

UNITED STATES OF AMERICA

NUCLEAR REGULATORY COMMISSION

**Title: DRAFT SUPPLEMENTAL ENVIRONMENTAL
IMPACT STATEMENT - PUBLIC MEETING**

PART I

Location: Russellville, Arkansas

Date: Tuesday, November 14, 2000

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UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

DRAFT SUPPLEMENT ENVIRONMENTAL IMPACT STATEMENT
FOR THE ARKANSAS NUCLEAR ONE
LICENSE RENEWAL APPLICATION

PUBLIC MEETING

Holiday Inn Russellville
Route 7 & I-40
Russellville, Arkansas

Tuesday, November 14, 2000

The above-entitled meeting commenced, pursuant to
notice, at 1:30 p.m.

APPEARANCES:

- CHIP CAMERON
- BARRY ZALCMAN
- CHRIS GRIMES
- ROBERT PRATO
- ANDREW KUGLER
- THOMAS KENYON

On Behalf of PNNL:

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EVA ECKERT HICKEY

On Behalf of ANO-1:

GARRY YOUNG

P R O C E E D I N G S

1
2 MR. CAMERON: Good afternoon, everyone, welcome to
3 the NRC's public meeting on the Draft Environmental Impact
4 Statement for the license renewal application for Arkansas
5 Nuclear Unit One. I think the people who are going to be
6 doing the presentations are going to call it ANO-1
7 throughout the presentations, so that will be the acronym
8 that we'll go using today.

9 My name is Chip Cameron and I'm with the NRC's
10 Office of General Counsel on the Special Counsel for Public
11 Liaison for the Commission, and I'm going to serve as your
12 facilitator today. Before we get to the presentation, I'd
13 just like to cover three things briefly with you. One is
14 the objectives for the meeting; secondly, I'd like to talk
15 about format for the meeting this afternoon and, third, I
16 wanted to go over the agenda with you to give you an idea of
17 what's going to be happening this afternoon.

18 In terms of objectives the NRC wants to inform you
19 -- provide you with information about the Draft
20 Environmental Impact Statement on the license renewal
21 application and to also give you a status of the license
22 renewal application generally.

23 Secondly, we want to hear any comments that any of
24 you might have on the findings that are in the Draft
25 Environmental Impact Statement. And the third ultimate

1 objective is that we want to use any comments or information
2 that you have for us today in preparing the Final
3 Environmental Impact Statement, and the NRC staff will be
4 providing you more information on what this whole process is
5 in a minute.

6 In terms of format today we're going to have a
7 number of presentations for you that go through various
8 parts of the license renewal process, and at the end of each
9 of those presentations we're going to go out to you to see
10 if you have any questions about that presentation or any
11 comments on what was said during that presentation, and we
12 think that you'll find that more interesting than just
13 hearing a bunch of presentations and then just having
14 feedback or comments after all of that is done. We're also
15 going to save time at the end of the day so that if anybody
16 does have a formal statement that they want to make, you
17 will have time to do that then.

18 The NRC is also taking written comments on this
19 Draft Environmental Impact Statement, and we wanted to be
20 with you here today to talk to you in person about this and
21 you may hear things today that will help you to prepare
22 written comments if you feel like sending them in or it may
23 be interesting for you to hear what other people in the
24 community have to say on some of these issues.

25 I would note that any comment that you make today

1 is going to be considered with the same weight as a written
2 comment that might be submitted. And we have our
3 stenographer, Bert, over here; we are taking a transcript of
4 this meeting and that transcript will be available.

5 When we get to the discussion periods on the
6 agenda, if you want to make a comment or ask a question,
7 just signal me and I will bring you this talking stick and
8 if you could just state your name and affiliation, if
9 appropriate, for the record so we'll know who said what, and
10 then we'll try to answer your questions, if it's a question,
11 or we'll note your comment.

12 There's only one guideline -- I don't think we
13 have to worry too much about it -- but we want to make sure
14 that everyone has an opportunity today to talk, so I would
15 just ask you if you do have comments, try to be to the point
16 and concise so that we can make sure that everyone has a
17 chance to speak today. And I would just ask that if you,
18 when we get to the formal statements, if you could keep that
19 to ten minutes, we would appreciate that.

20 We do want to stay on the issue of the Draft
21 Environmental Impact Statement. We know there may be
22 broader concerns with either the facility or with nuclear
23 power in general, and we're always ready to listen to those
24 comments but we do want to make sure that we get all the
25 information out to you on the Draft Environmental Impact

1 Statement and hear all the comments on that, so that's going
2 to be our first priority.

3 And I would like to thank all of you for being
4 here today with us, and I'm going to introduce the NRC and
5 our contractor personnel who are going to be doing
6 presentations in the context of the agenda for today. In
7 about a minute we're going to go to Barry Zalzman, who's
8 right here, who's going to give you a few words on meeting
9 overview and end purpose. And Barry, as you will note from
10 your agendas, is a section chief of a branch in the NRC
11 that's the Generic Issues, Environmental, Financial and
12 Rulemaking Branch, okay.

13 And all of these people from the NRC that are
14 going to be doing presentations are within an office at the
15 NRC called the Office of Nuclear Reactor Regulation.

16 Now in terms of Barry's section, his section
17 supervises the preparation of environmental impact
18 statements for license renewal applications generally, so
19 they have a lot of experience and you will be hearing more
20 about that. But it includes not only ANO-1 but other
21 facilities around the country who have come in with license
22 renewal applications.

23 Next we're going to go to Chris Grimes, who is
24 right here, and Chris is the chief of the License Renewal
25 and Standardization Branch at the NRC. And that branch has

1 the overall responsibility for integrating the safety
2 analysis on the license renewal application with the
3 environmental analysis that comes out of Barry's section,
4 and they also integrate any inspection findings in there and
5 we'll be telling you about how that process works in a few
6 minutes.

7 Next we're going to go to Bob Prato, and Bob is
8 also -- Bob is in Chris Grimes' branch, the License Renewal
9 and Standardization Branch, and he's the safety project
10 manager there, and he's going to tell you about the overall
11 license renewal process so you know what context this
12 environmental information how that fits into the overall
13 license renewal process.

14 And next we're going to go for an overview of the
15 National Environmental Policy Act process. This is the act
16 that requires the preparation of environmental impact
17 statements and Tom Kenyon, who is right over here, is going
18 to talk about that. And again, he's in the Generic Issues,
19 Environmental, Financial and Rulemaking Branch at NRC, and
20 he's the environmental project manager for ANO-1, for this
21 particular facility.

22 Then we're going to get to the meat of the
23 discussion in terms of the Draft Environmental Impact
24 Statement and we're going to go to Eva Hickey from Pacific
25 Northwest National Lab, and Eva is going to be taking us

1 through the results of the environmental review.

2 And we're also going to have Andy Kugler from the
3 NRC staff participate in that. Again, he's an environmental
4 project manager in the Generic Issues Branch that I
5 mentioned earlier. And then we're going to go back to Tom
6 Kenyon for some preliminary conclusions and then talk to
7 you, see if anybody has a formal statement.

8 But again, if you look at your agenda, we're going
9 to be going out to you at various times to see if you have
10 comments or questions about any of these various
11 preparations. Again thank you, and I'm going to turn it
12 over now to Barry.

13 MR. ZALCMAN: Welcome, my name is Barry Zalcman,
14 as Chip indicated. The title of the branch is the Generic
15 Issues, Environmental, Financial and Rulemaking Branch, and
16 within that we have a broad range of responsibilities. For
17 those of you familiar with the deregulation of the utility
18 market, there has to be financial qualification reviews;
19 that's also done within our branch. We're responsible for a
20 number of rulemaking activities where we establish new
21 regulations as well.

22 But principally for this activity, we focused on
23 the environmental staff; we have environmental specialists
24 working in the branch; we have project managers. And that
25 is our responsibility to implement the NEPA program within

1 the Office of Nuclear Reactor Regulation; it's to consider
2 the agency's regulations and environmental protection space,
3 and it's also to assure that we have technical expertise on
4 staff and access to technical experts at National
5 Laboratories. But we also deal with contractors and we also
6 have contract specialists that work with us to assist in that
7 review.

8 When we were here in April to talk to you about
9 the scope of the NRC environmental review for Arkansas
10 Nuclear One, Unit 1, it was because of an application
11 submitted by Entergy requesting for the renewal of its
12 license, and we indicated at that time we were seeking
13 public engagement to determine the scope of the
14 environmental review. That was to supplement the agency's
15 vision of what issues had to be considered and reach out to
16 the public and the community around the plant, licensee,
17 itself and any other interested party that would be aware of
18 additional information that we ought to consider in our
19 review.

20 We are now into the next stage, which is the
21 consideration of our independent assessment, and provide you
22 with the preliminary results of that review. And that is
23 contained within the document, the Draft Environmental
24 Impact Statement for ANO, Unit 1. We plan to put the
25 environmental review effort in proper context because it's

1 just one of several activities that have to go on before our
2 Commission can actually pass judgment on renewal of the
3 license.

4 We'll talk a little about the statutory as well as
5 the regulatory framework of requirements for this action,
6 the purpose of the review, the process that we go through in
7 conducting our review, the preliminary results of that
8 review and the schedule that we're working to.

9 We need to make sure that you understand that this
10 is a meeting for you and with you. We need to participate
11 to develop a product that we all can factor in supporting
12 the Commission's decision regarding license renewal.

13 We'll provide you an opportunity to give us any
14 input that you may have on these preliminary results or ask
15 about any of the issues that you've heard today. Most
16 importantly through this discussion we want to hear from you
17 either today or during the public comment period on the
18 draft document. So let me provide you a little bit of
19 background on this effort.

20 The operating license for Unit 1 of Arkansas
21 Nuclear One -- and just recognize that we're dealing with
22 Unit 1; this is a two unit plant -- currently expires in
23 2014. As will be discussed, the Atomic Energy Act allows
24 for a licensee to seek the renewal of an operating license.
25 In this situation the licensee seeking the renewal is

1 Entergy, and for purposes of this license renewal
2 application, they are considered an applicant.

3 The NRC has established the renewal of an
4 operating license for a nuclear power plant can be for a
5 period of up to twenty years. Part of the license renewal
6 process requires NRC to systematically consider
7 environmental impacts during its decision-making process on
8 this matter. This review must comply with the National
9 Environmental Policy Act -- we'll be calling that NEPA
10 through much of the discussion this afternoon -- as well as
11 NRC's own environmental protection regulations.

12 ANO-1 submitted its license renewal application in
13 January of 2000. The NRC environmental staff and its
14 contractors conducted a site review in April of this year,
15 and we had two public meetings dealing with scoping. During
16 that meeting we identified the environmental issues that we
17 would be considering and sought public input to consider
18 additional issues that may be of relevance or significance
19 in our decision making.

20 Thereafter, we had an on-going dialogue with
21 Entergy during the review period to resolve any additional
22 questions that we had while conducting our review and
23 performing our independent assessment. On October 3rd of
24 this year the NRC issued a Draft Supplemental Environmental
25 Impact Statement that describes the results of our review.

1 We are currently in the middle of that comment period for
2 the document, during which time we expect and hope to
3 receive comments from interested members of the public.

4 Comments on the environmental issues discussed in
5 the report may help the staff evaluate the acceptability of
6 the environmental aspects of ANO, Unit 1, license renewal
7 application, and that brings us to the specifics of why
8 we're here today.

9 Now the purposes of today's meeting are to discuss
10 NRC's mission and how NEPA factors into it; discuss the
11 environmental review process that we execute; discuss the
12 results of our review; provide the review schedule; receive
13 any comments that you have today and explain how you can
14 submit comments to us before the end of the comment period.

15 Now with that, I'm going to hand this over to
16 Chris Grimes. Chris is the branch chief of the License
17 Renewal and Standardization Branch, and Chris is the one
18 that integrates the results of our review with the safety
19 review to make recommendations to the Commission of whether
20 or not to consider the license renewal application.

21 MR. GRIMES: Good afternoon. I would like to
22 start off by explaining what the NRC's mission is and to
23 give you a framework in terms of how the NRC serves the
24 public interest and performs its functions. The NRC's
25 mission is to regulate the nation's civilian use of nuclear

1 materials; first, to ensure adequate protection of public
2 health and safety; second, to protect the environment and,
3 third, to promote the common defense and security.

4 This mission and the NRC's authority is derived
5 from the Atomic Energy Act of 1954, as well as amendments to
6 those acts, and to other laws involving security, waste and
7 energy policies. The NRC's regulations are issued under
8 Title 10 of the United States Code of Federal Regulations,
9 and for our purpose today we will refer to that as 10 CFR
10 for short.

11 The NRC established its requirements for nuclear
12 power plant design and operation as well as limits for
13 radiological exposure and releases and then enforces those
14 requirements in order to achieve our mission. Environmental
15 protection is achieved by those requirements. However, we
16 also perform environmental impact evaluations, which we will
17 describe today, to achieve the environmental protection
18 mission of the National Environmental Policy Act -- the
19 National Environmental Protection Act, which we refer to as
20 NEPA, as Barry previously mentioned.

21 For commercial power reactors the NRC's regulatory
22 function includes licensing. A nuclear power plant license
23 is based on a set of established regulatory requirements to
24 ensure that the design and proposed operation of the plant
25 are safe based on sound radiological safety standards.

1 Those requirements also include provisions for a
2 security program to safeguard safety related equipment and
3 nuclear materials, and the NRC conducts routine inspections
4 to assure that plant design and operation conform to the
5 license requirements and enforcement actions are taken in
6 the event that those license requirements are not being
7 satisfied. So that is the basic function and conduct of the
8 NRC's regulatory responsibilities.

9 And I am now going to ask Bob Prato, who is the
10 project manager for the safety review of the Arkansas
11 Nuclear One, Unit 1, renewal application to describe the
12 rest of the aspects of the renewal process.

13 MR. PRATO: Thank you. Can you hear me? Thank
14 you.

15 Again, my name is Bob Prato; I am the project
16 manager for the license renewal application for Arkansas
17 Nuclear One safety evaluation. I'm going to cover license
18 renewal in general, and I'm going to give a brief overview
19 of the process. I've got a lot of ground to cover so if you
20 have any questions, please jot them down next to the slide
21 and I'll be glad to answer them at the end. I will also
22 take any questions on the safety review after I finish the
23 presentation.

24 Beginning with slide eight, Atomic Energy Act. NRC
25 regulations limit commercial power license to forty years,

1 but it also permits the renewal of such licenses for up to
2 twenty additional years. The forty year term was originally
3 selected upon the basis of economic and antitrust
4 considerations, not technical limitations. But once the
5 licensing term was established, the design of several system
6 structures and components were engineered on the basis of an
7 expected forty year service life. The safety requirements
8 for the initial forty year license are contained in 10 CFR,
9 Part 50.

10 When the first reactors were constructed, major
11 components were expected to last at least forty years.
12 Operating experience has demonstrated that this expectation
13 was unrealistic for some of the major components such as
14 steam generators and pressurized water reactors. However,
15 research conducted since 1982 and plant operating experience
16 has demonstrated that there are no technical limitations to
17 plant life since major components and structures can be
18 refurbished or replaced, thus the plant life is determined
19 primarily on economic limitations.

20 As a result the NRC established regulatory
21 requirements in 10 CFR, Part 54, to provide for license
22 renewal. The rule, which was initially issued in 1991 and
23 amended in 1995, provides the basis on which a plant was
24 originally licensed remains valid after forty years and can
25 be carried over into the twenty year period of extended

1 operation. The rule requires that an applicant demonstrate
2 that applicable aging effects will be adequately managed for
3 a defined scope of passive, long-lived systems, structures
4 and components.

5 The Commission determined that aging of active
6 components is adequately managed by existing maintenance
7 activities and surveillance programs, and other aspects of
8 the existing license requirements can continue throughout
9 the license extension period. The rule also requires that
10 certain time-dependent design analyses be identified and
11 evaluated as well.

12 A new license can be granted upon a finding by the
13 Commission that actions have been or will be taken so that
14 there is reasonable assurance that applicable aging effects
15 will be adequately managed for the period of extended
16 operation, and whether or not the adverse environmental
17 impacts of license renewal are so great that preserving the
18 option of license renewal for energy planning decision
19 makers would be unreasonable.

20 The United States currently receives about twenty
21 percent of its power from -- twenty percent of its
22 electricity from the 103 operating nuclear power plants.
23 The electricity sector is moving rapidly to a deregulated
24 market in which energy supply choices will be dictated by
25 cost to the consumer. At the same time there are growing

1 pressures to limit fossil fuel emissions because of
2 continuing concerns for clean air and the potential global
3 climate changes.

4 Deregulation and competition have raised the
5 interest in license renewal to strategic importance because
6 large generating plants become vital economic assets to
7 plant owners. Operating nuclear plants are expected to
8 remain competitive after retail electricity restructuring,
9 provided that the cost associated with operating the plant
10 safely in the future can be reasonably predicted.

11 Some current operating U.S. plants will not apply
12 for license renewal for economic reasons. NRC established
13 the license renewal requirements so that any plant that is
14 financially and materially capable of operating safely
15 beyond a current term of the license should have that
16 opportunity, and clearly understand the requirements of
17 such extended operation, as is described in the Generic
18 Environmental Impact Statement for license renewal.

19 Calvert Cliffs in Maryland was the first plant to
20 apply for license renewal. Their application was submitted
21 April, 1998 and a license was granted in March of 2000. The
22 renewal application for ANO-1 was submitted by letter dated
23 January 31, 2000. Although the ANO-1 license does not
24 expire till 2014, the licensee is interested in license
25 renewal today to ensure that they certainly understand what

1 requirements will be necessary for an extended license prior
2 to the expiration of their current license for future
3 financial considerations.

4 The license renewal process consists of parallel
5 safety and environmental reviews which will be documented in
6 a safety evaluation report for the age and management review
7 and a supplement to the Generic Environmental Impact
8 Statement for the environmental impact review. The age and
9 management findings in the NRC staff safety evaluation will
10 be verified by the NRC inspection. The renewal application
11 and safety evaluation will also be reviewed by the NRC
12 Advisory Committee on Reactor Safeguards in accordance with
13 the usual practices for issuing a license.

14 The NRC plans to complete the safety evaluation
15 report for ANO-1 renewal application, which will address the
16 scope of passive systems, structures and components, their
17 applicable aging effects and the age and management programs
18 that Entergy, the licensee, will rely on to ensure that the
19 plant is safely maintained for a period of extended
20 operation. The initial report will identify any open items
21 and any confirmatory matters related to the safety review
22 under Part 54 which must be resolved before the Commission
23 can complete its decision on a renewed license; that report
24 will be made available to the public.

25 The NRC's licensing process includes a formal

1 process for public involvement through hearings conducted by
2 a panel of administrative law judges who are called the
3 Atomic Safety and Licensing Board. That process consists of
4 a petition to hold hearings on particular issues to be
5 litigated by that board. There were no petitions submitted
6 on ANO-1 renewal application, so there will be no formal
7 public hearing.

8 Despite the absence of a formal hearing,
9 interested members of the public who are concerned about
10 nuclear safety issues can raise those issues informally
11 during the various public meetings that the NRC will hold
12 with Entergy to discuss the safety aspects of the proposed
13 extended period of operation. Time is usually provided at
14 the end -- at the conclusion of each meeting for public
15 comment and questions. Meetings on technical issues are
16 usually held at the NRC headquarters in Rockville, Maryland.
17 However, some technical meetings and meetings to summarize
18 the results of the NRC inspection findings will be held near
19 the plant in a place that is accessible to the public.

20 The ANO-1 renewal application, safety evaluation
21 report, meeting summaries and other related correspondence
22 are available for public review at the NRC public document
23 room in Rockville or at the NRC electronic public document
24 room at the Website www.NRC.gov. Many of these materials
25 can also be found on the NRC Website under the reactor and

1 licensing renewal icon. Paper copies of the application,
2 reports and significant correspondence are also available to
3 the local residents at the Pendergraft Library at the
4 Arkansas Technical University located at 305 West Q Street
5 in Russellville.

6 The Advisory Committee on Reactor Safeguards, or
7 ACRS, performs an independent review of the renewal
8 application and the safety evaluation, and they report their
9 findings and recommendations directly to the Commission.
10 They also hold public meetings which are transcribed; oral
11 and written statements can be provided during the ACRS
12 meetings in accordance with the instructions described in
13 the notice of their meetings in the Federal Register.

14 At the end of the process the final safety
15 evaluation report, the final supplement to the environmental
16 impact statement, the results of the inspections and the
17 ACRS recommendations are submitted to the Commission with a
18 staff recommendation. Those documents and any formal
19 Commission meeting to discuss the staff's recommendation are
20 also accessible to the public.

21 Each Commissioner will vote on the proposed action
22 and their decision is formally sent to the NRC staff for
23 whatever action they conclude is appropriate for the renewal
24 application. The individual Commissioners' votes, and their
25 instructions to the NRC staff are also made part of the

1 public record.

2 Throughout the NRC review of the license renewal
3 application, the NRC continues to conduct regular
4 inspections and amendments to the current license. The
5 NRC's inspections and plant performance review are
6 continually evolving with the NRC's initiatives to improve
7 the reactor oversight process.

8 If you are interested in learning more about the
9 renewal inspection and oversight process, there is
10 information available to the NRC Web page and in NUREG-1649,
11 Revision 1. The normal regulatory process and amendments to
12 the existing license will continue in parallel with the
13 renewal application and address matters of interest such as
14 operational events, spent fuel storage, security and
15 emergency plans.

16 If there are any questions relating to the
17 presentation or on safety review, I will take them at this
18 time before Tom describes the environmental review.

19 MR. CAMERON: Anybody have any questions on Bob's
20 excellent overview of the license renewal process and how
21 all of this fits together?

22 MR. PRATO: Anything? That's all, thank you.

23 MR. CAMERON: All right, now we're going to go to
24 Tom Kenyon who's going to focus us in on the National
25 Environmental Policy Act requirements, specifically

1 environmental impact statements and other aspects. Tom.

2 MR. KENYON: Good afternoon, my name is Tom
3 Kenyon. To make sure you understand the distinction of the
4 two different project managers that have been up here, Bob
5 looks at the safety aspects of renewing the license, and I'm
6 looking at the environmental impacts of renewing the
7 license. I intend to spend the next fifteen minutes or so
8 talking about the process that's required by the National
9 Environmental Policy Act, the so-called NEPA process, and
10 then I'm going to describe how that process has been
11 incorporated into the NRC regulations and, more
12 specifically, how it's being applied to ANO, Unit 1.

13 NEPA was enacted in 1969 and it requires all
14 federal agencies to use a systematic approach to consider
15 environmental impacts during certain decision-making
16 proceedings. It is a disclosure tool that involves the
17 public, and it involves the process whereby information is
18 gathered by federal agencies; we document that information
19 that we gather, and then we invite public participation to
20 evaluate it.

21 The NEPA process results in a number of different
22 kind of documents, chief among them are the environmental
23 impact statement, which we call EISs, which describe the
24 results of our rigorous review that we do to evaluate the
25 environmental impacts of a proposed action that may

1 significantly affect the quality of the human environment.

2 Now the NRC has already determined that license
3 renewal is such a major federal action, which is why we're
4 here today.

5 Now this slide describes the objective of the
6 review, but to paraphrase it, we're simply taking a look to
7 determine whether or not the renewing of the ANO license for
8 an additional twenty years is acceptable from an
9 environmental perspective.

10 Now to give you a little bit of history, I'd like
11 to spend a few moments describing how the staff incorporated
12 the NEPA process into the regulatory framework of the NRC
13 and then how we perform our reviews.

14 The NRC's implementing regulations for carrying
15 out the NEPA process are located in 10 CFR, Part 51. The
16 regulation outlines the contents of our environmental impact
17 statements and describes the process that we're required to
18 follow in order to ensure NEPA has been followed.

19 Now early on in establishing the license renewal
20 process, back in the 1980s and '90s, it was recognized that
21 the original environmental impact statements that were
22 developed when the nuclear power plants were first being
23 licensed, back twenty or more years ago, would have to be
24 updated to reflect the additional twenty years that's being
25 proposed. So the NRC undertook a rulemaking effort to

1 modify Part 51 and to address license renewal aspects.

2 As part of the rulemaking effort, the staff
3 developed a generic environmental impact statement -- what
4 we call the GEIS -- which took a systematic look at the
5 thousands of hours of operations of nuclear plants in the
6 United States to help us identify what potential
7 environmental impacts we would see.

8 In addition, the staff developed and uses an
9 Environmental Standard Review Plan for license renewal to
10 help guide us in our reviews. There are copies of all these
11 documents in the back on the table if you want to take a
12 look at them today. In addition, you can go to our Web page
13 and view those documents there as well.

14 Now this next slide gives a little more detail of
15 the previous graphic of our license renewal process. Since
16 I'm going to be talking about this process for the next
17 couple of minutes, you might want to refer back to it from
18 time to time.

19 Now, as far as the NEPA process goes, there are
20 certain steps that the NRC are required to follow. These
21 steps are consistent for all environmental impact statements
22 that are prepared by federal agencies for any proposed major
23 federal action.

24 Now the first step in the process was the notice
25 of intent whereby we notified members of the public that we

1 intend to prepare an EIS for ANO-1; this occurred back in
2 March. During that time, we put together a team of NRC
3 staff with backgrounds in specific technical and scientific
4 disciplines that are required to perform environmental
5 reviews.

6 In addition, as has been mentioned, to supplement
7 the expertise of the staff we engaged the assistance of
8 Pacific Northwest National Laboratory to make sure we had a
9 well- rounded knowledge base to perform the review. We put
10 together a team of about twenty people, many of whom are
11 here today to hear the comments you may have and to answer
12 any questions that you have.

13 Now the next step was the scoping process, which
14 has already been mentioned, where we identified the scope of
15 the environmental impact statement. Now for ANO-1 this
16 occurred back in April and May, and we held two public
17 meetings in this hotel at that time to discuss the scope of
18 our review.

19 Now our review team went to the ANO site to
20 acquaint ourselves with the area, and we discussed all the
21 questions that we had after taking a look at ANO's
22 application. As the review progressed, we talked with
23 federal, state and local authorities, and we looked at a
24 number of issues, including the environmental impacts of
25 continued operation. We looked at alternatives to the

1 proposed actions and what the environmental impact would be
2 to those alternatives, and then we looked at possible
3 mitigation measures, which are things that can be done to
4 mitigate the environmental impact of the license renewal.

5 We completed our review at that time and by
6 October 3rd -- on October 3rd we issued our Draft
7 Environmental Impact Statement for public comment. Now this
8 was Supplement 3 to the GEIS. It's a supplement to the GEIS
9 because we rely on the findings of the GEIS for some of our
10 decisions. Now the report is a draft not because it's
11 incomplete but rather because we're at an intermediate stage
12 of our decision-making process.

13 We are in the midst of a second public comment
14 period now to allow you and other members of the public to
15 take a look at what we've done and to provide us with
16 feedback you may have to the report. Now after we gather
17 our comments -- gather your comments and we evaluate them,
18 we may decide to change the Environmental Impact Statement.
19 Once we complete our evaluation, we will then issue the
20 final EIS.

21 Now that I have given you a general idea of the
22 overall process, let's talk about what we did as far as our
23 review. As NRC's staff, we reviewed Entergy's application;
24 we discussed their evaluation process with them; we visited
25 the site, and then we took a look at the comments that were

1 received as part of the scoping process. All the comments
2 that we received during the comment period were considered
3 in our review.

4 In addition, we contacted federal, state and local
5 officials, as well as the local service agencies in the area
6 to obtain information on the unit.

7 Now the next two slides give you an idea of the
8 kind of things we look at, things such as aquatic ecology,
9 threatened and endangered species, land use, human health
10 and socioeconomics. I'm not going to talk about them in
11 very much detail because we're going to go into detail in
12 the next presentation.

13 Now there are certain things in the regulations
14 that the staff does not look at during its environmental
15 review, including the need for power and the cost of power,
16 spent fuel disposal, except for transportation in this area.
17 In addition, my team does not look at the environmental --
18 I'm sorry, my team does not look at the safety related
19 issues; that's being handled by Bob Prato under -- in his
20 review.

21 Now that completes my part of this presentation,
22 but before we go on, I think I'd like to open the floor one
23 more time to see if you have any comments or questions.

24 MR. CAMERON: Anybody have a question about the
25 overall NEPA process before we get into some of the

1 specifics? Okay, thank you, Tom.

2 MR. KENYON: With that, Eva Hickey from Pacific
3 Northwest National Laboratory, she's the task leader on the
4 team, and she will be presenting the results of the review.

5 MS. HICKEY: Good afternoon and welcome. As Tom
6 said, my name is Eva Hickey; I work for Pacific Northwest
7 National Laboratory, and I'm in the environmental technology
8 division. Today what I'd like to talk about is the process
9 that we used for our environmental review; then I'm going to
10 talk a little bit about the report, the draft SEIS, that we
11 created. We brought some of our team of environmental
12 scientists here today, so if you have any questions on some
13 of the specifics, we'll be glad to answer them.

14 Tom talked a little bit about the generic
15 environmental impact statement, the GEIS. I want to spend a
16 few more minutes talking about that. It was published --
17 it's NUREG-1437, and it is the basis for the revision of 10
18 CFR, Part 51. The NRC worked with the states, the Council
19 on Environmental Quality, CEQ, and the Environmental
20 Protection Agency and a number of other groups to develop
21 this final generic environmental impact statement.

22 During the time NRC used its staff to identify
23 what environmental impact issues need to be reviewed during
24 license renewal, the staff identified and categorized the
25 environmental impacts that were specific to license renewal,

1 and in that they came up with 92 particular issues or
2 potential consequences, and these were evaluated in generic
3 environmental impact statements.

4 Sixty-nine of these issues were found to be
5 generic, and by that it means that the findings are the same
6 for all plants, and it doesn't matter where the plants are
7 located or what type of plant they are. Those issues have
8 been called Category 1 issues. An example of a Category 1
9 issue would be offsite radiological consequences. When
10 developing the GEIS, the staff looked at it -- looked and
11 saw that the offsite doses during the license renewal period
12 would not be any higher than they are during the first forty
13 years of licensed operation.

14 They did a historical review and they looked at
15 the doses to the public and they notice that they have been
16 well maintained and, in fact, they often are going down.
17 The staff could see no reason that these doses would
18 increase during the license renewal period because expected
19 radiological impacts by all plants in a similar manner, and
20 the significance was that offsite radiological impact was
21 considered small at all plants, the staff concluded that
22 this item could be addressed on a generic basis, and that's
23 what we call Category 1. As I said, there are 69 of those
24 issues.

25 That does not mean that our environmental review

1 team did not look at these issues, but what we did look for
2 was to see if there was any new and significant information
3 since the time the generic environmental impact statement
4 was published.

5 As part of our review, we required the applicants
6 to inform the NRC in their application -- and Entergy did
7 this -- as to whether it is aware of any new and significant
8 information regarding the Category 1 issues. During the
9 scoping phase of the review we looked at comments that the
10 public, federal, state and local authorities to determine
11 whether or not there's any significant new information on
12 these Category 1 issues. If some new and significant
13 information is revealed by this, then an additional
14 evaluation would be made. If not, then NRC adopts the
15 generic conclusions provided in the GEIS.

16 The remaining issues of the 92, which is 23 of
17 those as categorized, are called Category 2 issues, and we
18 also looked at these in detail. The review process is
19 designed to help the NRC determine whether or not there's
20 any significant new issues that were not identified four
21 years ago and covered in the GEIS. If the significant new
22 issue is identified as a result of the current review
23 process that was not considered in the GEIS, then it will be
24 reviewed on a plant-specific basis as though it were a
25 Category 2 issue.

1 When we looked at Category 1 issues, the team
2 reviewed the information that was provided in the
3 environmental report. We discussed the information with the
4 Entergy staff when we were here on site in April. We sought
5 public concerns during the public scoping meeting and during
6 this scoping period, and we looked at environmental
7 standards and regulations.

8 And as I said before, part of our review was to
9 evaluate if there was any new and significant information,
10 and we determined during this review that, in fact, there
11 was no new and significant information on the Category 1
12 issues and, therefore, we rely on the conclusions in the
13 GEIS.

14 Now Category 2 issues, these are issues that we
15 look at on a site-specific basis, and there's 21 of these
16 considered. Five of the issues in the GEIS are not
17 applicable to ANO and, therefore, we did not look at those.
18 There is an additional four issues that are not applicable
19 because they are related to refurbishment and Entergy has
20 stated that they have no plans for major refurbishment
21 activities and, therefore, these issues are not relevant.

22 So that leaves twelve issues that were addressed,
23 and we found that there was small significance from these
24 issues. There's also an additional two issues that have not
25 been categorized, environmental justice and chronic exposure

1 to EMF, and we looked at those as though they were
2 site-specific issues.

3 Next, I want to talk just a little bit about
4 following our environmental review, the Draft Supplemental
5 Environmental Impact Statement that we put together. This
6 draft followed the same format as the GEIS; it's organized
7 in the same fashion. We have a Chapter 1, which is an
8 introduction and it briefly describes the NEPA process.

9 Then Chapter 2 is a description of the site and
10 the surrounding environment around Arkansas Nuclear One. I
11 will be going back in a moment and giving you a little
12 more specific detail on these issues, but I just want you to
13 take a look at the slide; you can see what we looked at was
14 fairly comprehensive.

15 Chapter 3 discusses refurbishment; however, since
16 Entergy stated that they had no replacement of components
17 related to extended operation at this facility and any
18 additional inspection activities are within the bounds of
19 normal plant replacement and inspections and, therefore,
20 it's not expected to affect the environment beyond what was
21 stated in the final environmental impact statement.

22 Chapter 4 addresses environmental impact of
23 operation during license renewal, specifically discusses
24 both Category 1 and Category 2 issues that are relevant to
25 the plant and the site. We looked at the impact for the

1 cooling system, impacts from transmission lines,
2 radiological impact, socioeconomic impact, ground water use
3 and quality and threatened or endangered species.

4 Chapter 5 discussed postulated plant accidents and
5 includes a review of severe accident mitigation, which Mr.
6 Andrew Kugler will describe in just a few minutes.

7 Chapter 6 takes a look at the complete review of
8 the uranium fuel cycle and the solid waste management
9 process and it looked at the impacts to the environment from
10 the fuel cycles. In Chapter 7 we looked at the impacts of
11 decommissioning, which will happen at the time the plant
12 ceases operation.

13 And Chapter 8 evaluates alternatives to license
14 renewal. It describes the methods that can be used to
15 obtain the same amount of power without having to renew the
16 license at Arkansas Nuclear One.

17 And finally, Chapter 9 is a summary of our
18 conclusion. So with that I'd like to spend a few more
19 minutes going over the specifics from our environmental
20 review for ANO-1.

21 First, let me take a minute to talk about the
22 cooling system at ANO-1. Unit 1 uses a once-through core to
23 condense steam in our operation. It takes water from the
24 Illinois Bayou of Lake Dardanelle -- so for those of you not
25 familiar with the plant but you may have seen the cooling

1 tower, that's appropriate for Unit 2, not Unit 1. The water
2 is taken into the plant through an intake structure which
3 includes bar grates, traveling screens and four circulating
4 water pumps. After passing through the traveling screens,
5 the water enters the circulating pumps. After flowing
6 through the condenser, the water is then discharged back to
7 Lake Dardanelle.

8 So I'd like to discuss some of the environmental
9 affect from this cooling system used at ANO-1. In order to
10 determine the effects of continued operation, we looked back
11 at the history of the life of the plant during the
12 operation. We reviewed many of the environmental studies
13 that the utility and other organizations have conducted over
14 the past twenty years.

15 Some of the specific effects we were looking at
16 are entrainment, and entrainment occurs when platonic larval
17 fish and shellfish, particularly in the Illinois Bayou, are
18 carried with the cooling water through the intake screens,
19 pumps and condensers. There's a high mortality rate to
20 these larval fish. ANO conducted monitoring of entrainment
21 for ten years, between 1977 and 1987, to determine if
22 entrainment was impacting the fish population in Lake
23 Dardanelle. ANO determined that most of the fish entrained
24 were not sport fish, that is gizzard shad and threadfin shad
25 -- that's the little critter you see here on the slide.

1 In the monitoring reports ANO indicated that
2 entrainment does not adversely affect the fish or aquatic
3 organisms in Lake Dardanelle. Also, the Arkansas Game and
4 Fish Commission concluded that entrainment losses have not
5 affected the recreational fishing in Lake Dardanelle.

6 When we looked at entrainment, we looked at
7 impingement, which is when small fish or shellfish get
8 stuck against the traveling screens located on the intake.
9 These are meant to keep debris out of the cooling water, but
10 sometimes smaller fish are also caught on them. Studies of
11 impingement show that the major species impinged at ANO are
12 the gizzard shad and threadfin shad.

13 Because of cold temperatures in Lake Dardanelle in
14 the winter months, many of these fish do not survive, and
15 what was found is that these were the fish that tend to be
16 impinged. So it appears that much of the mortality from
17 impingement is not directly related to the plant itself but
18 rather the result of cold water in the winter.

19 Some of the other affects on the cooling system we
20 looked at were heat shock. As I said, water from Lake
21 Dardanelle is used for cooling at ANO-1. When the water is
22 discharged back to Lake Dardanelle it must meet specific
23 limits that are described in the National Pollutant Discharge
24 Elimination System, the NPDES, permit. We determined that
25 ANO does have a current NPDES permit and that they meet the

1 discharge limits. Therefore, the impact due to heat shock
2 is considered small.

3 We also looked at microbial organisms. This is
4 the last of the Category 2 issues relating to cooling system
5 affects. We looked to see if microbial organisms,
6 thermophilic pathogens, those pathogens that thrive in warm
7 or hot water or that they love the heat, to determine if
8 there was an elevated risk from these in Lake Dardanelle
9 from ANO.

10 ANO took part in a study in 1981 in which it was
11 determined that there were no thermophilic pathogens found
12 in the intake canal or the discharge embayment. Also, the
13 Arkansas State Board of Health was contacted, and they
14 stated that they were unaware of any human health issues,
15 exposure problems in Lake Dardanelle related to ANO.

16 We looked at the transmission lines. ANO has 240
17 miles of connect -- transmission lines connected to the
18 site. We looked at the acute effects from electromagnetic
19 fields, that is those that have immediate impact, and we
20 looked at chronic effects from extremely low frequency
21 electromagnetic field exposure. We looked to see if there
22 were any new and significant issues related to these and we
23 found none; therefore, we followed the GEIS conclusions that
24 the impact is small.

25 Radiological impacts are considered a Category 1

1 impact, and there's no anticipated increase in public or
2 occupational radiation dose during the license renewal term.

3 Now I'd like to go out for questions, if there are
4 any, before we continue with the rest of the environmental
5 impact discussion. Anybody have any questions? Okay, then
6 I guess we'll go on.

7 We did quite an extensive review of socioeconomic
8 impacts, which is the next area that I want to talk about,
9 and there's a variety of these impacts that I'm going to
10 discuss. The first is housing impacts that may result if
11 ANO hired additional employees during the license renewal
12 period.

13 The plant is considered to be in a low population
14 area, which is described in the GEIS, and the area does not
15 have any growth control measures. However, Entergy has not
16 identified any increase in staffing related to license
17 renewal activities and, therefore, there is not an
18 anticipated change in housing needs for ANO staff.

19 Our staff also consulted real estate professionals
20 in the same area -- in the area and concluded that impacts
21 on housing during the licensing renewal period would be
22 small. They also looked at impacts on public utilities,
23 both for plant demand and plant related population growth.
24 Since Entergy does not expect to have any additional
25 employees, they also do not expect to have any additional

1 demands on public utilities, so, therefore, in discussions
2 with the city of Russellville we determined that public
3 utility impacts would be small.

4 Russellville -- the city of Russellville is
5 planning on doubling the current water treatment processing
6 capacity, but that's not related to the operation of ANO.

7 Other socioeconomic impacts that we looked at are
8 offsite land use and determined that this will not be an
9 issue. We'd like to point out, however, that the continued
10 operation of the plant will provide a significant continuing
11 tax revenue to the county with tax payments from the site
12 representing about one-third of the Pope County tax revenue.

13 Transportation in the area around the site is not
14 expected to be impacted by renewal of license since
15 employment at the site would not contribute to anticipated
16 population growth in the area.

17 One of the other areas that we looked at is
18 historic and archaeological resources. There are no plans
19 for future area disturbance within the site boundary. We
20 did note that there are many potential archaeological sites,
21 both Native American and Euroamerican, and the site has no
22 nationally registered historic places. Historic and
23 archaeological resources appear to be unaffected by the
24 renewal of the license and extension of the operating term
25 since there are no plans for future land disturbance,

1 structural modifications beyond routine maintenance.
2 Because there is no plans for future land use, then the
3 impact is determined to be small.

4 Finally, the last issue in socioeconomics is
5 environmental justice. Environmental justice refers to the
6 federal policy in which federal actions should not result in
7 disproportionately high and adverse impacts on low income or
8 minority population. Although the impacts that are
9 identified for the ANO-1 license renewal were small, the
10 staff examined the geographic distribution of minority and
11 low income populations as recorded during the 1990 census
12 and supplemented the inquiries from local planning
13 departments and social service agencies in Pope County.

14 It was found that, in general, minority
15 populations were small and dispersed, located primarily in
16 the surrounding towns of Russellville, Clarksville, Conway
17 and the outskirts of Morrilton. Information from social
18 service agencies indicated that the Hispanic population has
19 increased significantly in recent years. It was determined
20 that there is no specific methods or pathways that would
21 result in disproportionate adverse impacts on these
22 populations. Specifically looked at were pathways related
23 to subsistence agriculture or fishing.

24 Next we looked at water use and quality. ANO uses
25 surface water from Lake Dardanelle. We found no groundwater

1 use issues. Potable water and makeup water is obtained from
2 the Russellville water -- the Russellville water treatment
3 plant, and the water quality is regulated by the NPDES
4 permit.

5 We looked at threatened and endangered species.
6 We consulted with the Fish and Wildlife Service and
7 determined that there were no federally protected species on
8 the ANO site or the transmission lines right-of-way. There
9 are two endangered species in the area; the Gray Bat is
10 found downstream and the Interior Least Tern has breeding
11 grounds to the west of the site. But it was concluded that
12 there would be no impact from the continued operation of ANO
13 on these endangered species.

14 We looked at the environmental impacts of the
15 uranium fuel cycle. There are no Category 2 issues related
16 to this, and in discussions and we found no new and
17 significant information and so we are adopting the
18 conclusions in the GEIS.

19 Likewise, we looked at the impacts of
20 decommissioning, and there are no Category 2 issues here,
21 nor do we find any new and significant information, and we
22 are adopting the conclusions listed in the GEIS.

23 Finally, we looked at the alternatives to license
24 renewal; this is another part of the NEPA process. Because
25 there is many possible energy sources and mix of energy

1 sources, we limited the analysis to those that have been
2 demonstrated with capability of sufficient generating
3 capacity to replace the ANO nuclear plant. The alternatives
4 also include a no action alternative, which would simply
5 mean that the NRC would not renew the operating license and
6 Entergy would decommission the plant either at the time of
7 the license expiration, which is 2014, or sometime prior to
8 that.

9 Two of the alternatives that we did consider that
10 seemed to have the most promise for large scale replacement
11 of power are coal-fired power generation and gas-fired power
12 generation. We looked at the impacts of these alternatives
13 and we discussed them in several different ways. First,
14 with plants located at the ANO site using once-through
15 cooling and, secondly, with plants located at the ANO site
16 but using cooling towers rather than once-through cooling.

17 We also looked at the potential for closing the
18 site and building an alternative energy plant somewhere else
19 that would be considered a green field site. Green field is
20 a natural site that might currently be forested or that has
21 not been dealt with in any way.

22 We looked at options for building coal-fired plant
23 or gas-fired plant and the option of using once-through
24 cooling or cooling towers. These are also some of the other
25 options that we looked at. On this slide you can see some

1 of the other alternatives, including nuclear, which ANO is.
2 The other alternatives were not evaluated in depth because
3 it was either considered that they do not have the capacity
4 or the generating -- or the capability to replace power at
5 ANO.

6 I do want to point out that we looked at combining
7 alternatives, such as using conservation, the purchase of
8 power from another site and perhaps a new generation -- a
9 new way to generate power at ANO as one of the alternatives
10 to license renewal.

11 If you are interested in any more of the
12 specifics, because this is a very detailed and in depth
13 chapter, I would ask you to go and look at Chapter 8.

14 The alternative actions, including no action
15 alternative, have environmental effects that, at least in
16 some impact categories, reached large or moderate
17 significance. As we discussed earlier -- well, actually we
18 didn't discuss earlier -- but a moderate impact is one that
19 is sufficient to alter noticeably but not destabilize
20 important attributes of a resource. And a large impact has
21 an effect that is clearly noticeable and sufficient to
22 destabilize important attributes of resources.

23 Rather than going into an entire analysis, we've
24 talked about a few of the examples, and I refer you back to
25 Chapter 8. For the most part, the impacts on land use and

1 ecology range from moderate to large for coal-fired
2 generation and gas-fired generation because additional land
3 would be required for facilities and would require use of
4 land that is currently vegetated. Depending on where the
5 site is located the impacts on water quality might increase
6 to large, especially if it's located in an area which would
7 require ground water for cooling.

8 So to end my discussion I'd like to discuss our
9 preliminary conclusion, which is that the significance of
10 the environmental effects of license renewal on ANO are
11 small for all of the impact categories that we looked at.
12 Small means that the effect is not detectible or it's too
13 small to destabilize or noticeably alter any important
14 attribute of the resource.

15 With that I'd like to turn the discussion over to
16 Andy Kugler who will be talking about severe accident --

17 MR. CAMERON: Let's just check and see if there
18 are any questions on the last part of Eva's presentation on
19 alternatives or any of the other impacts that she noted.
20 All right, good, thank you.

21 MR. KUGLER: Good afternoon, my name is Andy
22 Kugler and, as Eva indicated, I will be talking about the
23 impacts of postulated accident. In our review we look at
24 two different types of accidents; we look at design basis
25 accidents and severe accidents.

1 Design basis accidents are designated a Category 1
2 issue, and we did not discover any new and significant
3 information related to design basis accidents so we adopted
4 the conclusions in the GEIS, and I don't intend to talk
5 about that area any further.

6 Severe accidents are a little different. There is
7 one aspect of severe accidents that is a Category 2 issue
8 requiring a plant-specific analysis, and that aspect is the
9 possibility of severe accident mitigation alternatives --
10 you will also hear those referred to as SAMAs. Now severe
11 accidents refer to accidents in which the core is damaged,
12 generally due to some sort of failure of the core cooling
13 systems. This failure would be brought on by some
14 combination of hardware failures and human errors. These
15 types of accidents are captured in the probabilistic safety
16 assessments for ANO-1, and these studies then form the basis
17 we use for our study of accident mitigation alternatives.

18 The generic environmental impact statements
19 considered severe accidents and looked at the risks that
20 they posed to the public at each of the sites. For each of
21 the sites we determined what the potential releases were
22 related to severe accidents, and then we also looked at the
23 impacts of those releases to the offsite population.

24 In looking at those we determined that the
25 probability-weighted consequences to the public were small

1 for all sites. So on that basis we determine that severe
2 accidents themselves are a Category 1 issue and we don't
3 discuss the severe accidents in our environmental impact
4 statement. However, in accordance with the NEPA
5 regulations, we do look at alternatives that could mitigate
6 the impacts of severe accidents, and that's what I'm going
7 to spend time talking about for this afternoon.

8 The purpose of our evaluation is to make sure that
9 we have determined or developed the possible changes to the
10 plant that could mitigate accidents and then assess those
11 changes. We look for alternatives that either reduce the
12 likelihood that a severe accident will occur or that could
13 mitigate the consequences of an accident once it does occur.
14 The changes that we look at could be hardware changes to the
15 plant; they could be procedure changes, training, anything
16 like that, so it's a very broad review.

17 Now I'd like to discuss the approach that we took
18 in evaluating severe accident mitigation alternatives. The
19 first thing we needed to do was determine what are the
20 sources of risk for ANO-1, and we relied heavily on the
21 plant specific probabilistic safety assessments that had
22 been done.

23 These assessments were done for both internal
24 events, such as a pipe break, and for external events,
25 something like a seismic event. In addition, we looked for

1 insight in other documents, such as generic studies and
2 plant-specific studies that were done at other sites.

3 Once we identified the sources of the risk, we
4 went about identifying potential changes that could be made
5 to reduce that risk. Again, we used a lot of information
6 out of the ANO-1 specific studies to help us identify where
7 there might be changes that could be made to reduce risks.
8 We also looked beyond that; we looked at the generic studies
9 and other plant studies. Through that process over 150
10 potential improvements were identified.

11 At this point we took that group and started to
12 look at the potential changes to determine whether or not
13 they would be beneficial -- cost beneficial to the site. In
14 the first step we eliminated those changes that either did
15 not apply to ANO-1 because of the specific plant design or
16 that had already been implemented at this plant and,
17 therefore, were no longer available to reduce risk.

18 Once those items were eliminated, we went about
19 assessing what benefit would come from each change, how much
20 of a benefit would be obtained and then converting that into
21 a value. And we also assessed the cost of each change to
22 determine how much it would cost to implement. Some changes
23 were clearly not going to be cost beneficial in that their
24 costs far outweighed the benefits. Some changes also were
25 eliminated because they had a very small impact on risk

1 reduction and, therefore, would not -- would not be
2 implemented because the cost would outweigh the benefit.

3 In going through this process we determined that
4 of all those changes fifty made it through the first
5 screening process and only one had a positive value impact.
6 In other words, the benefit gain would outweigh the cost of
7 implementing the change.

8 Now the last criteria we looked at the bottom
9 of this slide is this risk reduction related to aging
10 effects in the license renewal period.

11 For the one potential change that was identified
12 as being cost beneficial, we looked at that and determined
13 that it was not related to aging effects during license
14 renewal. The issue relates to training for operators for a
15 particular phase of an accident and is more appropriately
16 considered in terms of the current license.

17 Entergy is currently evaluating whether to
18 implement this change in the current license, and we are
19 waiting to see what decision Entergy makes and we will
20 evaluate it at that point. But it is not related to aging
21 management and, therefore, it is not related to license
22 renewal.

23 As I had indicated, all the other enhancements had
24 negative value impact ratio. So our overall conclusion with
25 respect to accidents is that there are no additional plant

1 improvements that should be made to further reduce the risk
2 of severe accidents for ANO-1 for license renewal. And
3 that's it for severe accidents.

4 MR. CAMERON: Any questions for Andy on the severe
5 accident analysis? Okay, thanks, Andy. We're going to go
6 to Tom Kenyon now to talk about some preliminary conclusions
7 from the NRC staff on the analysis.

8 MR. KENYON: You will be happy to hear that we're
9 coming to the end of our presentation -- formal
10 presentation. So now to summarize, Supplement 3 to the GEIS
11 contains a summary of the results of our review as well as
12 potential preliminary conclusions. I'd just like to remind
13 you that the overall decision is not only based on the
14 results of our environmental review but also on the safety
15 review that's being performed under the direction of Mr.
16 Prato.

17 The preliminary conclusions will be based on the
18 analysis of the findings of the GEIS, Entergy's application,
19 consultation with the local, state and federal agencies and
20 our own independent review, but the staff concludes that the
21 adverse environmental impacts of license renewal for ANO-1
22 are not so great that preserving the option of license
23 renewal for energy planning decision makers would be
24 unreasonable. Or in other words, extending the license for
25 an additional twenty years is acceptable from an

1 environmental standpoint.

2 Now the period for providing your comments on our
3 Draft Environmental Impact Statement ends on January 4th of
4 next year, and after the comment period ends, we're going to
5 assess all the comments that we receive and determine
6 whether or not they're applicable to the environmental
7 aspects of the license renewal for ANO-1. And, if
8 appropriate, we may find ourselves modifying our
9 environmental impact statement to address other comments.

10 Now in the final version of Supplement 3 all the
11 comments will be identified in Appendix A to the document
12 and we will -- in Appendix A, we'll describe or summarize
13 the comments and we'll also describe how we addressed all
14 the comments. And again, as we did during the issues raised
15 during the scoping period, issues that do not have a bearing
16 on the decision to renew the license will be referred to the
17 appropriate NRC program manager, such as the Operating Plant
18 Project Manager or the Allegations Coordinator.

19 Now this slide gives you the environmental review
20 milestones; key point there is that the environmental impact
21 statement is planned to be issued in July of next year.

22 The next two slides will give you my phone number
23 and NRC addresses. As we mentioned earlier, the application
24 and the Draft EIS are located in a hard copy form at
25 Pendergraft Library at Arkansas Tech. You can also review

1 these documents at the URL shown, and you can look at
2 other related documents at the NRC Website.

3 Now comments should be provided to the chief of
4 the Rules and Directives Branch either by mail to that
5 address, in person if you want to come down to Washington or
6 by e-mail at that address. And that ends our formal
7 presentation. And in closing I want to thank you for your
8 attention.

9 Now before we continue on I just want to thank you
10 for attending today's meeting because public participation
11 is an important part of the license renewal process. It's
12 important that you participate because it makes for a better
13 process; after all, you folks know this area a lot better
14 than we do.

15 I do have one administrative matter I need to
16 address before we continue. We would appreciate it if you
17 would fill out a brief questionnaire that we attached at the
18 end of our handout package to help us improve our future
19 presentations. And if you need pens or you need another
20 copy of the questionnaire, you can get them from the folks
21 at the back or the table. That ends our formal
22 presentation.

23 I'd like to offer you the opportunity to ask any
24 more questions you might have or to make any formal
25 comments.

1 MR. CAMERON: Why don't we go to formal comments
2 and then we'll see if there's any additional questions.
3 Garry, did you want to come up and either use the podium
4 mike or, if you want to use this one, you can.

5 MR. YOUNG: Thanks, Chip. Good afternoon, I'm
6 Garry Young and I'm the project lead for the license renewal
7 project for Arkansas Nuclear One, and I'd like to take this
8 opportunity to thank the NRC staff for the work they've done
9 on preparing the Unit 1 Supplemental Environmental Impact
10 Statement. This document is both thorough and comprehensive
11 for addressing the environmental topics important for
12 consideration at Arkansas Nuclear One, and the range of
13 topics and the level of detail clearly indicate the NRC's
14 diligence in preparing this document and also it provides an
15 excellent source of information for the public about the
16 environment around Arkansas Nuclear One.

17 I, along with many other Entergy employees that
18 live in Pope County, we love living in this area and enjoy
19 the benefits of living in this community. That's why we
20 share an interest with our neighbors in protecting the
21 environment. As indicated in the summary of the document,
22 the option of licensing renewal for ANO-1 is reasonable from
23 an environmental impact viewpoint. This conclusion is
24 consistent with the findings made by Entergy prior to making
25 the decision to seek license renewal.

1 I'd also like to thank the Entergy personnel and
2 consultants who supported the license renewal activities
3 that are the basis for the document that we're here to
4 discuss today. This includes the employees who have
5 supported the first 25 years of operation and who have
6 maintained a high level of environmental awareness during
7 those 25 years of operation. Without their commitment to
8 the continued safe, economic and environmentally friendly
9 operation, we would not be here today seeking license
10 renewal.

11 And finally, I would like to thank our neighbors
12 in the community that are represented here today. As I
13 mentioned earlier, we, the Entergy employees that live in
14 the community, appreciate the support of our community and
15 we appreciate the opportunity to be your neighbors. We are
16 committed to protecting the health and safety of the
17 residents around Arkansas Nuclear One as well as the
18 environment, and this commitment will continue as long as
19 Entergy is a part of the community. Thank you.

20 MR. CAMERON: Thank you, Garry. Do we have
21 anybody else that would like to make a formal statement?
22 Any questions on any of the presentations that we heard?
23 Okay, well great, thank you all for being here. And for
24 your information, we are going to do another meeting tonight
25 starting at seven o'clock for those people who could not

1 come out during the day and, of course, any and all of you
2 are welcome to join us again at that time. And I think we
3 are adjourned.

4 (Whereupon, at 3:00 p.m., the meeting was
5 adjourned.)

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