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April 18, 1991

1CAN049101

U. S. Nuclear Regulatory Commission  
Document Control Desk  
Mail Station P1-137  
Washington, DC 20555

Subject: Arkansas Nuclear One - Unit 1  
Docket No. 50-313  
License No. DPR-51  
Technical Specifications Change Request  
Radioactive Materials Sources

Gentlemen:

Attached for your review and approval is a proposed Technical Specification change revising Section 4.14 of the ANO-1 Technical Specifications. This change provides a current list of the radioactive sources subject to the 18 month inspection.

In accordance with 10CFR50.91(a)(1), and using the criteria in 10CFR50.92(c), Entergy Operations has determined that the change involves no significant hazards consideration. The basis for these determinations are included in the enclosed submittal. Although the circumstances of this proposed amendment is not exigent or emergency, your prompt review and approval is requested.

We request that the effective date for this change be 30 days after NRC issuance of the amendment to allow for distribution and procedural revisions necessary to implement this change.

Very truly yours,

NSC:sgw  
Attachment

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                              )  
COUNTY OF LOGAN     )

SS

OATH

I, N. S. Carns, being duly sworn, subscribe to and say that I am Vice President, Operations ANO for Entergy Operations, that I have full authority to execute this oath; that I have read the document numbered ICAN049101 and know the contents thereof; and that to the best of my knowledge, information and belief the statements in it are true.

N. S. Carns  
N. S. Carns

SUBSCRIBED AND SWORN TO before me, a Notary Public in and for the County and State above named, this 18th day of April, 1991.

Sandy Liebenmorgen  
Notary Public

My Commission Expires:

May 11, 2000

ENCLOSURE

PROPOSED TECHNICAL SPECIFICATION

AND

RESPECTIVE SAFETY ANALYSES

IN THE MATTER OF AMENDING

LICENSE NO. DPR-51

ENTERGY OPERATIONS, INCORPORATED

ARKANSAS NUCLEAR ONE, UNIT 1

DOCKET NO. 50-313

## PROPOSED CHANGE

The proposed change to the ANO-1 Technical Specifications revises the list of radioactive material sources in Surveillance Section 4.14 subject to the 18 month periodic leak test by deleting the four area radiation monitor sources located inside the reactor building from paragraph 4 of the Specification.

## BACKGROUND

Entergy Operations is licensed [Facility Operating License Section 2.b(4)] to possess sealed sources for radiation monitoring equipment calibration. The original ANO-1 Technical Specifications required all sealed sources (except those stored or not being used) with an activity of 100  $\mu$ ci Beta and/or Gamma or 5  $\mu$ ci Alpha to be tested for leakage and/or contamination at an interval not to exceed six months. Amendment 87 to the ANO-1 Facility Operating License provided exceptions to the six month surveillance requirement for certain sealed sources. Specifically this amendment allowed an eighteen month test schedule for ALARA (As Low As Reasonably Achievable) concerns. In the correspondence relating to the Amendment, the NRC Staff requested by letter dated November 8, 1983 (OCNA118310), that ANO amend its request of September 14, 1983 (OCAN098301), to specifically list proposed exempted sources in the Technical Specification. In our letter of January 20, 1984 (OCAN018407), ANO responded to the Staff's request by listing the four area radiation monitor sources located inside the reactor building and the boronometer source for ANO-1.

At that time the area radiation monitor sources located in the ANO-1 reactor building were Lead 210 (and daughters) with an activity of 10  $\mu$ ci Beta and Alpha. These sources were electroplated onto a ceramic backing and were contained inside a shielded container. These sources were used to response check the operation of the high range Geiger-Mueller radiation detector. A solenoid operated window is used to expose the source and, thereby, check detector operability. The four area radiation monitors in the ANO-1 reactor building are mounted in the following locations: one at the equipment hatch, one at the personnel hatch, one located in the fuel handling area, and one located inside the incore instrument tunnel to the reactor vessel (limited access due to high radiation area).

## DISCUSSION

In 1986 the reactor building area radiation monitors were modified to replace their sources with Strontium 90 sources. These sources have an activity of 1.0  $\mu$ ci Beta and no Alpha. Per Specification 3.12.1, "Sealed sources are exempt from such leak test when the source contains 100  $\mu$ ci or less of Beta and/or Gamma emitting material or 5  $\mu$ ci or less of Alpha emitting material". As the replaced sources have less Beta activity (1.0  $\mu$ ci) than the requirement (100  $\mu$ ci), the listing of the four reactor building sealed sources is no longer necessary. By making this revision to delete a surveillance that is not required, personnel



radiation exposure will be reduced. In our letter of 1984, ANO-1 estimated a dose reduction of 0.080 man-rem Neutron and 0.200 man-rem Gamma from each incident of leak testing of these sources. An NRC communication, IE Information Notice No. 82-51, has previously warned of unnecessary and hazardous entries into PWR cavities (eg; incore instrument tunnel) in which the level of radiation exposure is potentially very high. Additionally approximately 2 man-days of outage time for testing of the four sources would be saved by deleting this requirement.

#### DETERMINATION OF SIGNIFICANT HAZARDS

An evaluation of the proposed change has been performed in accordance with 10CFR50.91(a)(1) regarding no significant hazards consideration using the standards in 10CFR50.92(c). A discussion of those standards as they relate to this amendment request follows:

Criterion 1 - Does Not Involve a Significant Increase in the Probability or Consequences of an Accident Previously Evaluated.

The change provides Surveillance Requirements consistent with the Limiting Condition for Operation Specification for leak testing of the sealed sources based on activity level, thus allowing reduced testing and reduction in radiation exposure to personnel. The reduction in activity level of the reactor building area monitors is due to the replacement of the installed test sources. As such, this change is effectively administrative in nature and therefore does not involve an increase in the probability or consequences of an accident previously evaluated.

Criterion 2 - Does Not Create the Possibility of a New or Different Kind of Accident from any Previously Evaluated.

This change is administrative in nature in that the Surveillance Requirements are being changed for consistency with the requirements for the Limiting Condition for Operation and, therefore, does not create the possibility of a new or different kind of accident from any previously evaluated.

Criterion 3 - Does Not Involve a Significant Reduction in the Margin of Safety.

As this proposed change is administrative in nature to provide for consistency in the Surveillance Requirements with the Limiting Condition for Operation, the margin of safety will not be reduced by this change. A reduction in personnel radiation exposure will result from this change to the Technical Specifications.

The Commission has provided guidance concerning the application of the standards for determining whether a significant hazards consideration exists. The proposed amendment most closely matches example (i):

"A purely administrative change to technical specifications: for example, a change to achieve consistency throughout the technical specifications, correction of an error, or a change in nomenclature."

Based on the above evaluation, it is concluded that the proposed Technical Specification change does not constitute a significant hazards concern.