

May 20, 2004

Mr. Jeff Forbes, Vice President  
Entergy Operations, Inc.  
Arkansas Nuclear One  
1448 SR 333  
Russellville, Arkansas 72802

SUBJECT: ISSUANCE OF ENVIRONMENTAL SCOPING SUMMARY REPORT  
ASSOCIATED WITH THE STAFF'S REVIEW OF THE APPLICATION BY  
ENTERGY OPERATIONS, INC. FOR RENEWAL OF THE OPERATING LICENSE  
FOR ARKANSAS NUCLEAR ONE, UNIT 2

Dear Mr. Forbes:

The U.S. Nuclear Regulatory Commission (NRC) conducted a scoping process, from December 22, 2003, through February 20, 2004, to determine the scope of the NRC staff's environmental review of the application for renewal of the operating license for Arkansas Nuclear One, Unit 2 (ANO-2). As part of the scoping process, the NRC staff held two public environmental scoping meetings in Russellville, Arkansas on February 3, 2004, to solicit public input regarding the scope of the review. The scoping process is the first step in the development of a plant-specific supplement to NUREG-1437, "Generic Environmental Impact Statement for License Renewal of Nuclear Plants (GEIS)", for ANO-2.

The NRC staff has prepared the enclosed Environmental Scoping Summary Report identifying comments received at the February 3, 2004, license renewal environmental scoping meetings, by letters and electronic mail. In accordance with Title 10 of the *Code of Federal Regulations* Part 51.29(b), you are being provided a copy of the scoping summary report. The transcripts of the meetings can be found as an attachment to the meeting summary issued on February 24, 2004. The meeting summary is available for public inspection in the NRC Public Document Room located at One White Flint North, 11555 Rockville Pike (first floor), Rockville, Maryland or electronically from the Publicly Available Records component of NRC's document management system (ADAMS) under Accession Number ML040570279. ADAMS is accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html>, which provides access through the NRC's Public Electronic Reading Room (PERR) link (Note that the URL is case-sensitive). Persons who do not have access to ADAMS or who encounter problems in accessing the documents located in ADAMS should contact the NRC's PDR Reference staff at 1-800-397-4209, or 301-415-4737, or by e-mail to [pdr@nrc.gov](mailto:pdr@nrc.gov).

J. Forbes

-2-

The next step in the environmental review process is the issuance of the draft supplement to the GEIS scheduled for September 2004. Notice of the availability of the draft supplement to the GEIS and the procedures for providing comments will be published in an upcoming *Federal Register* notice. If there are any questions concerning this matter, please contact me at (301) 415-1120.

Sincerely,

***/RA/***

Thomas J. Kenyon, Senior Project Manager  
Environmental Section  
License Renewal and Environmental Impacts Program  
Division of Regulatory Improvement Programs  
Office of Nuclear Reactor Regulation

Docket No. 50-368

Enclosure: As stated

cc w/encl: See next page

J. Forbes

-2-

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OFFICIAL AGENCY RECORD

**Environmental Impact Statement  
Scoping Process**

**Summary Report**

**Arkansas Nuclear One  
Unit 2  
Pope County, Arkansas**

**May 2004**

Docket No. 50-368

**U.S. Nuclear Regulatory Commission  
Rockville, Maryland**





## Introduction

On October 15, 2003, the Nuclear Regulatory Commission (NRC) received an application from Entergy Operations, Inc. (Entergy) dated October 14, 2003, for renewal of the operating license of Arkansas Nuclear One, Unit 2 (ANO-2). ANO-2 is located in Pope County, Arkansas. There are two nuclear power units at the Arkansas Nuclear One site. A Final Environmental Impact Statement regarding renewal of the license for Arkansas Nuclear One, Unit 1 (ANO-1) was issued on April 15, 2001, and NRC issued its decision to renew the operating license of ANO-1 on June 12, 2001. The current operating license for ANO-2 expires on July 17, 2018. ANO-2 is a pressurized water reactor designed by Combustion Engineering. It is located in Pope County, Arkansas.

As part of the application for renewal of the operating license of ANO-2, Entergy submitted an environmental report (ER) prepared in accordance with the requirements of 10 CFR Part 51. 10 CFR Part 51 contains the NRC requirements for implementing the National Environmental Policy Act (NEPA) of 1969 and the implementing regulations promulgated by the Council on Environmental Quality (CEQ). Section 51.53 outlines requirements for preparation and submittal of environmental reports to the NRC.

Section 51.53(c)(3) was based upon the findings documented in NUREG-1437, "Generic Environmental Impact Statement for License Renewal of Nuclear Power Plants," (GEIS). The GEIS, in which the staff identified and evaluated the environmental impacts associated with license renewal, was first issued as a draft for public comment. The staff received input from Federal and State agencies, public organizations, and private citizens before developing the final document. As a result of the assessments in the GEIS, a number of impacts were determined to be small and to be generic to all nuclear power plants. These were designated as Category 1 impacts. An applicant for license renewal may adopt the conclusions contained in the GEIS for Category 1 impacts, absent new and significant information that may cause the conclusions to fall outside those of the GEIS. Category 2 impacts are those impacts that have been determined to be plant-specific and are required to be evaluated in the applicant's ER. The Commission determined that the NRC does not have a role in energy planning decision-making for existing plants, which should be left to State regulators and utility officials. Therefore, an applicant for license renewal need not provide an analysis of the need for power, or the economic costs and economic benefits of the proposed action. Additionally, the Commission determined that the ER need not discuss any aspect of storage of spent fuel for the facility that is within the scope of the generic determination in 10 CFR 51.23(a) and in accordance with 10 CFR 51.23(b). This determination was based on the Nuclear Waste Policy Act of 1982 and the Commission's Waste Confidence Rule, 10 CFR 51.23.

On December 22, 2003, NRC published a Notice of Intent in the *Federal Register* (68 FR 71174) to notify the public of the staff's intent to prepare a plant-specific supplement to the GEIS to support the renewal application for the ANO-2 operating license. The plant-specific supplement to the GEIS will be prepared in accordance with NEPA, CEQ guidelines, and 10 CFR Part 51. As outlined by NEPA, the NRC initiated the scoping process with the issuance of the *Federal Register* Notice. The NRC invited the applicant, Federal, State, and local government agencies, local organizations, and individuals to participate in the scoping process by providing oral comments at the scheduled public meetings and/or submitting written suggestions and comments no later than February 20, 2004. The scoping process included two

public scoping meetings held at the Russellville Holiday Inn in Russellville, Arkansas on February 3, 2004. The NRC announced the meetings in local newspapers (*Arkansas Democrat Gazette*, *Russellville Courier*, *Dardanelle Post Dispatch*, and *Dover Times*), on a cable television channel (Cox Cable), in issued press releases, and through flyers distributed locally. Approximately 40 people attended the meetings, including the NRC environmental review team, members of the public, representatives from Entergy, and representatives from State and local government agencies. Both sessions began with NRC staff members providing a brief overview of the license renewal process and the NEPA process. Following the prepared statements presented by the NRC, the meetings were opened for public participation. The transcripts of the meetings can be found as an attachment to the meeting summary, which was issued on February 24, 2004. The meeting summary is available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records (PARS) component of NRC's document system (ADAMS) under accession number ML040570279. ADAMS is accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html> (the Public Electronic Reading Room) (Note the URL is case-sensitive).

The scoping process provides an opportunity for public participation to identify issues to be addressed in the plant-specific supplement to the GEIS and highlight public concerns and issues. The Notice of Intent identified the following objectives of the scoping process:

- Define the proposed action
- Determine the scope of the supplement to the GEIS and identify significant issues to be analyzed in depth
- Identify and eliminate peripheral issues
- Identify any environmental assessments and other environmental impact statements being prepared that are related to the supplement to the GEIS
- Identify other environmental review and consultation requirements
- Indicate the schedule for preparation of the supplement to the GEIS
- Identify any cooperating agencies
- Describe how the supplement to the GEIS will be prepared.

At the conclusion of the scoping period, the NRC staff and its contractor reviewed the transcripts and all written material received, and identified individual comments. Four letters containing comments were received during the scoping period. All comments and suggestions received orally during the scoping meetings or in writing were considered. Each set of comments from a given commenter was given a unique alpha identifier (Commenter ID letter), allowing each set of comments from a commenter to be traced back to the letter in which the comments were submitted.

Table 1 identifies the individuals providing comments and the Comment ID letter associated with each person's set of comments. The Comment ID letter is preceded by ANO2-S (which

stands for Arkansas Nuclear One Unit 2 scoping). The comments are listed in the order in which they were received. Accession numbers indicate the location of the written comments in ADAMS.

The subject areas the comments were grouped into are as follows:

1. Comments Regarding License Renewal and Its Processes
2. Comments Concerning Threatened or Endangered Species Issues
3. Comments Concerning Aquatic Ecology Issues
4. Comments Concerning Socioeconomic Issues

Each comment is summarized in the following pages. For reference, the unique identifier for each comment (Comment ID letter listed in Table 1 plus the comment number) is provided. In those cases where no new environmental information was provided by the commenter, no further evaluation will be performed.

The preparation of the plant-specific supplement to the GEIS (which is the SEIS) will take into account all the relevant issues raised during the scoping process. The SEIS will address both Category 1 and Category 2 issues, along with any new information identified as a result of scoping. The SEIS will rely on conclusions supported by information in the GEIS for Category 1 issues, and will include the analysis of Category 2 issues and any new and significant information. The draft plant-specific supplement to the GEIS will be made available for public comment. The comment period will offer the next opportunity for the applicant, interested Federal, State, and local government agencies, local organizations, and members of the public to provide input to the NRC's environmental review process. The comments received on the draft SEIS will be considered in the preparation of the final SEIS. The final SEIS, along with the staff's Safety Evaluation Report (SER), will provide much of the basis for the NRC's decision on the ANO-2 license renewal application.

**Table 1.** Individuals Providing Comments During Scoping Comment Period

Commenter ID	Commenter	Affiliation	Date	Comment Source and ADAMS Accession Number
ANO2-S-A	Georgia Cranmore	National Oceanic and Atmospheric Administration	December 17, 2003	Comment Letter - ML0401307400
ANO2-S-B	Sandi Formica	Arkansas Department of Environmental Quality	January 30, 2004	Comment Letter - ML0405006770
ANO2-S-C	Summer R. King	United Keetoowah Band	January 15, 2004	Comment Letter - ML040580312
ANO2-S-D	Margaret Harney	Fish and Wildlife Service	January 14, 2004	Comment Letter - ML040510185

(a) The afternoon and evening transcripts can be found under accession number ML040570279.

**Arkansas Nuclear One, Unit 2 (ANO-2)  
Public Scoping Meeting  
Comments and Responses**

The comments and suggestions received as part of the scoping process are discussed below. Parenthetical numbers after each comment refer to the Commenter's ID letter and the comment number. Comments can be tracked to the commenter and the source document through the ID letter and comment number listed in Table 1.

**1. Comments Regarding License Renewal and its Processes**

**Comment:** The Arkansas Department of Environmental Quality (ADEQ) has reviewed the information submitted on the referenced project. We have no comments at this time. (ANO2-S-B-1)

**Comment:** We have no comment at this time, but reserve the right for future comment. Please keep us informed about this project. (ANO2-S-C-1)

**Response:** *The comments are general in nature and do not provide any significant, new information; therefore, they will not be evaluated further.*

**2. Comments Concerning Threatened or Endangered Species Issues**

As stated in 10 CFR Part 51, Table B-1, threatened or endangered species issues are a Category 2 issue.

**Comment:** It is NOAA [National Oceanic and Atmospheric Administration] Fisheries' opinion that the project will have no effect on listed species or critical habitat protected by the ESA [Endangered Species Act] under NOAA Fisheries' purview. No further consultation with NOAA Fisheries pursuant to section 7(a)(2) of the ESA is required. Consultation with NOAA Fisheries, Habitat Conservation Division, pursuant to the Magnuson-Stevens Fishery Conservation and Management Act's requirements for essential fish habitat consultation (16 U.S.C. 1855 (b)(2) and 50 CFR 600.905-.930, subpart K), may be required. (ANO2-S-A-1)

**Comment:** The endangered least tern (*Sterna antillarum*) and the threatened bald eagle (*Haliaeetus leucocephalus*) are present in the vicinity of the projected area. However, the proposed relicensing of the existing plant is not likely to impact any listed species. (ANO2-S-D-1)

**Response:** *The comments regarding the presence of threatened or endangered species in the vicinity of the ANO-2 site are general in nature and do not provide significant, new information. Discussions of threatened or endangered species in the vicinity of the ANO-2 site will be found in Chapters 2 and 4 of the draft SEIS.*

### **3. Comments Concerning Aquatic Ecology Issues**

As stated in 10 CFR Part 51, Table B-1, Category 1 and 2 aquatic ecology issues include:

#### **Category 1**

- Accumulation of contaminants in sediments or biota
- Entrainment of phytoplankton and zooplankton
- Cold shock
- Thermal plume barrier to migrating fish
- Distribution of aquatic organisms
- Premature emergence of aquatic insects
- Gas supersaturation (gas bubble disease)
- Low dissolved oxygen in the discharge
- Losses from predation, parasitism, and disease among organisms exposed to sublethal stresses
- Stimulation of nuisance organisms.

#### **Category 2**

- Entrainment of fish and shellfish in early life stages
- Impingement of fish and shellfish
- Heat shock.

**Comment:** The Service has become aware that a block net shad barrier is now being used on the entrance to the intake canal during the fall and winter months. The detailed use and effects of this barrier should be included in any environmental assessments and/or environmental impact statements regarding ANO operations. We believe this barrier may have both positive and negative effects on the fishery. In addition to reducing temperature induced shad entrainment and impingement the barrier may also prevent impingement of other healthy species. However, the barrier appears to prevent and/or discourage other species from entering the intake canal, which is valuable fisheries habitat and a popular recreation fishing location for much of the year. The Service recommends the establishment of specific protocols for the deployment of the barrier only when necessary to prevent increased temperature induced shad entrainment and impingement. Water temperature monitoring, meteorological data, and forecasts should provide sufficient indication of water temperatures approaching and departing shad thermal intolerances. Limiting shad barrier use by having deployment coincide with these water temperatures will maintain habitat availability and recreational use to the maximum extent, while maintaining ANO's ability to reduce shad impingement when necessary. Fisheries and recreational use of the intake canal have historically been reduced during the winter and for this reason along with the benefits to ANO operations, the Service believes that the use of the barrier when necessary will have limited effects on fisheries or recreation. (ANO2-S-D-2)

**Response:** *The comments are noted. Chapter 2 of the draft SEIS will provide a discussion of the block net shad barrier. Chapter 4 will provide an analysis of the environmental impacts of that barrier.*

#### **4. Comments Concerning Socioeconomic Issues**

As stated in 10 CFR Part 51, Table B-1, Category 1 and 2 socioeconomic issues include:

##### **Category 1**

- Public services: public safety, social services, and tourism and recreation
- Public services, education (license renewal term)
- Aesthetics impacts (refurbishment)
- Aesthetics impacts (license renewal)
- Aesthetics impacts of transmission lines (license renewal term).

##### **Category 2**

- Housing impacts
- Public services: public utilities
- Public services, education (refurbishment)
- Offsite land use (refurbishment)
- Offsite land use (license renewal term)
- Public services, transportation
- Historic and archaeological resources.

**Comment:** Further, the Service is aware that security barriers have been placed in the intake and effluent canals restricting access and recreational use. These restrictions and the effects of these barriers on the fisheries and recreation access should be included in any environmental assessment and/or environmental impact statements regarding ANO operations. These areas provide high quality habitat and water conditions that attract high densities of fish seasonally and therefore these areas and the adjacent waters have been and continue to be popular recreational fishing areas. The Service recommends documenting the loss of these valuable recreational uses and the benefits of creating a fisheries refugia. By restricting access to these area, ANO is providing high-quality habitat refugia for fish by limiting take or harassment from recreational fishing to adjacent areas. In the past the dense fish concentrations in these area have resulted in high levels of take. Limiting take will improve the quality and quantity of the fisheries and recreational fishing in Lake Dardanelle as a whole annually and in the long term. The Service recommends coordinating with the Arkansas Game and Fish Commission and/or other fisheries researchers to examine the effects of these changes on the fisheries in Lake Dardanelle. (ANO2-S-D-3)

**Response:** *The comments are noted. Chapter 2 of the draft SEIS will provide a discussion of the security barriers and the role they play in restricting recreational fishing in the intake and effluent canals. Chapter 4 will discuss in detail the environmental impacts the barriers may have on recreational fishing.*

## Summary

The preparation of the plant-specific supplement to the GEIS (called a SEIS) for Arkansas Nuclear One, Unit 2, will take into account all the relevant environmental issues raised during the scoping process that are described above. The draft SEIS will be made available for public comment. That comment period will offer the next opportunity for the applicant, interested Federal, Tribal, State, and local government agencies, local organizations, and members of the public to provide input to the NRC's environmental review process. The comments received on the draft SEIS will be considered during the development of the final SEIS. The final SEIS, along with the staff's Safety Evaluation Report (SER), will provide much of the basis for the NRC's decision on the ANO-2 license renewal.