SER for this review will be completed by J. Burdoin (PS3) prior to November 15, 1979. Management responsibility for this matter will be carried out by Operating Reactors Branch No. 4 (DOR).

3. Fire Protection

License Condition 2.C(3)(e), as modified by Amendment No. 7 to NPF-6 stipulates that the licensee shall complete certain modifications by the indicated dates in accordance with our findings as set forth in NUREG-0223, "Fire Protection SER." This matter is discussed further in Section 9.7 of the SER and Supplement No. 2 thereto.

Table 3.1 of NUREG-0223 is a summary of the outstanding items. NUREG-0223 requires the licensee to submit requests for TS changes on items 3.5, 3.11, 3.14 and 3.15 and additional information on items 3.6 and 3.7 at least 90 days prior to modification. Additional information will be requested from the licensee by ORB#4 on items 3.4, 3.8, 3.9 and 3.18 to allow completion of the review process. The Plant Systems Branch (DOR) will maintain

primary review responsibility and will prepare the input to a SER within 30 days of receipt of the information on the aforementioned items.

On January 15, 1979, the licensee provided information to support the deletion of Item 3.10 from Table 3.1 of NUREG-0223. The Plant Systems Branch (DOR) is reviewing the status of this matter.

A letter from the licensee dated July 17, 1979 provides the latest status of completion of items listed in Table 3.1 of NUREG-0223. The Office of Inspection and Enforcement will verify that the modifications have been satisfactorily implemented. Management responsibility for this matter will be carried out by Operating Reactors Branch No. 4 (DOR).

3.(a) Fire Protection - NUREG-0223, Table 3.1 Item 3.12 Fire Dampers

On March 23-24, 1979 by telephone, and on May 1, 1979 by Licensee Event Report, it was identified that 32 fire dampers were not installed as required by architectural design specifications. Nine of these dampers were for safety related area protection. A continuous fire watch was established for all affected safety related areas as required by TS 3.7.11. The licensee submitted a request on April 17, supplemented on May 18, 1979, for a modification to TS 3.7.11 to exempt four locations from the requirements of the TS until September 1, 1979 when the damper installation is expected to be completed. The Plant Systems Branch (DOR) reviewed this request and submitted input to the SER. An amendment will be issued by Operating Reactors Branch No. 4 (DOR) after receipt of the required input and concurrence from the Standard TS Group (DOR). The licensee has advised us verbally that the amendment request may be withdrawn since the damper installations will be completed shortly.

The Office of Inspection and Enforcement will verify that the modifications have been satisfactorily implemented. Management responsibility for this matter will be carried out by Operating Reactors Branch No. 4 (DOR).

4. Overpressure Mitigating System

License Condition 2.C(3)(f) stipulates that the licensee shall, prior to startup following the first regularly scheduled refueling outage, achieve full implementation of its proposed overpressure mitigating system described in the licensee's letter dated October 11, 1977. The licensee will submit a description of the interlock or alarm to be installed on the isolation valves which will be reviewed by ICSB and RSB (DSS) to assure compliance with applicable standards and criteria. RSB will provide the input to an SER within 60 days of receipt of the information from the licensee. The licensee will submit a request for a TS involving surveillance requirements for the relief valves. The Plant Systems Branch (DOR) will be responsible for the review. This matter is discussed further in Section 5.7 of Supplement No. 1 to the SER.

The Office of Inspection and Enforcement will verify that the system has been satisfactorily implemented. Management responsibility for this matter will be carried out by Operating Reactors Branch No. 4 (DOR).

5. Verification of Transient Analysis Code

License Condition 2.C(3)(g) stipulates that the licensee shall complete tests to verify the use of the CESEC Code during the initial startup and power ascension testing program and submit the results for Commission review and approval. This matter is discussed further in Section 15.4.2 of the SER and Supplement No. 2 thereto. The Office of Inspection and Enforcement indicated on December 14, 1978, that instrumentation was in place for the CESEC code verification.

The Analysis Branch (DSS) will maintain primary review responsibility for this matter and will prepare the input to a SER within 90 days after receipt of the report. Management responsibility for this matter will be carried out by Operating Reactors Branch No. 4 (DOR).

6. Main Feedwater System Modifications

License Condition 2.C(3)(h) stipulates that the licensee shall, prior to startup following the first regularly scheduled refueling outage, achieve full implementation of its proposed modifications to the main feedwater system to preclude unacceptable mass and energy blowdown into the containment in the event of a main steamline break accident. This matter is discussed further in Section 6.2.1 of Supplement No. 2 to the SER, and in an interoffice memo dated June 6, 1979 from R. Boyd to H. Thornburg.

A TS surveillance requirement for the redundant main feedwater isolation valve may be necessary. The Plant Systems Branch (DOR) will review this matter and prepare the input to a SER including the evaluation of the changes to TS.

The Office of Inspection and Enforcement will verify that the modifications have been satisfactorily implemented. Management responsibility for this matter will be carried out by Operating Reactors Branch No. 4 (DOR).

7. Containment Radiation Monitor

License Condition 2.C(3)(i), as modified by Amendment No. 7 to NPF-6, stipulates that the licensee shall, prior to July 31, 1980, submit for Commission review and approval, documentation which establishes the adequacy of the qualifications of the containment radiation monitors located inside the containment and shall complete the installation and testing of these instruments to demonstrate that they meet the operability requirements of TS 3.3.3.6.

The Instrumentation and Control Systems Branch (DSS) will maintain primary review responsibility for this matter and will prepare the input to a SER including the evaluation of the changes to TS. Management responsibility for this matter will be carried out by Operating Reactors Branch No. 4 (DOR).

8. Core Protection Calculator System (CPCS)

Subparts (1), (2) and (3) of License Condition 2.C(3)(k), as modified by Amendments Nos. 7 and 12 to NPF-6, stipulate that the startup report required by TS 6.9.1 be supplemented to include the results of testing associated with CPCS Position Nos. 1, 5 and 12, respectively. An interoffice memo from S. Hanauer (DSS) on

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April 6, 1979 describes the Commission's responsibilities relating to CPCS. A site visit is scheduled for September 13-14, 1979 by members of DSS.

(1) CPCS Position No. 1, Power Distribution Algorithm :

Subpart (1) of License Condition 2.C(3)(k), as modified by Amendment No. 7 to NPF-6, stipulates that the startup report required by TS 6.9.1 be supplemented to include the results of the startup verification testing which demonstrates the conservatism of the calculation of the power distribution uncertainty factors. This matter is discussed further in Section D.3.5 of the SER and Supplement Nos. 1 and 2 thereto.

The Core Performance Branch (DSS) will maintain primary review responsibility for this matter, and will prepare the input to a SER within 90 days of receipt of the testing report.

The assigned reviewer for this matter in the Core Performance Branch (DSS) is R. Schemel. In addition, the Plant Systems and Reactor Safety Branches (DOR) will monitor this matter in order to become knowledgeable about the CPCS. D. Tondi and J. Beard will monitor this matter for the Plant Systems Branch and S. Weiss will monitor for the Reactor Safety Branch. Management responsibility for this matter will be carried out by Operating Reactors Branch No. 4 (DOR).

(2) CPCS Position No. 5, Cable Separation

Subpart (2) of License Condition 2.C(3)(k), as modified by Amendment No. 7 to NPF-6, stipulates that the startup report required by TS 6.9.1 be supplemented to include the results of measurements from the startup testing program which demonstrate that noise or electromagnetic interference effects from non-Class IE circuits which are in close proximity to Class IE circuits are within previously established acceptable ranges. This matter is discussed further in Section D.4.1.2 of the SER and Supplement Nos. 1 and 2 thereto.

The Instrumentation and Control System Branch (DSS) will maintain primary review responsibility for this matter, and will prepare the input to a SER within 90 days of receipt of the testing report. The assigned reviewer for this matter in the Instrumentation and Control Systems Branch is J. Joyce. In addition, the Plant Systems Branch (DOR) will monitor this matter in order to become knowledgeable about the CPCS. D. Tondi and J. Beard will monitor this matter for the Plant Systems Branch. Management responsibility for this matter will be carried out by Operating Reactors Branch No. 4 (DOR).

(3) CPCS Position No. 12, Electrical Noise and Isolation

Subpart (3) of License Condition 2.C(3)(k), as modified by Amendment No. 7 to NPF-6, stipulates that the startup report required by TS 6.9.1 be supplemented to include the results of measurements from the startup testing program which demonstrate that noise or electromagnetic interference effects upon the operation of the optical isolators are within previously established acceptable ranges. This matter is discussed further in Sections D.4.1.4 and D.4.4.4 of Supplement Nos. 1 and 2 to the SER.

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The Analysis Branch (DSS) will maintain primary review responsibility for this matter, and will prepare the input to a SER within 90 days of receipt of the testing report.

The assigned reviewer for this matter in the Analysis Branch is L. Phillips. In addition, the Plant Systems Branch (DOR) will monitor this matter in order to become knowledgeable about the CPCS. D. Tondi and J. Beard will monitor this matter for the Plant Systems Branch. Management responsibility will be carried out by Operating Reactors Branch No. 4 (DOR).

9. CEA Guide Tube Surveillance Program

License Condition 2.C(3)(1) stipulates that the licensee shall, prior to startup following the first regularly scheduled refueling outage, submit for Commission review and approval the results of a surveillance program conducted on the design modifications to the control element assembly (CEA) guide tubes. This matter is discussed further in Section 4.2.4 of Supplement No. 2 to the SER. The licensee will provide the surveillance program for review at least 90 days prior to shutdown for the first refueling.

The Reactor Safety Branch (DOR) will maintain primary review responsibility for this matter, and will approve the program and prepare the input to a SER on the results of the surveillance program. Management responsibility for this matter will be carried out by Operating Reactors Branch No. 4 (DOR).

10. IE Bulletin No. 79-06

On April 14, 1979, IE Bulletin No. 79-06B was transmitted to the licensee. IE Bulletin No. 79-06B specified certain actions to be taken by the licensee to prevent the occurrence of an event similar to that which occurred at Three Mile Island Nuclear Station, Unit 2 on March 28, 1979.

By letter dated April 24, 1979, the licensee provided its response to IE Bulletin 79-06B. Based on our review to date of the information provided by the licensee, we have concluded that, while we have identified certain areas in which additional action or information is needed, the licensee has correctly interpreted IE Bulletin No. 79-06B. The licensee has stated that no changes to the TS are required at this time in response to the actions required by IE Bulletin 79-06B.

A request for additional information was issued on July 25, 1979, with response requested by August 10, 1979. The assigned project manager is I. Villalva.

On July 26, 1979, IE Bulletin No. 79-06C was transmitted to the licensee. IE Bulletin No. 79-06C specified long and short term actions to be taken in order to alleviate the concern over delayed tripping of the RCPs after a LOCA.

The response to Bulletin 79-06C is not yet available, but will be coordinated by I. Villalva.

Further staff actions required as a result of IE Bulletin 79-06 will be carried out as a joint effort between the Bulletins and Orders Task Force and DOR. Bulletins and Orders Task Force will have primary management responsibility for this item.

11. TMI-2 Generic Review of Operating CE Plants

As a result of the accident at TMI-2, the licensees of plants utilizing Combustion Engineering nuclear steam supply systems have formed an owner's group to address certain TMI-2 related matters such as our request for additional information concerning small break loss-of-coolant accident analyses. Our stipulation for this study is documented in our letter to the licensee dated June 5, 1979. The licensee has advised us that its response to these matters will be provided to us by late July 1979 in order for us to complete our generic evaluation for Combustion Engineering plants.

Further staff actions required as a result of this matter have been assigned to the Bulletins and Orders Task Force. DOR will interface with the Bulletins and Orders Task Force as necessary for any plant specific actions that might be required in the future.

12. EFW Pump Response Time

The licensee submitted a request on July 24, 1979 for a modification to TS Table 3.3-5 relating to emergency feedwater pump response times.

DOR review responsibility will be assigned in accordance with routine procedures. Management responsibility for this matter will be carried out by Operating Reactors Branch No. 4 (ORB#4).

13. Asymmetric Blowdown Loads on Reactor Primary Coolant Systems - PWR

Reactor vessel supports and reactor internals are discussed in the SER pp. 3-17 through 3-19 in Supplement 2 pp. 3-1 and 3-2, and in a submittal from the licensee on January 17, 1978. S. Hosford (E3) is the task coordinator. The Analysis Branch (DSS) is responsible for the site specific comparison between the GENPD-42 vs. CEFLASH-48 models. The task coordinator will inform ORB#4 of the outstanding items concerning this issue prior to August 24, 1979.

Management responsibility for this matter will be carried out by ORB#4.

14. Containment Leak Testing - Appendix J

Appendix J requirements are discussed in the SER p. 6-7; Supplement 2 pp. 6-6 and 6-7; and in the TS pp. 3/4 6-2 through 6-5. Amendment No. 1 to the Operating License NPF-6, issued September 1, 1978, authorized a three year exemption regarding testing of primary containment air locks. G. Arndt (SCSB) is involved in the development of a general exemption regarding containment leak testing which should be resolved prior to the time when the licensee's exemption expires.

DOR review responsibility will be assigned as necessary in accordance with routine procedures. Management responsibility for this matter will be carried out by ORB#4.

15. Diesel Generator Lock-Out (B-1)

A generic letter was issued on November 11, 1977, to which the licensee responded on December 30, 1977. Operating Reactors Branch No. 4 will forward copies of these letters for review to the Power Systems Branch (DSS). An evaluation of this generic issue will be submitted to ORB#4 within 30 days of the receipt of the information.

Management responsibility will be carried out by ORB#4.

16. Inservice Testing - Pumps and Valves

Inservice testing is addressed in the SER p. 3-16, Supplement 2 pp. 5-1 and 5-2, TS 3/4-02, 3/4-03 and 8 3/4 0-3. The Mechanical Engineering Branch (DSS) will maintain primary review responsibility for this matter. DSS will be contracting the review of the licensee's testing program, through the Department of Energy, with the Idaho National Engineering Laboratory (INEL). H. Brammer (MEB) will inform ORB#4 if changes in the status of the review occur and will update the target date for completion as necessary after the contract with INEL has been finalized. As per Supplement 2 p. 5-2, the acceptability of the licensee's program is to be determined prior to the start of facility commercial operation (approx. 9/20 to 9/25/79). Adequate communication is required between all parties aforementioned to insure that timely alternatives are available due to the fact that the contractor's review will not be completed prior to the licensee's commercial operation date.

17. Leakage of Containment Isolation Valves with Resilient Seats

This generic issue (B-20) is based upon IE Circular 77-11 issued in September 1977. The lead engineer on this generic issue is C. Grimes of the Plant Systems Branch (DOR). Action on this issue is being held pending resolution of generic item B-24 relating to venting and purging containments while at full power. Management responsibility will be carried out by ORB#4 when the issue is reopened.

18. PWR Secondary Water Chemistry Monitoring Requirements

This issue is addressed in the SER p. 5-11 and TS pp. 3/4 7-11 through 3/4 7-12. By letter from the Commission dated August 2, 1979, the licensee was requested to submit within 60 days a proposed amendment to license NPF-6 that will include the secondary water chemistry program. The program will be referenced in a condition to the license and will replace the existing TS on secondary water chemistry.

Management responsibility for the modification to the license will be carried out by ORB#4.

19. Pump Support - Lamellar Tearing [Fracture Toughness] (C-6)

A generic letter was issued on December 5, 1977, to which the licensee responded on December 19, 1978. A NUREG will be issued in September 1979 on this generic issue. The licensee's specific review will be performed by a contractor. The Engineering Branch (DOR) is responsible for the supervision of the contract. This generic issue is to be completed by 1982.

Management responsibility will be carried out by ORB#4.

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ENCLOSURE 2

CURRENT STATUS OF GENERIC REVIEW ITEMS

ARKANSAS NUCLEAR ONE, UNIT 2

The current status of the generic review items are listed below. Except for the regulatory guides, the generic review items correspond to those listed in the ONRR Operating Reactors Licensing Summary (DOR Generic Issues).

A. Items which have been resolved and require no further NRC action:

<u>Item</u>	<u>Reference</u>
1. ECCS Evaluation (A-8)	SER p. 6-10; Suppl. 2 pp. 6-7 through 6-9
2. Effluent Treatment Systems (ALARA) (A-2)	SER pp. 12-1 through 12-4
3. Emergency Planning (B-16)	SER pp. 13-3 & 13-4; Suppl. 2 p. 13-1
4. Filter Tech Specs (C-4)	TS pp. 3/4 7-17 through 3/4 7-19
5. Flood of Equipment Important to Safety (B-11)	SER pp. 6-10 & 10-2; Suppl. 2 pp. 6-7 & 6-10
6. Fracture Toughness Requirements Appendix G (A-7)	SER pp. 5-2 & 5-3; Suppl. 2 p. 5-1
7. High Energy Line Break	SER pp. 3-7 through 3-9
8. In-Reactor Growth of CE Poison Rods (B-15)	Suppl. 2 p. 4-1
9. Inservice Inspection of PWR Steam Generator Tubes (B-12)	SER pp. 5-11 & 5-12; TS pp. 3/4 4-6 through 3/4 4-12
10. Qualifications of Radiation Protection Manager (C-3)	SER pp. 13-1 & 13-2; TS pp. 6-1 through 6-5
11. Respiratory Protection Program (A-6)	
12. Steam Generator Feedwater Flow Instability (B-7)	
13. Potential Equipment Failure Associated With Degraded Grid Voltage (B-23)	SER p. 8-2; Suppl. 2, pp. 8-1 & 8-2; NPF-Condition 2.C(3)(0) as modified by Amendment No. 7.

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REGULATORY GUIDES

14. Net Position Suction Head for Emergency Core Cooling and Containment Heat Removal System Pumps (R.G. 1.1) SER pp. 6-4 & 6-9
15. Assumptions Used for Evaluating the Potential Radiological Consequences of a Loss of Coolant Accident for Pressurized Water Reactors (R.G. 1.4) SER p. 2-11
16. Independence Between Redundant Standby (Onsite) Power Sources and Between Their Distribution Systems (R.G. 1.5) SER. pp. 8-1 & 8-3
17. Control of Combustible Gas Concentrations in Containment Following a Loss of Coolant Accident (R.G. 1.7) SER pp. 6-6, 6-7 & 6-15; Suppl. 2, p. 15-6
18. Personnel Selection and Training (R.G. 1.8) SER pp. 13-1 & 13-2
19. Selection of Diesel Generator Set Capacity for Standby Power Supplies (R.G. 1.9) SER pp. 8-1 & 8-3
20. Instrumentation for Earthquakes (R.G. 1.12) SER p. 3-10
21. Spent Fuel Storage Facility Design Basis (R.G. 1.13) SER pp. 3-6, 9-2, 9-3 & 9-4
22. Reactor Coolant Pump Flywheel Integrity (R.G. 1.14) SER pp. 5-9 & 5-10
23. Protection of Nuclear Power Plants Against Industrial Sabotage (R.G. 1.17) SER p. 13-5; Suppl. 2 p. 13-1
24. Structural Acceptance Test for Concrete Primary Reactor Containments (R.G. 1.18) SER p. 3-11

- 25. Comprehensive Vibration Assessment Program for Reactor Internals During Preoperational and Initial Startup Testing (R.G. 1.20) SER p. 4-5
- 26. Measuring, Evaluating, and Reporting Radioactivity in Solid Wastes and Releases of Radioactive Materials in Liquid and Gaseous Effluents from Light-Water-Cooled Nuclear Power Plants (R.G. 1.21) SER pp. 11-5 & 11-6
- 27. Onsite Meteorological Programs (R.G. 1.23) SER pp. 2-11 & 2-12
- 28. Assumptions Used for Evaluating the Potential Radiological Consequences of a Fuel Handling Accident in the Fuel Handling and Storage Facility for Boiling and Pressurized Water Reactors (R.G. 1.25) SER p. 15-17
- 29. Ultimate Heat Sink for Nuclear Power Plants (R.G. 1.27) SER p. 9-6
- 30. Seismic Design Classification (R.G. 1.29) SER pp. 9-2, 9-10 & 10-2
- 31. Criteria for Safety-Related Electric Power Systems for Nuclear Power Plants (R.G. 1.32) SER p. 8-1
- 32. Nonmetallic Thermal Insulation for Austenitic Stainless Steel (R.G. 1.36) SER pp. 6-4, 6-7 & 6-15
- 33. Quality Assurance Requirements for Cleaning of Fluid Systems and Associated Components of Water-Cooled Nuclear Power Plants (R.G. 1.37) SER p. 6-7

34. Preoperational Testing of Redundant On-Site Electric Power Systems to Verify Proper Load Group Assignments (R.G. 1.41) SER p. 8-1
35. Control of the Use of Sensitized Stainless Steel (R.G. 1.44) SER pp. 4-5, 4-6, 5-5, 5-6, 5-7 & 6-14
36. Reactor Coolant Pressure Boundary Leakage Detection Systems (R.G. 1.45) SER p. 5-9
37. Protection Against Pipe Whip Inside Containment (R.G. 1.46) SER pp. 3-7 & 3-8
38. Bypassed and Inoperable Status Indication for Nuclear Power Plant Safety Systems (R.G. 1.47) SER p. 7-19
39. Design Limits and Loading Combinations for Seismic Category I Fluid System Components (R.G. 1.48) SER pp. 3-16 & 5-1
40. Control of Preheat Temperature for Welding of Low-Alloy Steel (R.G. 1.50) SER pp. 3-6 & 5-7
41. Design Basis Floods for Nuclear Power Plants (R.G. 1.59) SER p. 2-13
42. Damping Values for Seismic Design of Nuclear Power Plants (R.G. 1.61) SER p. 3-9
43. Installation of Overpressure Protection Devices (R.G. 1.67) SER pp. 3-17 & 5-2
44. Initial Test Programs for Water-Cooled Reactor Power Plants (R.G. 1.68) SER p. 14-1
45. Assumptions Used for Evaluating a Control Rod Ejection Accident for Pressurized Water Reactors (R.G. 1.77) SER p. 15-11

46. Preoperational Testing of Emergency Core Cooling Systems for Pressurized Water Reactors (R.G. 1.79) SER pp. 6-12 & 14-2; Suppl. 2 p 14-1
47. Inservice Inspection of Pressurized Water Reactor Steam Generator Tubes (R.G. 1.83) SER p. 5-12
48. Code Case Acceptability-ASME Section III Design and Fabrication (R.G. 1.84) SER p. 3-3
49. Code Case Acceptability-ASME Section III Materials (R.G. 1.85) SER p. 3-3
50. Protection of Nuclear Power Plant Control Room Operators Against an Accidental Chlorine Release (R.G. 1.95) SER p. 6-14
51. Methods for Estimating Atmospheric Transport and Dispersion of Gaseous Effluents in Routine Releases from Light Water Cooled Reactors (R.G. 1.111) SER pp. 2-11 & 2-12
52. Fire Protection Guidelines for Nuclear Power Plants (R.G. 1.120) SER p. 9-11
53. Information Relevant to Maintaining Occupational Radiation Exposure as Low as is Reasonably Achievable (Nuclear Power Reactors) (R.G. 3.8) SER p. 12-1
54. Operating Philosophy for Maintaining Occupational Radiation Exposures as Low as is Reasonably Achievable (R.G. 3.10) SER p. 12-1

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- B. Items which have been evaluated in light of current NRC requirements/guidance and which are presently unresolved. Further action by NRC and/or the licensee may be required in the future.

1. ATWS - Long Term Program

A meeting with Combustion Engineering will be held on August 17, 1979 regarding the submittal of an ATWS generic report. The Division of System Safety is responsible for the review and expects to present the generic analysis to the Commission by the spring of 1980. Site Specific requirements should be available by the summer of 1980. A. Thadani (DSS) will prepare the input for resolution of this generic issue. Management responsibility will be carried out by Operating Reactors Branch No. 4.

2. Fuel Rod Bow Effects (DOR Generic Issue 8-13)

This issue is discussed in the SER pp. 4-15 and 4-16 and in Supplement No. 1 pp. 4-1 and 4-2. This facility is the first to use Combustion Engineering's 16 x 16 fuel assemblies. Following the first cycle of operation, reanalyses along with rod bow measurements submitted by the licensee or fuel vendor will be reviewed by the Reactor Safety Branch. Management responsibility will be carried out by Operating Reactors Branch No. 4.

- C. Items which have been evaluated in light of current NRC requirements/guidance and which are unacceptable.

Item

Reference

None

None

- D. Items of which their status needs further review or clarification.

The Division of Operating Reactors will assume primary review responsibility for these items. Management responsibility will be carried out by Operating Reactors Branch No. 4.

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Item

1. Generic Issues (ONRR Operating Reactors Licensing Summary)

- A-2 Appendix I - ALARA
- A-9 Pressure Vessel Beltline Material Surveillance
- A-10 Contingency Planning
- A-11 Guard Training Plans
- A-12 Vital Area Analysis
- B-3 Moderator Dilution
- B-8 PWR HPSI-LPSI Flow Resistance
- B-9 Charging Systems Pipe Vibrations
- B-17 Technical Specifications Surveillance for Hydraulic Snubbers
- B-21 Loss of 125-V DC Bus Voltage With Loss of Annunciation System
- B-22 Technical Specification Surveillance Requirements for Mechanical Snubbers
- B-24 Venting and Purging Containments While at Full Power and Effect on LOCA
- B-26 Inadvertant Safety Injection During Coudown
- B-36 Resistance Temperature Detector (RTD) Response - CE
- B-37 Steam Generator Tube Denting and Support Plate Modifications - CE
- B-39 PWR Pressure-Temperature Limit Technical Specifications
- B-41 Fire Protection - Final Technical Specifications (including SER Supplements)
- C-7 Fuel Handling Accident Inside Containment
- C-12 Boron Solubility During Long Term Cooling Following LOCA
- D-4 PWR Reactor Vessel Cavity Seal Ring Missile Potential
- D-6 Peaking Model Change for CE Reactor Core
- D-8 Deficiency in Chem. Addition to Containment Sprays
- E-1 Spent Fuel Pool Expansions
- E-3 Core Reloads Requiring Prior NRC Approval
- E-6 CEA Position Indication Failures - CE
- E-7 Reactor Protection System Logic - CE
- Cracking in Feedwater Lines - PWR

E. Items which are not applicable to ANO-2.

<u>Item</u>	<u>Reference</u>
1. ATWS - Short Term Program (Cat B BWR's)	-
2. BWR Safety-Relief Valve Surveillance	-
3. ECCS Reevaluation to Account for Increased Vessel Head Fluid Temp	-
4. GE ECCS Input Errors	-
5. Mark I Containment - Short Term Program Technical Specifications	-
6. Mark I Containment Evaluation Long Term Program	-
7. Mark I Safety/Relief Valve Line Restraints in the Torus	-
8. Non-Jet Pump (NJP) BWR Core Spray Cooling Coefficients	-
9. Power Level for RWM Operability	-
10. Pressurizer Heatup Rate-Westinghouse PWR's	-
11. Stress Corrosion Cracking in BWR RCS Pressure Boundary Piping	-
12. Westinghouse Error in Metal-Water Reaction Calculation	-
13. Westinghouse Upper Plenum ECCS Injection - Long Range	-

ENCLOSURE 4

FACILITY SERVICE LIST

POOR ORIGINAL

ARKANSAS NUCLEAR ONE, UNIT 2

DOCKET NO. 50-368

FACILITY OPERATING LICENSE NPF-6

Mr. William Cavanaugh III
Executive Director of
Generation & Construction
Arkansas Power & Light Company
P. O. Box 551
Little Rock, Arkansas 72203

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

Philip K. Lyon, Esq.
House, Holmes & Jewell
1550 Tower Building
Little Rock, Arkansas 72201

Mr. E. H. Smith, Project Engineer
Bechtel Power Corporation
San Francisco, California 94119

Mr. Fred Sernatinger, Project Manager
Combustion Engineering, Inc.
1000 Prospect Hill Road
Windsor, Connecticut 06095

Mr. Charles B. Brinkman, Manager
Washington Nuclear Operations
C-E Power Systems
Combustion Engineering, Inc.
4853 Cordell Avenue, Suite A-1
Bethesda, Maryland 20014

Mr. E. F. Wilson, Director
Bureau of Environmental
Health Services
4815 West Markham Street
Little Rock, Arkansas 72201

Honorable Ernil Grant
Pope County Judge
Pope County Courthouse
Russellville, Arkansas 72801

U. S. Environmental Protection
Agency
ATTN: EIS Coordinator
Region VI Office
1201 Elm Street
Dallas, Texas 75270

Mr. James F. O'Hanlon
General Manager - Arkansas
Nuclear One
P. O. Box 508
Russellville, Arkansas 72801

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ENCLOSURE 5

LICENSEE'S DISTRIBUTION LIST

ARKANSAS NUCLEAR ONE, UNIT 2

DOCKET NO. 50-368

FACILITY OPERATING LICENSE NPF-6

Application, General Information and Safety Analysis Report and Amendments

Mr. E. F. Wilson, Director
Bureau of Environmental Health Services
4815 West Markham Street
Little Rock, Arkansas 72201

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

U. S. Environmental Protection Agency
ATTN: EIS Coordinator
Region VI Office
1201 Elm Street
Dallas, Texas 75270

Environmental Report and Amendments and Supplements
(Numbers in parentheses indicate numbers of copies)

Department of Commerce

Dr. Sidney R. Galler (6)*
Deputy Assistant Secretary for
Environmental Affairs
U. S. Department of Commerce
14th & Constitution, N. W., Rm. 3425
Washington, D. C. 20230

Mr. Robert Ochinerio, Director (1)
National Oceanographic Data Center
Environmental Data Service
National Oceanic and Atmospheric
Administration
U. S. Department of Commerce
Washington, D. C. 20235

*Generic - 13 copies
Amendments - 5 copies

Department of Interior

Mr. Bruce Blanchard, Director (18)
Office of Environmental Projects
Review, Room 5321
U. S. Department of Interior
18th & C Streets, N. W.
Washington, D. C. 20240

cc: (Transmittal letter only)
Chief
Division of Ecological Services
Bureau of Sport Fisheries &
Wildlife
U. S. Department of Interior
18th & C Streets, N. W.
Washington, D. C. 20240

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Department of HEW

Mr. Charles Custard, Director (2)
Office of Environmental Affairs
U. S. Department of Health, Education
and Welfare, Room 4740
330 Independence Avenue, S. W.
Washington, D. C. 20201

Federal Power Commission

Chief (1)
Bureau of Power
Federal Power Commission, Rm. 5100
825 North Capitol Street, N. E.
Washington, D. C. 20426

Federal Power Commission, Rm. 6100 (1)
825 North Capitol Street, N. E.
Washington, D. C. 20426

Department of Transportation

(Transmittal letter only)
Office of Environmental Affairs
U. S. Department of Transportation
400 7th Street, S. W., Rm. 10101
Washington, D. C. 20590

cc: (Transmittal letter only)
Captain William R. Riedel
Water Resources Coordinator
W/S 73 U.S.C.G., Room 7306
U. S. Department of Transportation
400 7th Street, S. W.
Washington, D. C. 20590

Environmental Protection Agency

Mr. Tom J. Sharpe (1)
Division of Applied Technology
Office of Air Programs
U.S. Environmental Protection Agency
Research Triangle Park
Durham, North Carolina 27711

Environmental Protection Agency
(Cont'd)

Mr. Devereaux Barnes (1)
Effluent Guidelines Division
U.S. Environmental Protection Agency
Waterside Mall, Rm. 905 E. Tower
401 M Street, S. W.
Washington, D. C. 20460

Ms. Geraldine Werdig (1)
Environmental Evaluation Branch
Office of Water Programs
U.S. Environmental Protection Agency
Waterside Mall, Rm. 2818 E. Tower
401 M Street, S. W.
Washington, D. C. 20460

Dr. Bern Kahn (1)
Radiochemistry & Nuclear Engineer
Division
National Environmental Research Center
U.S. Environmental Protection Agency
Cincinnati, Ohio 45268

Mr. Bruce Mann (1)
National Environmental Research Center
U.S. Environmental Protection Agency
P. O. Box 15027
Las Vegas, Nevada 89114

Mr. Ellery Savage (1)
Eastern Environmental Radiation Facility
U.S. Environmental Protection Agency
P. O. Box 3009
Montgomery, Alabama 36109

Mr. Neil Thomasson (1)
ATTN: Loretto Long
Office of Radiation Programs
U.S. Environmental Protection Agency
Waterside Mall, Rm. 647A E. Tower
401 M Street, S. W.
Washington, D. C. 20460

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Environmental Protection Agency
(Cont'd.)

(Coastal - salt water - only)
Dr. Eric D. Schneider, Director (1)
National Marine Water Quality Laboratory
U.S. Environmental Protection Agency
South Ferry Road
Narragansett, Rhode Island 02882

EPA Regional Office

U. S. Environmental Protection Agency
ATTN: EIS Coordinator
Region VI Office
1201 Elm Street
Dallas, Texas 75270

Advisory Council on Historic Preservation

Mr. Robert Garvey, Executive Director (1)
Advisory Council on Historic Preservation
1522 K Street, N. W., Suite 430
Washington, D. C. 20005

cc: (Transmittal letter only)
Director
Department of Natural and Cultural Heritage
The Old Stone House
300 West Markham
Little Rock, Arkansas 72201

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ENCLOSURE 6

RELEVANT DOCUMENTS

ARKANSAS NUCLEAR ONE, UNIT 2

DOCKET NO. 50-368

FACILITY OPERATING LICENSE NPF-6

The documents listed below are relevant to plant operations subsequent to the issuance of NPF-6. They will be provided to the Operator Licensing Project Manager, Operating Reactors Branch No. 4, on the date of the transfer memorandum.

1. FSAR (Vols. I-IX) as revised through Amendment 46.
2. SER, NUREG-0308 (November, 1977)
 - (a) Supplement No. 1 (June 1978)
 - (b) Supplement No. 2 (September, 1978)
3. Fire Protection SER, NUREG-0223 (August, 1978)
4. Operating License NPF-6 and Amendments 1 through 12 thereto (July 18, 1978 to date of transfer memorandum), Vol. 1.*
5. Plant Technical Specifications, Appendices A & B, and Amendments 1 through 12 thereto, Vol. 2.*
6. Correspondence:
 - (a) Licensee to NRC (August 30, 1978 to November 30, 1978), Vol. 3.*
Licensee to NRC (December 11, 1978 to date of transfer memorandum), Vol. 4.*
 - (b) NRC to Licensee (September 29, 1978 to date of transfer memorandum), Vol. 5.*
 - (c) Interoffice Memoranda (August 31, 1978 to date of transfer memorandum), Vol. 7.*
 - (d) Inspection & Enforcement Reports (August 11, 1978 to date of transfer memorandum), Vol. 8.*

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- (e) Licensee Construction Deficiency Reports (August 29, 1978 to date of transfer memorandum), Vol. 9.*
- (f) Licensee Event Reports (August 30, 1978 to date of transfer memorandum), Vol. 10.*
- (g) Monthly Operating Reports (August 30, 1978 to date of transfer memorandum), Vol 11.*

*Notebook volume numbers

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JUN 25 1979

Docket No. 50-368

MEMORANDUM FOR: Dominic B. Vassallo, Acting Director for
Division of Project Management

FROM: Daniel R. Muller, Acting Director for
Division of Site Safety and Environmental Analysis

SUBJECT: TRANSFER OF ARKANSAS NUCLEAR ONE, UNIT 2, TO OPERATING
REACTORS BRANCH 4

We understand that you are planning to transfer Arkansas Nuclear One, Unit 2, from DPH to DOR. This memorandum should be attached as an enclosure to your transfer memorandum to effect transfer of the environmental review responsibility from Environmental Projects Branch 2 to Operating Reactors Branch 4. This transfer of environmental responsibility is to be effective as of the date of your transfer memo.

The only item remaining to be completed on this project is a request for change to the environmental technical specifications dated May 10, 1979, which we will complete.

At the time of transfer of responsibility, I&E, OMPA, and others on the distribution for this memo should be notified of the following changes:

	<u>From</u>	<u>To</u>
Environmental Project Manager	D. Scaletti	G. Vissing
Branch Chief	D. Sells	R. Reid
Assistant Director	W. Regan	W. Garmill
Licensing Assistant	M. Duncan	R. Ingram

Original signed by
Daniel R. Muller

Daniel R. Muller, Acting Director for
Division of Site Safety and
Environmental Analysis

POOR ORIGINAL

DUPLICATE

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