UNITED STATES
ATOMIC ENERGY COMMISSION
DIRECTORATE OF REGULATORY OPERATIONS
REGION II - SUITE 818
230 PEACHTREE STREET, NORTHWEST
ATLANTA, GEORGIA 30303

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RO Inspection Report No. 50-313/73-5

Licensee: Arkansas Power and Light Company
Sixth and Pine Streets
Pine Bluff, Arkansas 71601

Facility Name: Arkansas Nuclear One, Unit 1
Docket No.: 50-313
License No.: CPPR-57
Category: B1

Location: Russellville, Arkansas

Type of License: B&W, PWR, 880 Mwe

Type of Inspection: Routine, Unannounced

Dates of Inspection: April 10-13, 1973

Dates of Previous Inspection: March 6-9, 1973
March 20-21, 1973

Principal Inspector: M. S. Kidd, Reactor Inspector
Facilities Test and Startup Branch

Accompanying Inspector: K. W. Whitt, Reactor Inspector
Facilities Test and Startup Branch

Other Accompanying Personnel: C. E. Murphy, Acting Chief
Facilities Test and Startup Branch

Principal Inspector: C E Murphy for 5/11/73
M. S. Kidd, Reactor Inspector Date
Facilities Test and Startup Branch

Reviewed by: C E Murphy 5/14/73
C. E. Murphy, Acting Chief, Facilities Test and Startup Branch Date

SUMMARY OF FINDINGS

I. Enforcement Action

A. Violations

1. Criterion V of Appendix B to 10 CFR 50 states, in part, "Activities affecting quality shall be prescribed by documented instructions, procedures . . . and shall be accomplished in accordance with these instructions, procedures, ..."

Contrary to the above, three examples of procedure violation were noted during the review of the test results of TP204.02, "Reactor Building Spray System Electrical Test." The examples of violation are as follows:

a. The use of jumpers was not logged as required by OP 1004.09, "Plan for Preoperational Testing." (Details II, paragraph 3.a)

b. A portion of the test procedure was deleted without the proper approval as required by OP 1004.09, "Plan for Preoperational Testing." (Details II, paragraph 3.b)

c. The test procedure was not followed during the performance of certain portions of the test. (Details II, paragraph 3.c)

2. Paragraph (2) of 10 CFR 50.55(e) states, "The holder of a construction permit shall promptly notify the appropriate Atomic Energy Commission Regional 'Regulatory Operations' Office of each reportable deficiency."

Contrary to the above, RO:II was not promptly notified of a reportable construction deficiency found in the reactor building spray system on March 27, 1973. (Details I, paragraph 9)

B. Safety Items

None

II. Licensee Action on Previously Identified Enforcement Matters

A. Violations

Gaseous Radwaste Tank Volumes

Evaluation of the problem of waste gas decay and purge tanks which were constructed smaller than FSAR specifications was being conducted by Bechtel Corporation (Bechtel). (Details I, paragraph 3)

B. Safety Items

There were no previously identified safety items.

III. New Unresolved Items

73-5/1 Reactor Building Ventilation System Tests

Test procedures for the reactor building ventilation and purge systems do not appear to test certain functional requirements and capabilities of the systems described in the FSAR. (Details I, paragraph 10)

73-5/2 Core Flood System Flow Rate Test

The licensee does not plan to perform a flow rate test on the core flood system which would demonstrate reflood capabilities discussed in the FSAR. (Details I, paragraph 11)

IV. Status of Previously Reported Unresolved Items

72-6/1* Onsite Training Program

The formal classroom-type training program is almost complete. This item is resolved. (Details I, paragraph 4)

72-6/2* Staffing Commitments

One waste control operator is needed to fulfill FSAR requirements. (Details I, paragraph 2)

72-9/1* Incorporation of All Safety Related Equipment in the FSAR Q-List

Not inspected.

72-9/2* Documentation of Station Test Coordinator's (STC) Prerequisite Duties in the Conduct of Tests

Documentation has been implemented per the Unit 1

Plan For Preoperational Testing (Plan). This item is resolved. (Details I, paragraph 5)

72-9/3* Preparation of Test Procedures to Cover Tests in "Guide to Planning of Preoperational Test Programs"

The licensee plans to test safety related systems which contain pneumatic devices under loss of air conditions. (Details I, paragraph 6)

73-1/1 Lack of Implementing Procedure For Use of Jumpers and Bypasses

This procedure has been written and is in the review process. (Details I, paragraph 7)

73-1/2 Comments on Core Flood Functional Test Procedure

The inspector's comments on this procedure have been resolved. (Details I, paragraph 8)

73-3/1 Completion of Construction of Radwaste Systems

Not inspected.

V. Unusual Occurrences

Reactor Building Spray Piping Crack

With the reactor building spray system filled with water in preparation for a hydro test, a crack was found in an eight-inch section of piping in the heat affected zone adjacent to a circumferential shop weld. A construction deficiency report will be submitted by the licensee. (Details I, paragraph 9)

VI. Other Significant Findings

Project Status

Licensee personnel estimate construction of Unit 1 to be 97% complete. Of the 75 startup systems, 32 have been completely released, 33 partially released, and 10 have no releases. Core loading is now scheduled for November 1, 1973.

*These numbers are assigned for the first time in this report.

VII. Management Interview

A. A management interview was held at the conclusion of the inspection April 13, 1973. The following persons attended:

Arkansas Power and Light Company (AP&L)

J. W. Anderson - Plant Superintendent
R. R. Culp - Test Administrator
C. A. Moore - Procedure Administrator
D. N. Bennett - Quality Control Engineer
C. L. Bean - Quality Assurance Engineer - Mechanical

B. These subjects were discussed by Kidd.

1. Staffing

The inspector stated that it was his understanding that one waste control operator had been hired since the previous inspection and that the remaining waste control operator position was expected to be filled within two weeks.

A licensee representative stated that this information was correct. (Details I, paragraph 2)

2. Onsite Training Program

The inspector stated that it was his understanding that the formal training program had been completed with the exception of four sessions on procedures and that these would be covered when the procedures were approved.

Licensee representatives confirmed this understanding.

The inspector stated that this item was considered resolved. (Details I, paragraph 4)

3. Waste Gas System Tank Volumes

The inspector asked when AP&L's evaluation of the waste gas system tank volumes problem would be complete.

Licensee representatives stated that an evaluation was to be received from Bechtel shortly and that

solutions would be addressed in their response to the notice of violation.[1/] (Details I, paragraph 3)

4. Documentation of STC's Prerequisite Test Duties

The inspector stated that he had reviewed Revision 2 of the Plan which provides for this documentation and also had witnessed use of the form used by the STC. He also stated that this item was considered resolved. (Details I, paragraph 5)

5. Preparation of Preop Test Procedures

The inspector stated that it was his understanding that all pneumatic valves in safety systems except six are presently scheduled to be tested under loss of air conditions and that provisions are to be made for the remaining six.

Licensee representatives stated that this was correct and that Bechtel had been requested to make provisions in appropriate procedures for testing the remaining six valves. They stated that these provisions would be completed by May 1, 1973. (Details I, paragraph 6)

6. Implementing Procedure For Use of Jumpers and Bypasses

Licensee representatives confirmed the inspector's understanding that this procedure had been written and stated that it would be approved in four to six weeks. (Details I, paragraph 7)

7. Comments on Core Flood Functional Test Procedure

The inspector stated that review of the revised procedure revealed that his comments had been resolved and, therefore, this item was considered closed. (Details I, paragraph 8)

8. Reactor Building Spray System Piping

The inspector stated that the discovery of a

1/ See RO Report No. 50-313/73-3, Details II, paragraph 3.

crack adjacent to a weld in a portion of the reactor building spray system piping appeared to be a reportable construction deficiency per 10 CFR 50.55(e). The inspectors stated that RO's positions in regards to the timeliness of reporting such deficiencies is that "promptly" as used in 10 CFR 50.55(e)(2) means within 24 hours of the discovery of the deficiency. They also noted that failure to notify the RO regional office within this time period is in violation of the referenced regulation.

Licensee representatives disagreed with the definition of "promptly" and stated that their plans for reporting this deficiency would be discussed with RO:II by telephone the following week. The inspectors were informed by telephone April 17, 1973, that this item would be reported as a potential construction deficiency. (Details I, paragraph 9)

9. Reactor Building Ventilation System Test

The inspector stated that his review of TP-160.34, "Heating and Ventilation System - Reactor Building," revealed that certain functional requirements and capabilities of the system described in the FSAR were not tested, such as valve closing times and radiation interlocks.

Licensee representatives stated that it was their intention to test such functions.

The inspector stated that this matter would be carried as an unresolved item and would be reviewed again along with testing of other engineered safeguards equipment. (Details I, paragraph 10)

10. Core Flood Flow Rate Test

The inspector stated that it was his understanding that AP&L was not planning a flow rate test on the core flood system which would demonstrate reflood capabilities.

Licensee representatives stated that they thought this was a first-of-a-kind test and that tests on the first Babcock and Wilcox Company (B&W) system would suffice, but that it might be possible to use

results of a functional test to demonstrate the necessary capability.

The inspectors stated that a meaningful flow rate test would be required and that this matter would be carried as an unresolved item. (Details I, paragraph 11)

11. Emergency Operating Procedures

The inspector stated that his review of certain draft emergency procedures indicated that a format similar to the one recommended by ANS 3.2 was being used. He presented one comment on the procedures, stating that the procedures or the procedural system should state explicity that verification of automatic actions includes performing the actions manually if the automatic actions have failed to take place.

A licensee representative stated that this comment would be studied.

The inspector asked what AP&L's plans were in regard to writing procedures to cover the following conditions:

a. Loss of instrument air,

b. Loss of condenser vacuum,

c. Loss of containment integrity,

d. Loss of service water,

e. Loss of flux indication,

f. Expected transients,

g. Malfunction of integrated control system,

h. Emergency shutdown,

i. Emergency boration, and

j. Malfunction of pressure relief valves.

A licensee representative stated that plans were to write an emergency procedure for each condition which

represents an emergency at the station or determine that another procedure covers it. For these conditions which would not be a true emergency, an alarm procedure would be written. (Details I, paragraph 12)

12. Alarm Procedures

The inspectors noted that no alarm procedures had been written and asked what AP&L's schedule was for writing them.

A licensee representative stated that these were scheduled to be written by September 1973. (Details I, paragraph 13)

13. Operating Procedures

The inspector stated that comments on two approved operating procedures had been given to an AP&L staff member, who had resolved most of the comments but would need to take further action in selected areas.

In discussion of which procedures are considered nonroutine and would be provided some type of checklist for the operator's use, licensee representatives stated that checklists had already been provided for several procedures. (Details I, paragraph 14)

14. Zero Power and Power Ascension Test Programs

The inspector stated that he and a member of the licensee's staff had compared AP&L's test listing to the "Guide For The Planning of Initial Startup Programs." He asked that AP&L obtain more information regarding the scope of certain of their tests.

Licensee personnel stated that they would try to have the information by the next RO inspection. (Details I, paragraph 15)

15. Effectiveness of Procedure Reviews

The inspector stated that RO:II was concerned that the test procedures currently being approved by AP&L contain the same types of deficiencies as those approved almost a year ago and cited several examples.

Licensee representatives stated that this was not a fair assessment based on the limited examples discussed, most of which involved one procedure. (Details I, paragraph 18)

C. The following subjects were discussed by Whitt.

1. Comments on Test Procedures

The inspector stated that he had reviewed six approved test procedures and had discussed his comments on each with the station test administrator. He said the station test administrator had agreed to give the comments suitable consideration and to advise him of the licensee's resolution of each at a later date and in consideration of this agreement, he did not wish to discuss these comments further at this time. (Details II, paragraph 2)

2. Comments on Completed Test

The inspector further stated that he had reviewed the completed test results of TP 204.02, "Reactor Building Spray System Electrical Test." He said he had also discussed his comments resulting from this review with the station test administrator, but that he wished to discuss four of the more significant ones further at this time. Three of the comments concerned activities appearing to be in violation of Appendix B to 10 CFR 50 as follows:

a. The use of jumpers was not logged in the bypass and jumper log as required by OP 1004.09," Plan for Preoperational Testing." (Details II, paragraph 3.a)

b. A portion of the test procedure was deleted without the proper approval as required by OP 1004.09," Plan for Preoperational Testing." (Details II, paragraph 3.b)

c. The test procedure was not followed during the performance of certain portions of the test. (Details II, paragraph 3.c)

A licensee management representative stated that he did not wish to respond to any of these three items at this time, but preferred rather to respond in writing after the letter of violation had been received.

The fourth comment concerned the use of pencil for recording official data and signoff verifications in test procedures. The inspector stated that pencils had been used in TP 204.02 for these purposes and said that this was considered by Regulatory Operations, Region II, to be poor practice at best. He then asked for a licensee position regarding the practice.

A licensee management representative stated that some time was needed to consider the matter, and that the licensee would inform the inspector of its position later.

DETAILS I

Prepared by: [signature] 5/9/73
M. S. Kidd, Reactor Inspector, Facilities Test and Startup Branch — Date

Dates of Inspection: April 10-13, 1973

Reviewed by: [signature] 5/9/73
C. E. Murphy, Acting Chief, Facilities Test and Startup Branch — Date

1. Individuals Contacted

Arkansas Power and Light Company (AP&L)

J. W. Anderson - Plant Superintendent
G. H. Miller - Assistant Plant Superintendent
D. N. Bennett - Quality Control Engineer
N. A. Moore - Chief Quality Assurance Coordinator
R. R. Culp - Test Administrator
C. A. Moore - Procedure Administrator
B. A. Tervilliger - Operations Supervisor
C. A. Halbert - Technical Support Engineer

2. Staffing

A third waste control operator had been hired since the previous inspection. An offer for the last waste control operator position to be filled has been accepted and the new operator was expected to be onsite within two weeks. The addition of this operator will satisfy the minimum staffing requirements of the FSAR.

3. Gaseous Radwaste System Tank Volumes

The inspector was informed that as a result of the discrepancies found in tank volumes in the gaseous radioactive waste system,[1/] AP&L reviewed all radwaste component nameplate data and compared it to Table 11.6 of the FSAR. Other differences were found. These are to be discussed in the reply to the notice of violation on this matter.

In order to overcome the problem of reduced holdup capability in the waste gas decay tanks, the pressure ratings of the tanks and waste gas compressor will be increased.

1/ See RO Report No. 50-313/73-3, Details II, paragraph 3.

4. Onsite Training Program

The inspector was informed that the formal training program started January 8, 1973,[1] had been completed with the exception of four sessions involving procedures. These sessions will be conducted when the procedures are approved.

AP&L plans to give operator candidates written exams on the subjects already covered in April and B&W will give simulated cold license exams in August.

This matter was discussed in the management interview at which time the inspector stated that he had no further questions.

5. Documentation of the STC's Prerequisite Test Duties

Revision 2 of OP 1004.09, "Plan For Preoperational Testing" (Plan), provides instruction for these duties and for documentation of the performance of them. Form A-31 is being used to document the activities.

The inspector stated during the management interview that he had no further questions on this item.

6. Preparation of Test Procedures

Tests requiring further discussions at the conclusion of the previous inspection[2] included loss of instrument air tests in safety systems, tests of the evacuation alarm signal, and ventilation systems tests.

Licensee personnel stated that the audibility of the evacuation alarm will be checked by administrative instruction at various times during the preoperational phase in addition to the test conducted by TP 360.79, "Radiation Monitoring System Preop Test."

Test procedures have been identified which will test all pneumatic valves in safety systems except six. Procedures are being revised to incorporate a loss of air test for these remaining valves. The inspector was informed that these revisions should be complete by May 1, 1973.

1/ See RO Report No. 50-313/73-1, Details, paragraph 9.
2/ See RO Report No. 50-313/73-3, Details I, paragraph 6.

Discussion of the ventilation systems centered around the reactor building cooling and purge systems. These discussions are reported in paragraph 10 of this report section.

This item will remain open and be discussed further.

7. Implementing Procedure For Use of Jumpers and Bypasses

The inspector was informed that a procedure covering the use of jumpers and bypasses[1/] had been written and was being reviewed. It is expected to be approved in four to six weeks.

This item remains open.

8. Resolution of Previous Comments on Procedures

a. Core Flood Functional Test

Previous comments[2/] were reviewed and the inspector was informed of the action taken on them. The review revealed that all significant comments had been resolved by revising the test procedure.

This item is resolved.

b. Other Test Procedures

Action taken on comments offered by RO:II on other procedures was discussed. Agreement with the action taken was noted in most cases.

9. Reactor Building Spray Piping

A licensee representative informed the inspector April 4, 1973, that a hydro test of the reactor building spray system had been delayed the previous week due to a crack found in the vertical, eight-inch section of piping leading to the containment spray ring header in one of the two trains. Subsequent discussions revealed that the crack was in the heat affected zone of a circumferential shop weld. Also, licensee representatives stated that this problem was not believed to be a reportable construction deficiency per 10 CFR 50.55(e).

1/ See RO Report No. 50-313/73-1, Details, paragraph 6.
2/ See RO Report No. 50-313/73-1, Details, paragraph 15.

Licensee personnel informed the inspector that the defective piping was being handled as a nonconforming item and an evaluation of the significance of the problem was being made by Bechtel engineering per quality assurance procedures.

The inspector stated that the problem appeared to be reportable and that an initial report had not been made in a timely fashion. Licensee personnel stated that it was their interpretation that 10 CFR 50.55(e)(2) meant that a deficiency should be reported as soon as the determination was made that the deficiency was truly reportable.

The inspectors stated that RO's position was that "promptly" meant within 24 hours of the discovery of the deficiency and that a written report was needed where extensive evaluation was required to demonstrate that the occurrence would not have resulted in a condition adverse to safety.

A licensee representative informed RO:II by telephone April 17, 1973, that a written report would be submitted and that a request for extension of the report due date would probably be requested.

10. Reactor Building Ventilation Systems Tests

The inspector asked whether TP 160.34, "Heating and Ventilation System - Reactor Building," was intended to cover the reactor building cooling system engineered safeguards test (FSAR page 13-13) and the reactor building purge system isolation test (FSAR page 13-36). He was informed that portions of these tests would be accomplished in this procedure and portions in TP 310.03, "Integrated Engineered Safeguards Test."

The following comments on TP 160.34 were given to licensee personnel:

a. The heat removal capability of the reactor building cooling system is not calculated as required by item 5.5 of page 13-13 of the FSAR.

b. The ability of the radiation interlock to trip the purge fans as indicated in item 5 of page 13-36 of the FSAR is not tested.

c. The ability of the purge system isolation valves to close in five seconds upon receipt of an engineered safeguards signal as described in Section 5.1.6.2.1 of the FSAR is not checked.

The inspector was informed that the first two comments involved information which had been deleted in Amendment 36 to the FSAR dated April 6, 1973, which should be received by RO:II shortly.

Licensee personnel stated that calculation of the heat removal capability did not appear to be necessary. Also, it had been determined that there was no radiation interlock on the purge fans.

Regarding the valve closing times, the inspector was informed that AP&L intended to demonstrate such changes of status times for all engineered safeguards equipment in individual system procedures and then demonstrate only functional capabilities in TP 310.03.

This matter was discussed during the management interview, at which time the inspector stated that it would be carried as an unresolved item.

11. Core Flood Flow Rate Test

The inspector asked if AP&L planned to perform a flow rate test on the core flood systems which would demonstrate reflood capabilities discussed in Section 14 of the FSAR. He was informed that a functional flow test had been performed to verify that the lines to the reactor vessel were open but that a flow rate test was considered to be a first-of-a-kind and was not planned for Unit 1.

Licensee personnel further stated that this matter would be studied and that the results of the flow test already run might be used in demonstrating the capability.

The inspector stated that this matter would be carried as an unresolved item.

12. Emergency Operating Procedures

Unit 1 emergency procedures are being written by AP&L operations personnel and are being written with the following format:

° Title - This is descriptive of the event for which the procedure is intended.

° Symptoms - Changes in system status and other indications of the emergency condition are listed.

° Immediate Action - Immediate operator actions to be taken, including verification that automatic actions have occurred are listed here.

° Followup Actions - Operator steps to be taken to return conditions to normal or secure conditions are listed here.

The inspector stated that AP&L's procedural system should clarify the fact that verification of automatic action includes performing actions manually, if necessary. A licensee representative stated that this would be considered.

The inspector stated that procedures for the following conditions had not been part of the Unit 1 procedure listing prior to October 1972[1/] and would be needed:

a. Loss of instrument air,

b. Loss of condenser vacuum,

c. Loss of containment integrity,

d. Loss of service water,

e. Loss of flux indication,

f. Expected transients,

g. Malfunction of integrated control system,

h. Emergency shutdown,

i. Emergency boration, and

j. Malfunction of pressure relief valves.

In discussing AP&L's plans for writing procedures for these conditions a licensee representative stated that they would be covered in an emergency or alarm procedure.

13. Alarm Procedures

The inspector was informed that no alarm procedures had been written. AP&L plans to write a procedure for each safety related alarm and will probably write one for all alarms. The format which will be used is as follows:

° Title

° Alarm Source

° Automatic Action

° Manual Action

Immediate
Subsequent

1/ See RO Report No. 50-313/72-10, Details I, paragraph 9.

Licensee representatives stated that the alarm procedures should be written by September 1973.

14. Operating Procedures

The inspector gave station personnel comments on OP 1103.04, "Soluble Poison Concentration Control," and OP 1103.06, "RC Pump Operation." Most comments and questions were resolved at that time. The procedures contained step-by-step instructions, but the inspector noted that these procedures did not provide a checklist to aid the operator in performing required actions. Licensee representatives stated that several of the nonroutine procedures have checklists provided.

15. Zero Power and Power Ascension Test Programs

The inspector and a licensee representative discussed how AP&L's test program would meet the AEC "Guide For The Planning of Initial Startup Programs." It was found that AP&L has identified a test procedure to cover essentially all of the subject areas listed in the guide. It could not be determined, however, what the content of several of the test procedures would be as they had not been written. In response to requests for more information, licensee representatives stated that they would try to obtain more detailed information on the content of the procedures by RO's next visit to the site.

The inspector was informed that AP&L is planning to perform startup testing at the major power plateaus of 15, 40, 75, and 100 percent power. Power levels of 25, 50, 75, and 100 percent are recommended by the guide.

16. Barton D/P Cells

Licensee representatives informed the inspector that two pressure transmitters of the model in question[1/] were installed in Unit 1 feedwater systems. The vendor has been requested to arrange for necessary modification.

17. Primary System Piping Flushes

The inspector discussed results of flushing the decay heat removal and core flood lines into the reactor vessel. Water analysis results were within specifications after the flushes and no debris was found in the vessel. The vessel and internals will be inspected by AP&L after hot functional tests.

1/ See RO Report No. 50-313/72-13, Details, paragraph 8.

18. Effectiveness of Procedure Reviews

The inspector informed licensee representatives that RO:II was concerned that the test procedures being approved now contain many of the same type mistakes as those approved almost a year ago, citing examples ranging from typographical errors to lack of agreement with FSAR test descriptions. (See paragraph 10 of this section and Details II, paragraph 2.) Licensee representatives stated that the comment was not well founded because most examples cited involved one procedure.

19. Procedure Approval Status

The following information was provided the inspector regarding the status of testing and operating procedures:

	No. Identified	No. Written	No. Approved
Precp and Initial Startup Tests	143	109	97
Quality Control	13	12	10
Administrative	3	3	1
Operating	76	61	42
Emergency	37	23	1
Calibration and Surveillance Tests	212	29	29
Maintenance	9	6	0
Refueling	19	11	5
Chemistry and Radiation Protection	23	10	9
Totals	365	270	194

DETAILS II

Prepared By: _____ 5/4/73
K. W. Whitt, Reactor Inspector Date
Facilities Test and Startup Branch

Dates of Inspection: April 10-13, 1973

Reviewed By: _____ 5/4/73
C. E. Murphy, Acting Chief Date
Facilities Test and Startup Branch

1. Individuals Contacted

a. Arkansas Power and Light Company (AP&L)

D. N. Bennett - Quality Control Engineer
R. R. Culp - Test Administrator
D. R. Sikes - Results Engineer

b. Bechtel Corporation (Bechtel)

J. C. Judd - Station Test Coordinator

2. Comments on Approved Test Procedures

The following comments were given to the station test administrator. None of the comments were satisfactorily resolved during the inspection. The station test administrator agreed to bring them to the attention of the appropriate management members and committees and to provide resolution at a later date.

a. TP 203.01, "Decay Heat Removal System Hydro Test"

(1) The prerequisites of Section 6.0 have not been provided with signoff spaces.

(2) Valve BW-8B should be added to the boundary valve list of hydro Section 5 of procedure Section 7.0.

(3) Signoff spaces have not been provided for procedure step completion verification.

(4) There are numerous requirements throughout the procedure for verification that specific sections of piping have been vented, but the vent valves required to be open have not been specified. These vent valves should be specified in the appropriate steps.

b. TP 203.03, "Decay Heat Removal System Functional Test"

(1) Prerequisite 6.1.10 - What filter is being referenced here? Is it the makeup system prefilter? The P and ID drawing for the decay heat removal system does not show a filter labeled as "makeup filter." What is meant by available? Does this mean the filter is on hand in case it is needed or that it is installed and ready for use? This should be clarified.

(2) Prerequisite 6.2.2 - What relief valves are being referenced? Unless the valves are listed, how does one know what he is signing for?

(3) There should be a prerequisite to assure that all pumps and air operated valves have been checked out before the functional test is performed. The prerequisite tests check out the pump motors and motor operated valves, but the guide for preoperational testing also requires that the pumps and air operated valves be checked out.

(4) Step 7.4.7 - This step requires that data sheet E be completed for the two-hour run in for pump P-29, but data sheet E is labeled, "DH-P34B, Initial Run In." Similar discrepancies exist for the initial run in test for DH-P34A and DH-P34B. The data sheets and the reference section should be made to agree with the body of the procedure.

(5) Reference 2.2.16 appears to be used incorrectly in numerous places throughout procedure Section 7.13. This reference should be replaced with the correct one whereever used incorrectly.

(6) The first isolation valve in each of the lines from the reactor coolant system to the suction of the decay heat pumps is interlocked with the reactor coolant system pressure. On high reactor coolant system pressure these valves should close. It does not appear that this procedure checks out these interlocks. Unless the interlocks are tested in another procedure, they should be checked here.

c. TP 203.07, "Decay Heat Removal System ES Test"

(1) Subsection 8.1.02 - The criteria stated here specify that each pump must pump at least 3000 gpm to the reactor vessel with a reactor coolant system pressure at 100 psig. The reactor coolant system pressure established in steps 7.2.07 and 7.2.22 of this procedure is 50 psig. How and when is the pressure increased to the required 100 psig.

(2) The FSAR, Section 6.1.3.2, states that the low pressure injection system will be in full operation within the required 25 seconds after a loss-of-coolant accident. This requirement should be added to the list of acceptance criteria.

d. TP 204.01, "Reactor Building Spray System Hydro Test"

(1) The prerequisites of Section 6.0 have not been provided with signoff spaces.

(2) Signoff spaces have not been provided for procedure step completion verification.

(3) Step 7.1.3 - This step provides instructions to install test pump and associated pressure gauge and relief valve, but the point of installation has not been specified.

e. TP 204.03, "Reactor Building Spray System Functional Test"

(1) Steps 7.2.3.15 and 7.3.04 - The references in the notes of these steps appear to be incorrect. They should be checked and replaced by the proper references as necessary.

(2) Step 7.2.6.23 - Why weren't valves CU-1616 and CU-1617 closed in this step? It appears that the data could be in question if these two valves are left open. The procedure should be studied in this area and changes made as appropriate.

(3) Steps 7.2.2.43 and 7.2.2.44 - These steps require high and low flow alarms to be recorded on data sheet 5, but data sheet 5 does not provide for recording this data.

f. TP 370.01, "Containment Hydrogen Purge System"

(1) What construction tests are required? Consideration should be given to specifying the construction tests required to be complete.

(2) Prerequisite 3.4.(1) - How does one determine that all instruments, valves, meters, relays are operational and properly calibrated? What does "etc," include? Why not make a list and verify that all listed instruments, valves, meters and relays are operational and properly calibrated. There will probably be more time to review the list for completeness now than there will be at the time of testing.

3. Comments on Completed Test Procedures

TP 204.02 was the only completed test procedure reviewed during this inspection. All comments on this procedure were given to to the station test administrator for resolution. In addition, the first four comments listed below were discussed in the exit interview. The first three represent examples of failure to follow procedures and represent violations of Criterion V of Appendix B to 10 CFR 50.

a. Step 7.2.64 and others of TP 204.02 provide instructions for connecting jumpers between specific terminals, but the bypass and jumper log indicates that no jumpers were used during the test performance. Failure to log the use of jumpers is a deviation from the requirements of Section 6.2 of OP 1004.09, "Plan for Preoperational Testing."

b. During the performance of the reactor building spray system electrical test, the station test coordinator wrote addendum 63 to TP 204.02 to delete the requirement for checking ventilation unit coolers 1A and 1C. This action deviates from the requirement of Section 7.2 of OP 1004.09, "Plan for Pre-operational Testing," which states, in part, that changes that result in a deletion of any part of the procedure which was an intent of the original approved procedure may be made only on approval of the station superintendent.

c. The approved copy of TP 204.02 contained fifty-five addenda. During the review of the test results, it was difficult to determine whether the test had been conducted in accordance with addenda 52, 53, 54 and 55. In conversation with the responsible station test coordinator, it was learned that these four addenda were not followed. The test was completed on February 23, 1973, and addenda 52, 53, 54 and 55 were rewritten by the station test coordinator on March 1, 1973. This is a violation of Criterion V of Appendix B to 10 CFR 50 since the test was not accomplished in accordance with the procedure.

d. Throughout the procedure, data were recorded and signoffs were made in pencil. Is this going to be a general practice during the test program? Consideration should be given to the feasibility of requiring all official data to be recorded in ink.

e. Addendum 64 - No date was recorded to indicate when this addendum was added.

f. Addendum 65 - No data or initials were recorded to indicate when and by whom this addendum was added.

Ltr to Arkansas Power and Light Company
dtd MAY 10 1973

cc w/encl:
H. D. Thornburg, RO
RO:HQ (4)
Directorate of Licensing (4)
DR Central Files
*PDR
*Local PDR
*NSIC
*DTIE, OR
*State

*To be dispatched with licensee response.