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February 18, 2000

Mr. C. Randy Hutchinson
Vice President, Operations ANO
Entergy Operations, Inc.
1448 S. R. 333
Russellville, Akansas 72801

SUBJECT: ARKANSAS NUCLEAR ONE, UNITS 1 AND 2 - ISSUANCE OF AMENDMENTS RE: LOWERING THE CURIE LIMIT FOR THE RADIOACTIVE GAS STORAGE TANKS (TAC NOS. MA6788 AND MA6789)

Dear Mr. Hutchinson:

The Commission has issued the enclosed Amendment No. 204 to Facility Operating License No. DPR-51 and Amendment No. 211 to Facility Operating License No. NPF-6 for Arkansas Nuclear One, Units 1 and 2, respectively. The amendments consist of changes to the Technical Specifications (TSs) in response to your application dated September 17, 1999 (0CAN099901).

The amendments modify TS 3.25.2, "Radioactive Gas Storage Tanks," at Arkansas Nuclear One, Unit 1 (ANO-1) and TS 3/4.11.2, "Gas Storage Tanks," at Arkansas Nuclear One, Unit 2 (ANO-2). This change would reduce the limiting condition for operation for the maximum quantity of stored radioactivity per tank from 300,000 curies of noble gases as Xenon-133 (Xe-133) equivalent to 78,782 curies of noble gases as Xe-133 equivalent at ANO-1, and 82,400 curies of noble gases as Xe-133 equivalent at ANO-2.

A copy of our related Safety Evaluation is also enclosed. The Notice of Issuance will be included in the Commission's next biweekly *Federal Register* notice.

Sincerely,
/RA/
M. Christopher Nolan, Project Manager, Section 1
Project Directorate IV & Decommissioning
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Docket Nos. 50-313 and 50-368
Enclosures: 1. Amendment No. 204 to DPR-51
2. Amendment No. 211 to NPF-6
3. Safety Evaluation
cc w/encls: See next page

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UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

ENTERGY OPERATIONS, INC.

DOCKET NO. 50-313

ARKANSAS NUCLEAR ONE, UNIT NO. 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 204
License No. DPR-51

1. The Nuclear Regulatory Commission (the Commission) has found that:

   A. The application for amendment by Entergy Operations, Inc. (the licensee) dated September 17, 1999, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter I;

   B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;

   C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;

   D. The issuance of this license amendment will not be inimical to the common defense and security or to the health and safety of the public; and

   E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and Paragraph 2.C.(2) of Facility Operating License No. DPR-51 is hereby amended to read as follows:

   (2) Technical Specifications

   The Technical Specifications contained in Appendix A, as revised through Amendment No. 204, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

3. The license amendment is effective as of its date of issuance and shall be implemented within 30 days from the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

Robert A Gramm

Robert A. Gramm, Chief, Section 1
Project Directorate IV & Decommissioning
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Attachment: Changes to the Technical Specifications

Date of Issuance: February 18, 2000

ATTACHMENT TO LICENSE AMENDMENT NO. 204

FACILITY OPERATING LICENSE NO. DPR-51

DOCKET NO. 50-313

Replace the following pages of the Appendix A Technical Specifications with the attached revised pages. The revised pages are identified by amendment number and contain marginal lines indicating the areas of change.

Remove	Insert
66w	66w

3.25.2 Radioactive Gas Storage Tanks

Applicability: At all times

Objective: To restrict the amount of activity in a radioactive gas holdup tank.

Specifications:

3.25.2 A. The quantity of radioactivity contained in each gas storage tank shall be limited to 78,782 curies noble gases (Xe-133 equivalent).

B. With the quantity of radioactive material in any gas storage tank exceeding the above limit, immediately suspend all additions of radioactive material to the tank and within 48 hours reduce the tank contents to within the limit and describe the events leading to the condition in the next Radioactive Effluent Release Report pursuant to Specification 6.12.2.6.

C. The provisions of Specification 3.0.3 are not applicable.

Bases:

Restricting the quantity of radioactivity contained in each gas storage tank provides assurance that, in the event of an uncontrolled release of the tank's contents, the resulting total body exposure to a member of the public at the nearest exclusion area boundary will not exceed 0.5 rem. This is consistent with Branch Technical Position ETSB 11-5 in NUREG-0800, July 1981.

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

ENTERGY OPERATIONS, INC.

DOCKET NO. 50-368

ARKANSAS NUCLEAR ONE, UNIT NO. 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 211
License No. NPF-6

1. The Nuclear Regulatory Commission (the Commission) has found that:

   A. The application for amendment by Entergy Operations, Inc. (the licensee) dated September 17, 1999, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter I;

   B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;

   C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;

   D. The issuance of this license amendment will not be inimical to the common defense and security or to the health and safety of the public; and

   E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and Paragraph 2.C.(2) of Facility Operating License No. NPF-6 is hereby amended to read as follows:

   (2) Technical Specifications

   The Technical Specifications contained in Appendix A, as revised through Amendment No. 211 , are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

3. The license amendment is effective as of its date of issuance and shall be implemented within 30 days from the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

Robert A Gramm

Robert A. Gramm, Chief, Section 1
Project Directorate IV & Decommissioning
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Attachment: Changes to the Technical Specifications

Date of Issuance: February 18, 2000

ATTACHMENT TO LICENSE AMENDMENT NO. 211

FACILITY OPERATING LICENSE NO. NPF-6

DOCKET NO. 50-368

Replace the following pages of the Appendix A Technical Specifications with the attached revised pages. The revised pages are identified by amendment number and contain marginal lines indicating the areas of change.

Remove	Insert
3/4 11-2	3/4 11-2

RADIOACTIVE EFFLUENTS

3/4.11.2 GAS STORAGE TANKS

LIMITING CONDITION FOR OPERATION

3.11.2 The quantity of radioactivity contained in each gas storage tank shall be limited to less than or equal to 82,400 curies noble gases (considered as Xe-133).

APPLICABILITY: At all times.

ACTION:

a. With the quantity of radioactive material in any gas storage tank exceeding the above limit, immediately suspend all additions of radioactive material to the tank and within 48 hours reduce the tank contents to within the limit and describe the events leading to the condition in the next Radioactive Effluent Release Report pursuant to Specification 6.9.3.

b. The provisions of Specification 3.0.3 are not applicable.

SURVEILLANCE REQUIREMENTS

4.11.2 The quantity of radioactive material contained in each gas storage tank shall be determined to be within the above limit at least once per 24 hours when radioactive materials are being added to the tank and the reactor coolant activity exceeds the limits of Specification 3.4.8.

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NOS. 204 AND 211 TO

FACILITY OPERATING LICENSE NOS. DPR-51 AND NPF-6

ENTERGY OPERATIONS, INC.

ARKANSAS NUCLEAR ONE, UNIT NOS. 1 AND 2

DOCKET NOS. 50-313 AND 50-368

1.0 INTRODUCTION

By letter dated September 17, 1999 (0CAN099901), Entergy Operations, Inc. (Entergy, the licensee) submitted a request for changes to the Arkansas Nuclear One, Units 1 and 2, Technical Specifications (TSs). The requested change would modify TS 3.25.2, "Radioactive Gas Storage Tanks," at Arkansas Nuclear One, Unit No. 1 (ANO-1) and TS 3/4.11.2, "Gas Storage Tanks," at Arkansas Nuclear One, Unit-2 (ANO-2). The proposed change would reduce the limiting condition for operation (LCO) from 300,000 curies (Ci) of noble gases, to 78,782 Ci of noble gases as Xe-133 equivalent at ANO-1 and 82,400 Ci of noble gases as Xe-133 equivalent at ANO-2.

The ANO-1 gaseous radioactive waste (GRW) system consists, in part, of four gas storage tanks, each designed to receive, and hold for decay, radioactive gaseous effluents from various plant systems, including the reactor coolant system. The ANO-2 GRW system is similarly designed, but contains just three gas storage tanks. Exhausted effluents from these tanks could, if of sufficient radiological content, affect the health and safety of the public. Consequently, restrictions are placed on the quantity of radioactivity that a tank is permitted to contain at any given time. The bases of the subject technical specifications state that restricting the quantity of radioactivity in each gas storage tank provides assurance that, in the event of an uncontrolled release of the tank's contents, the resulting whole body exposure to a member of the public at the nearest exclusion area boundary (EAB) will not exceed 0.5 rem. This basis is consistent with NUREG-0800, Branch Technical Position 11-5, "Postulated Radioactive Releases Due to a Waste Gas System Leak or Failure," and Standard Review Plan Section 11.3, "Gaseous Waste Management Systems."

During a study of component classifications within the GRW system, Entergy determined that the existing 300,000 Ci limit for the gas storage tanks for ANO-1 and ANO-2 may not adequately ensure that exposure to a member of the public at the nearest EAB during an inadvertent gas storage tank release over a 2-hour period would be limited to a whole body dose of 0.5 rem. Entergy performed new calculations using the guidance provided in the branch technical position and determined that reductions in the values of the LCOs were needed. Besides requesting the proposed technical specification changes, Entergy has

implemented administrative controls on the tank contents to ensure that these reduced limits are not exceeded.

2.0 EVALUATION

The staff reviewed Entergy's submittal and relevant sections of the ANO-1 and ANO-2 Final Safety Analsis Reports (FSAR). The staff did a confirming calculation and agrees with the licensee's conclusion that there is reasonable assurance that the 0-2 hour whole body dose at the EAB will not exceed 0.5 rem if the contents of each tank is limited to 78,782 Ci dose equivalent Xe-133 at ANO-1, and 82,400 Ci dose equivalent Xe-133 at ANO-2. The staff used the FSAR X/Q values of 6.8E-4 sec/m^3 for ANO-1 and 6.5E-4 sec/m^3 for ANO-2, and used the Xe-131 dose conversion factor from Table B-1 of Regulatory Guide 1.109, "Calculation of Annual Doses to Man From Routine Releases of Reactor Effluents for the Purpose of Evaluating Compliance with 10 CFR Part 50, Appendix I."

Based on the information provided by the licensee related to the proposed changes to TS 3.25.2, "Radioactive Gas Storage Tanks," at ANO-1 and TS 3/4.11.2, "Gas Storage Tanks," at ANO-2, the NRC staff finds reasonable assurance that, if there were an uncontrolled release of the tank's contents, the resulting whole body exposure to a member of the public at the nearest EAB will not exceed 0.5 rem. This is consistent with NUREG-0800, Branch Technical Position 11-5 and, as such, the postulated doses would be a small fraction of the dose guidelines of 10 CFR Part 100. The proposed reductions in the LCOs are acceptable.

3.0 STATE CONSULTATION

In accordance with the Commission's regulations, the Arkansas State official was notified of the proposed issuance of the amendment. The State official had no comment.

4.0 ENVIRONMENTAL CONSIDERATION

The amendments change a requirement with respect to installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20. The staff has determined that the amendments involve no significant increase in the amounts, and no significant change in the types, of any effluents that may be released offsite, and that there is no significant increase in individual or cumulative occupational radiation exposure. The Commission has previously issued a proposed finding that the amendments involve no significant hazards consideration and there has been no public comment on such finding (65 FR 1921, 01/12/00). Accordingly, the amendments meet the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment need be prepared in connection with the issuance of the amendments.

5.0 CONCLUSION

The Commission has concluded, based on the considerations discussed above, that (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, (2) such activities will be conducted in compliance with the

Commission's regulations, and (3) the issuance of the amendments will not be inimical to the common defense and security or to the health and safety of the public.

Principal Contributor: S. F. LaVie

Date: February 18, 2000