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Kevin T. Walsh
Vice President, Operations
Arkansas Nuclear One

OCAN110901

November 19, 2009

U.S. Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, DC 20555

SUBJECT: License Amendment Request – Cyber Security Plan
Arkansas Nuclear One – Units 1 and 2
Docket Nos. 50-313 and 50-368
License Nos. DPR-51 and NPF-6

Dear Sir or Madam:

In accordance with the provisions of 10 CFR 50.4 and 10 CFR 50.90, Entergy Operations, Inc. (Entergy) is submitting a request for an amendment to each of the operating licenses for Arkansas Nuclear One (ANO), Units 1 and 2. The proposed amendments request NRC approval of the common ANO Cyber Security Plan, provides an implementation schedule, and revises the existing operating licenses' Physical Protection license condition to require Entergy to fully implement and maintain in effect all provisions of the Commission-approved cyber security plan for each unit.

Attachment 1 provides an evaluation of the proposed change. Attachment 2 provides the existing ANO-1 and ANO-2 operating license pages marked-up to show the proposed change. Attachment 3 provides the proposed operating license changes in final typed format for both of the ANO units. Attachment 4 provides the ANO Cyber Security Plan implementation schedule as the list of regulatory commitments. Attachment 5 provides the Nuclear Energy Institute guidance deviations taken by Entergy. Attachment 6 provides a copy of the ANO Cyber Security Plan which is a standalone document that will be incorporated by reference into the ANO Security Plan upon approval. Entergy requests that Attachments 4, 5, and 6, which contain security-related information, be withheld from public disclosure in accordance with 10 CFR 2.390.

The proposed changes have been evaluated in accordance with 10 CFR 50.91(a)(1) using criteria in 10 CFR 50.92(c), and it has been determined that the changes involve no significant hazards consideration. The bases for these determinations are included in Attachment 1.

Entergy requests this license amendment be effective as of its date of issuance. Once approved, the amendment will be implemented in accordance with the approved implementation schedule. Although this request is neither exigent nor emergency, your prompt review is requested.

This letter contains security-sensitive information – Attachments 4, 5, and 6 are withheld from public disclosure per 10CFR2.390

S001
LRR

The new commitments contained in this letter are provided in Attachment 4. If you have any questions or require additional information, please contact David Bice at 479.858.5338.

I declare under penalty of perjury that the foregoing is true and correct. Executed on November 19, 2009.

Sincerely,



KTW/nbm

- Attachments:
1. Analysis of Proposed Operating License Change
 2. Proposed ANO-1 and ANO-2 Operating License Changes (mark-up)
 3. Revised ANO-1 and ANO-2 Operating License Pages
 4. Implementation Schedule/List of Regulatory Commitments
 5. Entergy (ANO) Deviation Table to NEI 08-09, Revision 3
 6. ANO Cyber Security Plan

cc: Mr. Elmo Collins
Regional Administrator
U. S. Nuclear Regulatory Commission
Region IV
612 E. Lamar Blvd., Suite 400
Arlington, TX 76011-4125

NRC Senior Resident Inspector
Arkansas Nuclear One
P.O. Box 310
London, AR 72847

U. S. Nuclear Regulatory Commission
Attn: Mr. Kaly Kalyanam
MS O-8 B1
Washington, DC 20555-0001

Mr. Bernard R. Bevill
Arkansas Department of Health
Radiation Control Section
4815 West Markham Street
Slot #30
Little Rock, AR 72205

Attachment 1

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Analysis of Proposed Operating License Change

1.0 SUMMARY DESCRIPTION

The proposed license amendment request (LAR) includes the proposed Arkansas Nuclear One (ANO) Cyber Security Plan, an Implementation Schedule, and a proposed sentence to be added to the existing operating license Physical Protection license condition.

2.0 DETAILED DESCRIPTION

The proposed LAR includes three parts: the proposed ANO Cyber Security Plan, an implementation schedule, and a proposed sentence to be added to the existing operating license Physical Protection license condition for both ANO units to require Entergy to fully implement and maintain in effect all provisions of the Commission-approved ANO Cyber Security Plan as required by 10 CFR 73.54. *Federal Register* notice dated March 27, 2009, issued the final rule that amended 10CFR Part 73. The regulations in 10 CFR 73.54, "Protection of Digital Computer and Communication Systems and Networks," establish the requirements for a cyber security program. This regulation specifically requires each licensee currently licensed to operate a nuclear power plant under Part 50 of this chapter to submit a cyber security plan that satisfies the requirements of the Rule. Each submittal must include a proposed implementation schedule and implementation of the licensee's cyber security program must be consistent with the approved schedule. The background for this application is addressed by the NRC Notice of Availability published on March 27, 2009, 74FR13926 (Reference 1).

3.0 TECHNICAL EVALUATION

Federal Register notice 74FR13926 issued the final rule that amended 10 CFR Part 73. Cyber security requirements are codified as new 10 CFR 73.54 and are designed to provide high assurance that digital computer and communication systems and networks are adequately protected against cyber attacks up to and including the design basis threat established by 10 CFR 73.1(a)(1)(v). These requirements are substantial improvements upon the requirements imposed by NRC Order EA-02-026 (Reference 2).

This proposed amendment conforms to the model Cyber Security Plan contained in Appendix A of Nuclear Energy Institute (NEI) 08-09, "Cyber Security Plan Template," Revision 3, dated September 2009, for use by licensees in development of their own cyber security plans with deviations as identified and justified in Attachment 5. Deviations to Appendices D and E of NEI 08-09, Revision 3 are detailed in Attachment 1 of the ANO Cyber Security Plan.

This LAR includes the proposed ANO Cyber Security Plan (Attachment 6) that conforms to the template provided in NEI 08-09 with deviations. In addition, the LAR includes the proposed change to the existing operating license condition for "Physical Protection" (Attachments 2 and 3) for both of the ANO units. The LAR contains the proposed implementation schedule (Attachment 4) as required by 10CFR73.54. Attachment 5 explains deviations from NEI 08-09, Revision 3, Appendix A to reflect later industry and NRC discussions.

4.0 REGULATORY EVALUATION

4.1 Applicable Regulatory Requirements/Criteria

This LAR is submitted pursuant to 10CFR73.54 which requires licensees currently licensed to operate a nuclear power plant under 10CFR Part 50 to submit a cyber security plan as specified in 10CFR50.4 and 10CFR50.90.

4.2 Significant Safety Hazards Consideration

Entergy has evaluated whether or not a significant hazards consideration is involved with the proposed amendment by focusing on the three standards set forth in 10 CFR 50.92, "Issuance of Amendment," as discussed below:

1. Does the proposed change involve a significant increase in the probability or consequences of an accident previously evaluated?

Response: No.

The proposed change is required by 10 CFR 73.54 and includes three parts. The first part is the submittal of the ANO Cyber Security Plan for NRC review and approval. The ANO Cyber Security Plan conforms to the template provided in NEI 08-09 with deviations and provides a description of how the requirements of the Rule will be implemented at ANO. The ANO Cyber Security Plan establishes the licensing basis for the ANO Cyber Security Program. The ANO Cyber Security Plan establishes how to achieve high assurance that nuclear power plant digital computer and communication systems and networks associated with the following are adequately protected against cyber attacks up to and including the design basis threat:

1. Safety-related and important-to-safety functions,
2. Security functions,
3. Emergency preparedness functions including offsite communications, and
4. Support systems and equipment which, if compromised, would have a significant impact on safety, security, or emergency preparedness functions.

Part one of the proposed change is designed to achieve high assurance that the systems are protected from cyber attacks. The ANO Cyber Security Plan itself does not require any plant modifications. However, the ANO Cyber Security Plan does describe how plant modifications which involve digital computer systems are reviewed to provide high assurance of adequate protection against cyber attacks, up to and including the design basis threat as defined in the Rule. The proposed change does not alter the plant configuration, require new plant equipment to be installed, alter accident analysis assumptions, add any initiators, or effect the function of plant systems or the manner in which systems are operated, maintained, modified, tested, or inspected. The first part of the proposed change is designed to achieve high assurance that the systems within the scope of the Rule are protected from cyber attacks and has no impact on the probability or consequences of an accident previously evaluated.

The second part of the proposed change is an implementation schedule. The third part adds a sentence to the existing operating license condition for Physical Protection. Both of these changes are administrative and have no impact on the probability or consequences of an accident previously evaluated.

Therefore, it is concluded that this change does not involve a significant increase in the probability or consequences of an accident previously evaluated.

2. Does the proposed change create the possibility of a new or different kind of accident from any accident previously evaluated?

Response: No.

The proposed change is required by 10 CFR 73.54 and includes three parts. The first part is the submittal of the ANO Cyber Security Plan for NRC review and approval. The ANO Cyber Security Plan conforms to the template provided by NEI 08-09 with deviations and provides a description of how the requirements of the Rule will be implemented at ANO. The ANO Cyber Security Plan establishes the licensing basis for the ANO Cyber Security Program. The ANO Cyber Security Plan establishes how to achieve high assurance that nuclear power plant digital computer and communication systems and networks associated with the following are adequately protected against cyber attacks up to and including the design basis threat:

1. Safety-related and important-to-safety functions,
2. Security functions,
3. Emergency preparedness functions including offsite communications, and
4. Support systems and equipment which, if compromised, would have a significant impact on safety, security, or emergency preparedness functions.

Part one of the proposed change is designed to achieve high assurance that the systems within the scope of the Rule are protected from cyber attacks. The ANO Cyber Security Plan itself does not require any plant modifications. However, the ANO Cyber Security Plan does describe how plant modifications involved digital computer systems are reviewed to provide high assurance of adequate protection against cyber attacks, up to and including the design basis threat defined in the Rule. The proposed change does not alter the plant configuration, require new plant equipment to be installed, alter accident analysis assumptions, add any initiators, or effect the function of plant systems or the manner in which systems are operated, maintained, modified, tested, or inspected. The first part of the proposed change is designed to achieve high assurance that the systems within the scope of the Rule are protected from cyber attacks and does not create the possibility of a new or different kind of accident from any previously evaluated.

The second part of the proposed change is an implementation schedule. The third part adds a sentence to the existing operating license condition for Physical Protection. Both of these changes are administrative and do not create the possibility of a new or different kind of accident from any previously evaluated.

Therefore, the proposed change does not create the possibility of a new or different kind of accident from any previously evaluated.

3. Does the proposed change involve a significant reduction in a margin of safety?

Response: No.

The proposed change is required by 10 CFR 73.54 and includes three parts. The first part is the submittal of the ANO Cyber Security Plan for NRC review and approval. The ANO Cyber Security Plan conforms to the template provided by NEI 08-09 with deviations and provides a description of how the requirements of the Rule will be implemented at ANO. The ANO Cyber Security Plan establishes the licensing basis for the ANO Cyber Security Program. The ANO Cyber Security Plan establishes how to achieve high assurance that nuclear power plant digital computer and communication systems and networks associated with the following are adequately protected against cyber attacks up to and including the design basis threat:

1. Safety-related and important-to-safety functions,
2. Security functions,
3. Emergency preparedness functions including offsite communications, and
4. Support systems and equipment which, if compromised, would have a significant impact on safety, security, or emergency preparedness functions.

Part one of the proposed change is designed to achieve high assurance that the systems within the scope of the Rule are protected from cyber attacks. Plant safety margins are established through limiting conditions for operation, limiting safety system settings, and safety limits specified in the technical specifications. Because there is no change to these established safety margins, the proposed change does not involve a significant reduction in a margin of safety.

The second part of the proposed change is an implementation schedule. The third part adds a sentence to the existing operating license condition for Physical Protection. Both of these changes are administrative and do not involve a significant reduction in a margin of safety.

Therefore, the proposed change does not involve a significant reduction in a margin of safety.

Based on the above, Entergy concludes that the proposed change presents no significant hazards consideration under the standards set forth in 10CFR50.92(c), and accordingly, a finding of "no significant hazards consideration" is justified.

4.3 Conclusion

In conclusion, based on the considerations discussed above: (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 amendment will not be inimical to the common defense and security or to the health and safety of the public.

5.0 ENVIRONMENTAL CONSIDERATION

The proposed amendment establishes the licensing basis for a Cyber Security Program for ANO and will be a part of the ANO Cyber Security Plan. The proposed amendment meets the eligibility criterion for a categorical exclusion set forth in 10 CFR 51.22(c)(12). Therefore, pursuant to 10 CFR 51.22(b) no environmental impact statement or environmental assessment need be prepared in connection with the issuance of the amendment.

6.0 REFERENCES

1. Federal Register Notice, Final Rule 10 CFR Part 73, Power Reactor Security Requirements, published on March 27, 2009, 74 FR 13926
2. Federal EA-02-026, Order Modifying Licenses, Safeguards and Security Plan Requirements, issued February 25, 2002

Attachment 2

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Proposed ANO-1 and ANO-2 Operating License Changes (mark-up)

EOI shall fully implement in accordance with an NRC-approved implementation schedule and maintain in effect all provisions of the Commission-approved ANO Cyber Security Plan submitted by letter dated November 19, 2009, and withheld from public disclosure in accordance with 10 CFR 2.390.

(5) Implementation of the Improved Technical Specifications (ITS)

The licensee is authorized to relocate certain Technical Specification requirements previously included in Appendix A to licensee controlled documents, as described in Table R, Relocated Specifications, and Table LA, Removal of Details, attached to the Safety Evaluation for Amendment No. 215. These requirements shall be relocated to the appropriate documents as part of the implementation of the ITS.

The schedule for performing Surveillance Requirements (SRs) that are new or revised in Amendment No. 215 shall be as follows:

1. For SRs that are new in this amendment, the first performance shall be due at the end of the first surveillance interval, which begins on the date of implementation of this amendment.
2. For SRs that existed prior to this amendment whose intervals of performance are being reduced, the first reduced surveillance interval shall begin upon completion of the first surveillance performed after implementation of this amendment.
3. For SRs that existed prior to this amendment that contained modified acceptance criteria, the performance shall be due at the end of the first surveillance interval that began on the date the surveillance was last performed prior to the implementation of this amendment.
4. For SRs that existed prior to this amendment whose interval of performance are being extended, the first extended surveillance interval shall begin upon completion of the last surveillance performed prior to the implementation of this amendment.

(6) Deleted

(7) Deleted

(10) Mitigation Strategies

The licensee shall develop and maintain strategies for addressing large fires and explosions that include the following key areas:

- (i) Fire fighting response strategy with the following elements:
 1. Pre-defined coordinated fire response strategy and guidance
 2. Assessment of mutual aid fire fighting assets
 3. Designated staging areas for equipment and materials
 4. Command and control
 5. Training of response personnel

- (ii) Operations to mitigate fuel damage considering the following:
 1. Protection and use of personnel assets
 2. Communications
 3. Minimizing fire spread
 4. Procedures for implementing integrated fire response strategy
 5. Identification of readily-available pre-staged equipment
 6. Training on integrated fire response strategy
 7. Spent fuel pool mitigation measures

- (iii) Actions to minimize release to include consideration of:
 1. Water spray scrubbing
 2. Dose to onsite responders

D. Physical Protection

EOI shall fully implement and maintain in effect all provisions of the Commission-approved physical security, training and qualification, and safeguards contingency plans, including amendments made pursuant to provisions of the Miscellaneous Amendments and Search Requirements revisions to 10 CFR 73.55 (51 FR 27817 and 27822) and to the authority of 10 CFR 50.90 and 10 CFR 50.54(p). The combined set of plans, which contains Safeguards Information protected under 10 CFR 73.21, is entitled: "Arkansas Nuclear One Physical Security, Safeguards Contingency and Training & Qualification Plan," as submitted on May 4, 2006.

EOI shall fully implement in accordance with an NRC-approved implementation schedule and maintain in effect all provisions of the Commission-approved ANO Cyber Security Plan submitted by letter dated November 19, 2009, and withheld from public disclosure in accordance with 10 CFR 2.390.

E. This renewed license is subject to the following additional condition for the protection of the environment:

Before engaging in additional construction or operational activities which may result in an environmental impact that was not evaluated by the Commission, EOI will prepare and record an environmental evaluation for such activity. When the evaluation indicates that such activity may result in a significant adverse environmental impact that was not evaluated, or that is significantly greater than that evaluated, in the Final Environmental Statement (NUREG-0254) or any addendum thereto, and other NRC environmental impact assessments, EOI shall provide a written evaluation of such activities and obtain prior approval from the Director, Office of Nuclear Reactor Regulation.

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F. Updated Final Safety Analysis Report Supplement

The Final Safety Analysis Report supplement, as revised, shall be included in the next scheduled update to the Final Safety Analysis Report required by 10 CFR 50.71(e)(4) following issuance of this renewed license. Until that update is complete, ANO-2 may make changes to the programs and activities described in the supplement without prior Commission approval, provided that ANO-2 evaluates each such change pursuant to the criteria set forth in 10 CFR 50.59 and otherwise complies with the requirements of that section.

The ANO-2 Final Safety Analysis Report supplement, submitted pursuant to 10 CFR 54.21(d), describes certain future activities to be completed prior to the period of extended operation. ANO-2 shall complete these activities no later than July 17, 2018, and shall notify the NRC in writing when implementation of these activities is complete and can be verified by NRC inspection.

G. Reactor Vessel Material Surveillance Capsules

All capsules in the reactor vessel that are removed and tested must meet the test procedures and reporting requirements of American Society for Testing and Materials (ASTM) E 185-82 to the extent practicable for the configuration of the specimens in the capsule. Any changes to the capsule withdrawal schedule, including spare capsules, must be approved by the NRC prior to implementation. All capsules placed in storage must be maintained for future insertion.

4. This renewed license is effective as of the date of issuance and shall expire at midnight, July 17, 2038.

FOR THE NUCLEAR REGULATORY COMMISSION

Original signed by J. E. Dyer

J. E. Dyer, Director
Office of Nuclear Reactor Regulation

Attachments:

1. Appendix A - Technical Specifications
2. Preoperational Tests, Startup Tests and other items which must be completed by the indicated Operational Mode

Date of Issuance: June 30, 2005

Renewed License No. NPF-6
Amendment No.

~~Revised by letter dated February 7, 2007, July 18, 2007~~

Attachment 3

OCAN110901

Revised ANO-1 and ANO-2 Operating License Pages

EOI shall fully implement in accordance with an NRC-approved implementation schedule and maintain in effect all provisions of the Commission-approved ANO Cyber Security Plan submitted by letter dated November 19, 2009, and withheld from public disclosure in accordance with 10 CFR 2.390.

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