



ARKANSAS POWER & LIGHT COMPANY

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November 9, 1984

ØCAN1184Ø3

Mr. Darrell G. Eisenhut, Director
Division of Licensing
Office of Nuclear Reactor Regulation
U. S. Nuclear Regulatory Commission
Washington, DC 20555

SUBJECT: Arkansas Nuclear One - Units 1 & 2
Docket Nos. 50-313 and 50-368
License Nos. DPR-51 and NPF-6
NUREG-0737 Supplement 1 Update

Gentlemen:

On April 15, 1983, in our letter ØCANØ48312, AP&L submitted to the NRC our response to NUREG-0737 Supplement 1 (Generic Letter 82-33). Subsequent to that letter, updates were provided regarding our progress on October 20, 1983 (ØCAN1Ø83Ø5), and April 30, 1984 (ØCAN9484Ø6). This letter is provided to update you regarding our present status and to briefly describe the tasks performed over the previous six months. The attached figure is a revised version of the Integrated Implementation Plan (Figure 2-2), of our April 15, 1983 response. The shaded boxes indicate tasks which have been completed. A brief summary of our progress in each of the topic areas is presented below.

Control Room Design Review

AP&L submitted the Control Room Design Review (CRDR) program plan for Arkansas Nuclear One, Units 1 and 2, on November 25, 1983, in our letter ØCAN11831Ø. The actual review effort began in February, 1984. In response to a request by the NRC in a letter dated March 6, 1984 (ØCNAØ38415), AP&L provided additional details regarding the schedule, scope and preliminary results of the CRDR program during a meeting with the NRC staff in Bethesda, Maryland on May 2, 1984. A summary of this meeting was documented in Mr. Guy Vissing's letter to AP&L dated June 7, 1984. Subsequent to that meeting, the NRC issued confirmatory orders on June 14, 1984 (ØCNAØ68421), which confirmed the previously committed schedules to submit the ANO-1 Final Summary Report to the NRC by August 14, 1985, and the ANO-2 Final Summary Report by May 5, 1986.

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The review phase of the ANO-1 CRDR program consisting of control room inventory, operating experience review, task analysis, verification and validation has been completed. The assessment phase of the program began in early October. The review phase resulted in the identification of approximately 400 human engineering discrepancies (HEDs), several of which are the subject of previously planned control room design changes. The ANO-1 CRDR program remains on schedule for submittal of the Final Summary Report to the NRC by August 14, 1985.

The ANO-2 CRDR program is well underway with activities currently taking place on the operating experience review and control room inventory. The ANO-2 effort is on schedule for submittal of the Final Summary Report to the NRC by May 5, 1986.

Regulatory Guide 1.97

On June 25, 1984, AP&L submitted the ANO-1 Regulatory Guide 1.97 position document in letter 1CAN068402. The ANO-2 position document was submitted on April 13, 1984 in letter 2CAN948404. The planned modification schedules for each unit were provided in the submittals. Recent work on Regulatory Guide 1.97 has been concentrated on preparing design change packages for the current 1R6 refueling outage and the upcoming 2R4 refueling outage (scheduled to begin in March, 1985). Currently all planned modifications related to Regulatory Guide 1.97 are on schedule.

In accordance with the June 25 and April 13, 1984 letters, the documentation of environmental qualification of Category 1 and 2 installed instrumentation is being reviewed. As a result of that review, it has been determined that certain electrical equipment associated with the ANO-1 subcooling margin monitor may not have sufficient documentation to demonstrate full compliance with the current environmental qualification requirements. Therefore, as committed in the June 25, 1984 letter, the subject equipment will be replaced during the 1R7 refueling outage.

As a result of further review of the ANO-2 Regulatory Guide 1.97 position document dated April 13, 1984, some editorial corrections are identified as follows:

- Table 1, Page 8 - A schedule for complying with the committed instrumentation upgrade for Safety Injection Tank Level was inadvertently omitted. The schedule is 2R5.
- Table 1, Page 9 - The Regulatory Guide 1.97 Variable Recommendation column for RCP status, Motor Current, incorrectly shows Category 1. This is changed to Category 3 in accordance with Regulatory Guide 1.97.
- Table 1, Page 10 - A schedule for Quench Tank Temperature variable upgrade was shown as 2R4. Since no modifications are planned for this variable (i.e., it currently complies with Regulatory Guide 1.97), the schedule is deleted.

- Table 1, Page 17 and 18 - The variables of Wind Direction, Wind Speed and Estimated Atmospheric Stability are shown as having recorders in the control room in addition to being displayed on the GERMS computer. This statement is being clarified to state that the control room recorders are located in Unit 1 while the GERMS computer has CRTs located in both Unit 1 and Unit 2.
- Table 1, Page 5 - The variables of Radioactivity Concentration or Radiation Level in Circulating Primary Coolant and Analysis of Primary Coolant are shown as being displayed in the control room on the GERMS computer CRTs. While this information can be displayed on the GERMS computer CRTs, it is not AP&L's intent to use GERMS for this purpose, nor have the plant operators been trained on this use of GERMS. Therefore, primary reliance on information regarding these variables will be by verbal communications between the plant operators and radiochemistry personnel. This is consistent with the AP&L submittal on NUREG-0737 Item II.B.3, Post-Accident Sampling.

The above editorial corrections have been incorporated into revised pages for the April 13, 1984 submittal and are attached for your use.

Emergency Operating Procedures (ANO-2)

The major portions of the ANO-2 Technical Guidelines and the EOP have been drafted and are currently undergoing review. Verification of the EOP is currently underway. Validation will begin upon completion of the verification process. Validation of the EOP is expected to be complete within the next six months. Operator conceptual training on the EOP is underway and formal classroom training on the final EOP is tentatively scheduled to begin in February, 1985.

AP&L letter ~~ØCANØ7841Ø~~ dated July 17, 1984, indicated that the ANO-2 plant-specific technical guidelines would be available for NRC review by November 1, 1984. As discussed verbally with the NRC staff on October 23, 1984, based on the current EOP development progress the ANO-2 technical guidelines will not be available for NRC review until approximately November 30, 1984. This revised date is in accordance with the original schedule submitted on April 15, 1983 and as confirmed in the NRC confirmatory order dated June 14, 1984.

Safety Parameter Display System/Emergency Response Facility

The ANO-1 SPDS was declared operational with existing parameters on January 9, 1984, and the Safety Analysis Report was submitted to the NRC on June 27, 1984 (~~1CANØ684Ø3~~). The ANO-2 SPDS was declared operational with existing parameters on June 1, 1984, and the Safety Analysis Report was submitted to the NRC on April 30, 1984. These dates are all in accordance with the NRC confirmatory order issued on June 14, 1984.

Mr. Darrell G. Eisenhut

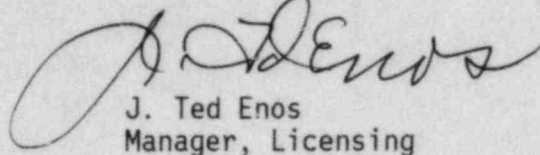
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November 9, 1984

The Primary and Secondary Technical Support Center (PTSC and STSC) SPDS terminals were declared operational with existing parameters on June 1, 1984.

This concludes our update. Another update is scheduled for submittal in April, 1985.

Very truly yours,

A handwritten signature in cursive script, appearing to read "J. Ted Enos".

J. Ted Enos
Manager, Licensing

JTE/GGY/ac

Attachments

TABLE 1
AP&L RESPONSE TO RG1.97

ANO-2

VARIABLE RECOMMENDED PER RG1.97 (REV. 3)	CATEGORY	RANGE	REDUNDANCY	POWER SUPPLY	CR DISPLAY	SPDS	SCHEDULE	COMMENTS
<u>TYPE "C" VARIABLES</u>								
Core Exit Temp 200 ^o to 2300 ^o F (Cat. 1)	---	---	---	---	---	---	---	See previous listing on page 3.
Radioactivity Concentration or Radiation Level in Circulating Primary Coolant 1/2 Tech Spec Limit to 100 Times Tech Spec Limit (Cat. 1)	3	10 ⁻⁴ uCi/gm to 10 Ci/gm	N/A	OP	N/A Communication with Radiochemistry Personnel	No	---	Complies; see Table 2, Note 11.
Analysis of Primary Coolant (Gamma Spectrum) 10uCi/ml to 10 Ci/ml or TID-14844 Source Term in Coolant Volume (Cat. 3)	3	10 ⁻⁴ uCi/ml to 10Ci/ml	N/A	OP	N/A Communication with Radiochemistry Personnel	No	---	Complies; see Table 2, Note 11
RCS Pressure 4000 psig (for CE Plants) (Cat. 1)	---	---	---	---	---	---	---	See previous listing on Page 1.
Containment Pressure -5 psig to Design Pressure (Cat. 1)	---	---	---	---	---	---	---	See previous listing on Page 4.

TABLE 1

AP&L RESPONSE TO RG1.97

PAGE 8ANO-2

VARIABLE RECOMMENDED PER RG1.97 (REV. 3)	CATEGORY	RANGE	REDUNDANCY	POWER SUPPLY	CR DISPLAY	SPDS	SCHEDULE	COMMENTS
<u>TYPE "D" VARIABLES</u>								
RHR System Flow 0-110% Design Flow (Cat. 2)	2	0-8000 GPM (Design= 3100 GPM)	N/A	DG	1 Indicator	Yes	---	Complies
RHR Heat Exchanger Outlet Temp 32 ^o -350 ^o F (Cat. 2)	2	0-400 ^o F	N/A	DG	2 Indicators (1/Containment Spray Line)	Yes	---	Complies
Safety Injection Tank (Accumulator) Level Bottom to Top (Cat. 2)	2	8.75%-91.25% (Bottom to Top)	N/A	DG	4 Indicators (1/Tank)	Yes	2R5	Will Comply; see Table 2, Note 15.
Safety Injection Tank Pressure; 0-750 psig (Cat. 2)	3	0-700 psig	N/A	DG	4 Indicators (1/Tank)	Yes	---	Complies; see Table 2, Note 16.
Safety Injection Tank (Accumulator) Isol. Valve Position Closed/Not Closed (Cat. 2)	2	Closed/ Not Closed	N/A	1E	8 Lights (2/Valve)	No	---	Complies

TABLE 1

AP&L RESPONSE TO RGI.97

PAGE 9

ANO-2

VARIABLE RECOMMENDED PER RGI.97 (REV. 3)	CATEGORY	RANGE	REDUNDANCY	POWER SUPPLY	CR DISPLAY	SPDS	SCHEDULE	COMMENTS
Boric Acid Charging Flow 0-110% Design Flow (Cat. 2)	2	0-150 GPM Design=132 GPM	N/A	DG	1 Indicator	Yes	---	Complies
Flow in HPI System 0-110% Design Flow (Cat. 2)	2	0-875 GPM (Design= 320 GPM)	N/A	DG	2 Indicators (1/HPI Loop)	Yes	---	Complies
Flow in LPI System 0-110% Design Flow (Cat. 2)	2	0-8000 GPM (Design= 5100 GPM)	N/A	DG	1 Indicator	Yes	---	Complies
Residual Water Storage Tank Level Top to Bottom (Cat. 2)	1	5.25-94.75% (Bottom to Top)	Yes (4 Channels)	1E	4 Indicators 1 Recorder	Yes	---	Complies
RCP Status Motor Current (Cat. 3)	3	0-600 amps	N/A	OP	4 Meters (1/Pump)	Yes (Planned)	---	Complies
Primary System Safety Relief Valve Positions (Including PORVs and Code Valves) or Flow Through or Pressure in Relief Valve Lines Closed/Not Closed (Cat. 2)	2	Closed/ Not Closed	N/A	DG	2 Indicators (1/Safety Valve)	Yes	---	Complies

TABLE 1

AP&L RESPONSE TO RGL.97

PAGE 10ANO-2

VARIABLE RECOMMENDED PER RGL.97 (REV. 3)	CATEGORY	RANGE	REUNDANCY	POWER SUPPLY	CR DISPLAY	SPDS	SCHEDULE	COMMENTS
Pressurizer Level Top to Bottom (Cat. 1)	1	3%-95% (Top to Bottom)	Yes (2 Channels)	1E	2 Indicators (Redundant)	Yes	2R6	Will comply; see Table 2, Note 17.
Pressurizer Heater Status Electric Current (Cat. 2)	2	Electric Current	N/A	DG	CRT (SPDS)	Yes	2R5	Will comply; see Table 2, Note 18.
Quench Tank Level Top to Bottom (Cat. 3)	3	5-95% (Top to Bottom)	N/A	DG	1 Indicator	Yes	---	Complies
Quench Tank Temp 50-750°F (Cat. 3)	3	0-300°F	N/A	DG	1 Indicator	Yes	---	Complies; see Table 2, Note 19.
Quench Tank Pressure 0 to Design Pressure (Cat. 3)	3	0-100 psig Design=100 psig	N/A	DG	1 Indicator	Yes	---	Complies
Steam Generator Level from Tube Sheet to Separators (Cat. 1)	---	---	---	---	---	---	---	See previous listing on Page 1.
Steam Generator Pressure from Atmospheric Pressure to 20% Above the Lowest Safety Valve Setting (Cat. 2)	---	---	---	---	---	---	---	See previous listing on Page 1.

TABLE 1

AP&L RESPONSE TO RGL.97

PAGE 17

ANO-2

VARIABLE RECOMMENDED PER RGL.97 (REV. 3)	CATEGORY	RANGE	REDUNDANCY	POWER SUPPLY	CR DISPLAY	SPDS	SCHEDULE	COMMENTS
Plant and Environs Radiation; 3 10^{-3} R/hr to 10^4 R/hr, Photons; 10^{-3} RADS/HR to 10^4 RADS/HR, Beta Radi- ations and Low-Energy Photons (Portable Instrumentation)		$10E^{-3}$ R/hr to $10E^3$ R/hr Photons; 10^{-3} RADS/hr to 50 RADS/hr	N/A	N/A	N/A	N/A	---	Complies; see Table 2, Ncte 33.
Plant and Environs Radio- activity (Portable instru- mentation) (Isotopic Analysis) (Cat. 3)	3	Isotopic Analysis	N/A	N/A	N/A	N/A	---	Complies; see Table 2, Note 34.
Wind Direction 0-360 ⁰ (+ 5 ⁰ accuracy with a deflection of 10 ⁰). Starting speed < 1 mph; damping ratio >0.4; distance constant less than or equal to 2 meters. (Cat. 3)	3	0-360 ⁰ + 1/2% Full Scale; Starting Speed - .75 mph; damping ratio - .6; distance constant - 1 m.	N/A	OP	1 Recorder in ANO-1 CR CRT (GERMS Computer)	No	---	Complies
Wind Speed 0-50 mph (+ .5 mph accuracy for wind speeds < 5 mph, 10% for speeds > 5 mph, with a starting threshold < 1 mph and a distance constant not to exceed 2 meters (Cat. 3)	3	0-100 mph accuracy greater of + 1% or + 0.15 mph; starting threshold - 0.6 mph; distance constant - 5 ft.	N/A	OP	1 Recorder in ANO-1 CR CRT (GERMS Computer)	No	---	Complies