NRC FORM 195 (2-76)

U.S. NUCLEAR REGULATORY COMMISSION

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TO: Mr Ziemann

FROM: Arkansas Power & Light Co
Little Rock, Ark
J D Phillips

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DESCRIPTION

Ltr trans the following:

PLANT NAME: Arkansas #1

ENCLOSURE

Proposed Amdts to OL/Changes to Tech Specs: Consisting of revisions with regard to;

1. Deletion of requirements to test & confirm the air distribution across HEPA filters & charcoal absorbers of the penetration room ventilation system & the spent fuel pool ventilation system.....

2. Allowing of the selection of reactor building tendons on a random but representative basis.....

(40 cys encl rec'd)

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ARKANSAS POWER & LIGHT COMPANY

P.O. BOX 551 LITTLE ROCK, ARKANSAS 72203 • (501) 371-4000

November 12, 1976

50-313

1-116-6

Director of Nuclear Reactor Regulation
ATTN: Mr. Dennis L. Ziemann, Chief
Operating Reactors Branch #2
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

Subject: Arkansas Nuclear One-Unit 1
Proposed Technical Specifications
(File: 1511.1)

Gentlemen:

Enclosed please find two proposed changes to the Arkansas Nuclear One-Unit 1 Technical Specifications for your review and approval. The first proposal would delete the requirements to test and confirm the air distribution to be uniform ± 20% across HEPA filters and charcoal absorbers of the Penetration Room Ventilation System and the Spent Fuel Pool Ventilation System. The second proposal would allow the selection of reactor building tendons on a random but representative basis.

Filter test standard (ANSI N510) for testing nuclear air cleaning systems requires only an initial acceptance test. Regulatory Guide 1.52, Revision 1 does require air distribution testing of HEPA filters at refueling intervals, but will delete this recommendation in the final draft version of Revision 1. Since other fan units do not require air distribution testing and the components in air cleaning systems are fixed and air distribution cannot change, we request the requirements to test and confirm the air distribution across HEPA filters and charcoal absorbers be deleted.

Presently Technical Specification 4.4.2.1 states "twenty-one tendons shall be selected for periodic inspection for symptons of material deterioration or force reduction". Regulatory Guide 1.35, Revision 2 says that for each inspection, the tendons should again be selected on a

random but representative basis so the sample group will change somewhat each time. Therefore, in order to comply with Revision 2 of Regulatory Guide 1.35, we request the indicated wording change be made.

If we may be of further assistance in this matter, please contact us.

Very truly yours,

J. D. Phillips
Senior Vice President

JDP:ay

Attachments

4.4.2 Structural Integrity

Applicability

Applies to the structural integrity of the reactor building.

Objective

To define the structural integrity of the reactor building.

Specification

4.4.2.1 Tendon Surveillance

For the tendon surveillance program, to conducted over the life of the unit, twenty-one tendons shall be selected each surveillance for inspection for symptoms of material deterioration or force reduction. The surveillance tendons shall consist of ten hoop tendons, at least three in each of the three 240° sectors of the reactor building; five vertical tendons located at approximately equally spaced intervals; and six dome tendons, two in each of the three groups of dome tendons.

4.4.2.1.1 Lift-Off

Lift-off readings shall be taken for all 21 surveillance tendons.

4.4.2.1.2 Wire Inspection and Testing

A minimum of three surveillance tendons, one from each of the hoop, vertical, and dome families, shall be relaxed and one wire from each relaxed tendon shall be removed as a sample and visually inspected for corrosion or pitting. In addition, the applicable anchor assemblies shall be inspected for deleterious conditions, such as corrosion, cracks, missing wires and off size button heads. Tensile and elongation tests shall also be performed on a minimum of three specimens taken from the ends and middle of each of the wires. The specimens shall be the maximum length acceptable for the test apparatus to be used and shall include areas representative of significant corrosion or pitting.

After the wire removal, the tendons shall be retensioned to the stress level measured at the lift-off reading (and changes in shim thicknesses shall be recorded) and then checked by a final lift-off reading. The tendon elongation during retensioning shall be measured.

3.13 PENETRATION ROOM VENTILATION SYSTEM

Applicability

Applies to the operability of the penetration room ventilation system.

Objective

To ensure that the penetration room ventilation system will perform within acceptable levels of efficiency and reliability.

Specification

3.13.1 Two independent circuits of the penetration room ventilation system shall be operable whenever reactor building integrity is required with the following performance capabilities:

a. The results of the in-place cold DOP and halogenated hydrocarbon tests at design flow ($\pm$ 10%) on HEPA filters and charcoal adsorber banks shall show $\geq$ 99% DOP removal and $\geq$ 99% halogenated hydrocarbon removal.

b. The results of laboratory carbon sample analysis from the charcoal adsorber banks shall show $\geq$ 90% radioactive methyl iodide removal at a velocity within $\pm$ 20% of system design, 0.15 to 0.5 mg/m^3 inlet methyl iodide concentration, $\geq$ 95% R.H. and $\geq$ 190F.

c. Fans shall be shown to operate within $\pm$ 10% of design flow.

d. The pressure drop across the combined HEPA filters and charcoal adsorber banks shall be less than 6 inches of water at system design flow rate ($\pm$ 10%).

e. Each circuit of the system shall be capable of automatic initiation.

3.13.2 If one circuit of the penetration room ventilation system is made or found to be inoperable for any reason, reactor operation is permissible only during the succeeding seven days provided that during such seven days all active components of the other circuit shall be operable.

3.13.3 If the requirements of Specifications 3.13.1 and 3.13.2 cannot be met, the reactor shall be placed in the cold shutdown condition within 36 hours.

3.15 FUEL HANDLING AREA VENTILATION SYSTEM

Applicability

Applies to the operability of the fuel handling area ventilation system.

Objective

To ensure that the fuel handling area ventilation system will perform within acceptable levels of efficiency and reliability.

Specification

3.15.1 The fuel handling area ventilation system shall be in operation whenever irradiated fuel handling operations are in progress in the fuel handling area of the auxiliary building and shall have the following performance capabilities:

a. The results of the in-place cold DOP and halogenated hydrocarbon tests at design flows (± 10%) on HEPA filters and charcoal adsorber banks shall show ≥ 99% DOP removal and ≥ 99% halogenated hydrocarbon removal.

b. The results of laboratory carbon sample analysis shall show ≥ 90% radioactive methyl iodide removal at a velocity within ± 20% of system design, 0.05 to 0.15 mg/m3 inlet methyl iodide concentration, ≥ 70% R. H. and ≥ 125F.

c. Fans shall be shown to operate within ± 10% design flow.

d. The pressure drop across the combined HEPA filters and charcoal adsorber banks shall be less than 6 inches of water at system design flow rate (± 10%).

3.15.2 If the requirements of Specification 3.15.1 cannot be met, irradiated fuel movement shall not be started (any irradiated fuel assembly movement in progress may be completed).

Bases

The fuel handling area ventilation system is designed to filter the auxiliary building atmosphere during fuel handling operations to limit the release of activity should a fuel handling accident occur. The system consists of one circuit containing two exhaust fans and a filter train. The fans are redundant and only one is required to be operating. The filter train consists of a prefilter, a HEPA filter and a charcoal adsorber in series.

4.11 PENETRATION ROOM VENTILATION SYSTEM SURVEILLANCE

Applicability

Applies to the surveillance of the penetration room ventilation system.

Objective

To verify an acceptable level of efficiency and operability of the penetration room ventilation system.

Specification

4.11.1 At least once per refueling period (not to exceed 18 months), it shall be demonstrated that the pressure drop across the combined HEPA filters and charcoal adsorber banks is less than 6 inches of water at system design flow rate (± 10%).

4.11.2 At least once per refueling period (not to exceed 18 months), automatic initiation of the penetration room ventilation system shall be demonstrated.

4.11.3a. The tests and sample analysis of Specification 3.13.1a,b, & c. shall be performed initially* and at least once per refueling period (not to exceed 18 months) or after every 720 hours of system operation and following significant painting, fire or chemical release in any ventilation zone communicating with the system.

b. Cold DOP testing shall also be performed after each complete or partial replacement of the HEPA filter bank or after any structural maintenance on the system housing.

c. Halogenated hydrocarbon testing shall also be performed after each complete or partial replacement of the charcoal adsorber bank or after any structural maintenance on the system housing.

4.11.4 Each circuit shall be operated at least 1 hour every month. This test shall be considered satisfactory if control board indication verifies that all components have responded properly to the actuation signal.

*Initial tests shall be performed within 90 days of the date of issuance of Amendment 10 to License No. DPR-51.

4.17 FUEL HANDLING AREA VENTILATION SYSTEM SURVEILLANCE

Applicability

Applies to the surveillance of the fuel handling area ventilation system.

Objective

To verify an acceptable level of efficiency and operability of the fuel handling area ventilation system.

Specification

4.17.1 At least once per refueling period (not to exceed 18 months), it shall be demonstrated that the pressure drop across the combined HEPA filters and charcoal adsorber banks is less than 6 inches of water at system design flow rate (± 10%).

4.17.2.a. The tests and sample analysis of Specification 3.15.1.a,b,& c shall be performed within 720 system operating hours prior to irradiated fuel handling operations in the auxiliary building following significant painting, fire or chemical release in any ventilation zone communicating with the system.

b. Cold DOP testing shall also be performed prior to irradiated fuel handling in the auxiliary building after each complete or partial replacement of a HEPA filter bank or after any structural maintenance on the system housing.

c. Halogenated hydrocarbon testing shall also be performed prior to irradiated fuel handling in the auxiliary building after each complete or partial replacement of a charcoal adsorber bank or after any structural maintenance on the system housing.

4.17.3 The system shall be operated for at least 10 hours prior to initiation of irradiated fuel handling operations in the auxiliary building.

Bases

Since the fuel handling area ventilation system may be in operation when fuel is stored in the pool but not being handled its operability must be verified before handling of irradiated fuel. Operation of the system for 10 hours before irradiated fuel handling operations and performance of Specification 4.17.2 will demonstrate operability of the active system components and the filter and adsorber systems.