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Nuclear Power Plant: Evening Session

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1 UNITED STATES OF AMERICA

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3 NUCLEAR REGULATORY COMMISSION

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5 OFFICE OF NUCLEAR REACTOR REGULATION (NRR)

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7 PUBLIC MEETING

8 TO DISCUSS THE

9 DRAFT SUPPLEMENTAL ENVIRONMENTAL IMPACT STATEMENT

10 FOR THE LICENSE RENEWAL OF

11 JAMES A. FITZPATRICK NUCLEAR POWER PLANT

12 + + + + +

13 7:00 P.M. SESSION

14 WEDNESDAY,

15 AUGUST 1, 2007

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17 SCRIBA TOWN HALL

18 42 CREAMERY ROAD

19 OSWEGO, NEW YORK 13126

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21
22 NRC STAFF PRESENT:

23 RANI L. FRANOVICH, NRR/ADRO/DLR/REB

24 JESSIE M. MUIR, NRR/ADRO/DLR/REB

25

P R O C E E D I N G S

MS. FRANOVICH: Good evening. We're about to start. I just wanted to take a few minutes to welcome you all and thank you for coming.

This meeting is a meeting to solicit some comments from the public on the Draft Environmental Impact Statement for FitzPatrick. This is a Supplemental Environmental Impact Statement to our Generic Environmental Impact Statement.

We'll have a brief presentation that Jessie Muir will provide on preliminary findings of the staff's environmental review for FitzPatrick license renewal.

Jessie Muir is the project manager for the environmental review.

Then we'll have a brief question-and-answer session, if there are any questions from the public on anything that Jessie discusses in her presentation, and then we'll open up the floor to receive comments from the public. The comments will be transcribed. We have Peter here, our transcriptionist, who will take down all of the comments, and we ask that you use the microphone to provide your comments, state your name and affiliation, if there is any, and we ask that just one

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1 person at a time speak so we can get a clean
2 transcript of this meeting, and if you could all just
3 check and make sure that your cell phones are turned
4 off at this time, so we don't have any distractions or
5 interruptions.

6 And with that, Jessie.

7 MS. MUIR: Good evening. Thank you all
8 for taking the time to come to this meeting this
9 evening. I hope the information we provide you will
10 help you to understand the process we're going
11 through, what we've done so far, and the role you can
12 play in helping us make sure that the final EIS is
13 accurate.

14 I'd like to start off briefly by going
15 over the agenda and the purpose of tonight's meeting.

16 We're going to present preliminary
17 findings of our environmental review, which assesses
18 the impacts associated with renewing the operating
19 license for FitzPatrick.

20 Then we'll give you some information about
21 the schedule for the remainder of our review, and how
22 you can submit comments in the future.

23 And then finally, really, the most
24 important part of tonight's meeting, is where we
25 receive any comments that you may have. Next slide.

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1 The Atomic Energy Act gives the NRC the
2 authority to issue operating licenses to commercial
3 nuclear power plants for a period of up to 40 years.

4 For FitzPatrick, that license will expire
5 in 2014. Our regulations make provisions for
6 extending plant operation for an additional 20 years.
7 FitzPatrick Nuclear Power Plant, owned and operated by
8 Entergy, has requested license renewal.

9 As part of the NRC's review of that
10 license renewal application, we perform an
11 environmental review to look at the impacts of an
12 additional 20 years of operation.

13 We held a meeting here, in October of
14 2006, to seek input regarding the issues we needed to
15 evaluate. Now we are here to present the preliminary
16 results in the Draft Supplemental EIS, and afterwards,
17 we'll open the floor for comments on the draft
18 document.

19 All right. This slide illustrates the
20 environmental review process. This review, which is
21 the subject of today's meeting, evaluates the impacts
22 of license renewal. It involves scoping activities
23 and the development of a document called the
24 Supplemental Environmental Impact Statement, or an
25 EIS.

1 The Draft EIS provides the staff's
2 preliminary assessment of environmental impacts during
3 the period of extended operation. The Draft EIS for
4 FitzPatrick was published for comment in June. Next
5 slide.

6 Next, I would like to give a little
7 information on the statute that governs the
8 environmental review, and that statute is NEPA, or the
9 National Environmental Policy Act of 1969.

10 NEPA requires that all federal agencies
11 follow a systematic approach in evaluating potential
12 environmental impacts associated with certain actions.

13 We, at the NRC, are required to consider
14 the impacts of the proposed action, in this case
15 license renewal, and also any mitigation for those
16 impacts.

17 We are also required to consider
18 alternatives to the proposed action.

19 The NRC has determined that an EIS will be
20 prepared for any proposed license renewal of a nuclear
21 power plant. NEPA and our EIS are disclosure tools.
22 They're specifically structured to involve public
23 participation and obtain public comment. This meeting
24 facilitates the public participation in our
25 environmental review.

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1 In the 1990's, the NRC staff developed a
2 Generic EIS that addresses a number of issues common
3 to all nuclear plants. As a result of that analysis,
4 the NRC was able to determine that a number of
5 environmental issues were common to or similar for all
6 nuclear power plants.

7 The staff is supplementing that Generic
8 EIS with a site-specific EIS that addresses issues
9 specific to the FitzPatrick facility.

10 So together, the Generic EIS and the
11 supplemental EIS form the staff's analysis of the
12 environmental impacts of license renewal for the
13 FitzPatrick site.

14 Also during the review, the NRC staff
15 looks for and evaluates any new and significant
16 information that might call into question the
17 conclusions that were previously reached in the
18 Generic EIS. In addition, the staff searches for new
19 issues not already addressed in the Generic EIS.

20 This slide is our decision standard for
21 the environmental review, and simply put, is license
22 renewal acceptable from an environmental standpoint?
23 Next slide.

24 We use information we received in the
25 environmental report submitted as part of Entergy's

1 license renewal application. We conducted an audit in
2 December of last year, where we toured the facility,
3 observed plant systems, and evaluated the interaction
4 of the plant operation with the environment.

5 We talked to plant personnel and reviewed
6 specific documentation. We also spoke to federal,
7 state, and local officials, permitting authorities and
8 social services. We also consider the comments
9 received during the public scoping period.

10 All of this information forms the basis of
11 our preliminary conclusions presented in the Draft
12 Supplemental EIS. Next slide.

13 And this slide just shows some of the
14 various disciplines that are included in our team.

15 In the mid 1990's, the NRC evaluated the
16 impacts of all operating nuclear power plants across
17 the U.S. NRC looked at 92 separate impact areas, and
18 found that for 69 of these areas, the impacts were the
19 same for all plants with similar features.

20 The NRC called these Category 1 issues and
21 they were able to make generic conclusions, that all
22 the impacts on the environment would be small. The NRC
23 published these conclusions in the Generic EIS in
24 1996.

25 The NRC was unable to make similar

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1 determinations for the remaining 23 issues, and as a
2 consequence, NRC decided that we would prepare a
3 supplemental EIS for each plant, to address the
4 remaining 23 issues, and this slide lists some of the
5 major impact areas addressed for FitzPatrick. Next
6 slide.

7 This slide outlines how impacts are
8 quantified. The Generic EIS defined three impact
9 levels--small, moderate and large. I'm going to use
10 the fishery in Lake Ontario to illustrate how we use
11 these three terms.

12 The operation of the FitzPatrick plant may
13 cause a loss of fish at the intake structure. If the
14 loss of fish is so small, that it cannot be detected
15 in relation to the total population in Lake Ontario,
16 the impact would be small.

17 If losses cause the population to decline,
18 and then stabilize at a lower level, the impact would
19 be moderate.

20 If losses at the intake cause the fish
21 population to decline to the point where it cannot be
22 stabilized, and continually declines, then the impact
23 would be large.

24 Now the first set of issues I'm going to
25 talk about relate to the cooling system for

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1 FitzPatrick. There are three Category 2 issues
2 relevant to the cooling system. These are
3 entrainment, impingement and heat shock.

4 Entrainment refers to the process where
5 very small aquatic organisms are pulled into the
6 cooling system. The majority of these organisms
7 experience mortality due to physical, chemical, or
8 thermal impacts.

9 Impingement refers to larger organisms
10 being pulled into the cooling system and getting
11 pinned on the debris screen. Impinged organisms
12 generally experience a lower mortality rate than
13 entrainment.

14 Heat shock, the third Category 2 issue
15 related to the cooling system, refers to when
16 relatively warm water is released into a colder
17 environment. Aquatic organisms adapted to the cooler
18 water can lose equilibrium, or die, when exposed to
19 warmer water. The team evaluated these three impact
20 areas and our preliminary conclusion is that the
21 FitzPatrick cooling system could have a small impact
22 on the fishery in Lake Ontario.

23 Radiological impacts are a Category 1
24 issue. This means the NRC has made a generic
25 determination that the impact of radiological releases

1 from normal nuclear plant operations during the period
2 of extended operation is small.

3 By design, the operation of nuclear power
4 plants is expected to result in small releases of
5 radiological effluents. FitzPatrick is no exception.

6 During our site audit, we looked at
7 selected parts of the radioactive effluent release and
8 radiological environmental monitoring programs, and
9 supporting documentation.

10 We looked at how the gaseous and liquid
11 effluents are controlled, treated, monitored and
12 released, as well as how solid radioactive wastes are
13 handled, packaged and shipped. We looked at how the
14 applicant's radiation protection program maintains
15 radiological releases in compliance with the
16 regulations for radioactive effluents.

17 We also looked at the applicant's data
18 from on-site and near-site environmental radiological
19 monitoring station locations for airborne releases and
20 direct radiation, as well as monitoring stations
21 beyond the plant site where water, milk, fish, and
22 food products are sampled.

23 Based on our review of the data, we found
24 that the calculated dose to the maximally-exposed
25 member of the public to be well within the NRC's

1 radiation protection limit.

2 The dose of the maximally-exposed member
3 is a conservative calculation which assumes maximum
4 values associated with an individual who is exposed
5 from radiation sources from the plant.

6 Since releases from the plant are not
7 expected to increase on a year to year basis during
8 the period of extended operation, and since we also
9 found no new and significant information related to
10 this issue, we preliminarily adopted the generic
11 conclusion that the radiological impact on human
12 health and the environment is small.

13 There are no aquatic species, federally
14 listed as threatened and/or endangered, that have the
15 potential to occur in the vicinity of FitzPatrick or
16 its transmission lines; however, there are five
17 terrestrial species. We prepared a detailed
18 biological assessment to analyze the effects of
19 continued operation of FitzPatrick on these listed
20 terrestrial species.

21 The staff's preliminary determination is
22 that the impacts during the period of extended
23 operation, on threatened or endangered species, would
24 be small.

25 There are two classes of accidents

1 evaluated in the Generic EIS, design-basis accidents
2 and severe accidents. Design-basis accidents are
3 those accidents that the plant is designed to
4 withstand without risk to the public. The ability of
5 the plant to withstand these accidents has to be
6 demonstrated before the plant is granted a license.

7 Because the licensee has to demonstrate
8 acceptable plant performance for the design-basis
9 accidents through the life of the plant, the
10 Commission found in the Generic EIS, that the
11 environmental impacts of design-basis accidents is
12 small for all plants.

13 The second category of accidents is severe
14 accidents. Severe accidents are, by definition, more
15 severe than design-basis accidents because they would
16 result in substantial damage to the reactor core.

17 The Commission found, in the Generic EIS,
18 that the risk of a severe accident is small for all
19 plants. Nevertheless, the Commission determined that
20 alternatives to mitigate severe accidents must be
21 considered for all plants that have not done so.
22 These are called SAMAs, Severe Accident Mitigation
23 Alternatives.

24 The SAMA evaluation is a Category 2 issue
25 and thus requires a site-specific analysis.

1 The purpose of the SAMA evaluation is to
2 ensure that plant changes with the potential for
3 changing severe accident safety performance are
4 identified and evaluated.

5 The scope of potential plant improvements
6 considered included hardware modifications, procedural
7 changes, training program improvements, and basically
8 a full spectrum of potential changes. The scope
9 includes SAMAs that would prevent core damage as well
10 as SAMAs that would improve containment performance,
11 if a core damage event occurs.

12 The preliminary results of the FitzPatrick
13 SAMA evaluation are summarized on this slide.

14 239 potential SAMA candidate improvements
15 were identified for FitzPatrick. That number was
16 reduced to 63, based on a multi-step screening
17 process. Then a more detailed assessment of the risk
18 reduction potential, and implementation cost, were
19 performed for each of the 63 SAMAs.

20 Six SAMAs were identified as potentially
21 cost-beneficial. None of the potentially cost-
22 beneficial SAMAs, however, are related to the managing
23 of effects of plant aging during the period of
24 extended operation. Accordingly, they are not required
25 to be implemented as part of license renewal.

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1 Regardless, Entergy is encouraged to consider, and
2 evaluate further, the potentially cost-beneficial
3 SAMAs. In fact, Entergy has indicated that one SAMA
4 has already been implemented, one is scheduled for the
5 end of this year, and the other four have been
6 combined into a single project undergoing an in-house
7 review.

8 Cumulative impacts are the impacts of the
9 proposed action, in this case license renewal, taken
10 together with other past, present, or reasonably
11 foreseeable future actions, regardless of what agency
12 or person undertakes those actions.

13 The cumulative impacts were evaluated for
14 the period of extended operation. Our preliminary
15 determination is that any cumulative impacts resulting
16 from continued operation of FitzPatrick would be small
17 for all resources.

18 And as part of the environmental review
19 process, we also evaluated a number of alternatives to
20 license renewal. Specifically, we looked at the
21 impacts of replacing FitzPatrick power, approximately
22 880 megawatts, with power from other sources.

23 Alternatives that the team looked at
24 included a "no-action" alternative, that is, not
25 renewing the license. We also looked at replacing

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1 FitzPatrick generation with generation from new power
2 plants, either coal, natural gas, or new nuclear. We
3 considered the impacts and capabilities of providing
4 replacement power with purchased power.

5 We also looked at other technologies such
6 as wood, wind, and solar power. Then we looked at a
7 combination of alternatives, including conservation,
8 to replace that capacity.

9 For each alternative, we looked at the
10 same type of issues that we did when we were
11 evaluating the environmental impacts of license
12 renewal.

13 The team's preliminary conclusion is that
14 the environmental impacts of the selected alternatives
15 would reach moderate to large significance in at least
16 some of the categories evaluated.

17 During the environmental review, we found
18 no information that was both new and significant.
19 Therefore, we have preliminarily adopted the Generic
20 EIS conclusion that impacts associated with the 69
21 issues will continue to be small.

22 In the FitzPatrick supplemental EIS, we
23 analyzed the remaining 23 Category 2 issues, and
24 determined that the environmental impact resulting
25 from these issues was also small in all categories.

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1 During our analysis, we found that the
2 environmental impacts of alternatives, in at least
3 some impact areas, would reach moderate to large
4 levels of significance. Based on these conclusions,
5 the NRC staff's preliminary recommendation is that the
6 environmental impacts of license renewal are not so
7 great, that license renewal would be unreasonable.

8 Listed are important milestone dates for
9 the FitzPatrick environmental review. In June, the
10 FitzPatrick Draft Supplemental EIS was published. We
11 are currently accepting public comments on the draft
12 until September 5th, and the Final EIS is scheduled to
13 be published in January of next year.

14 This slide identifies me as your primary
15 point of contact with the NRC for the environmental
16 review. Mr. Tommy Lee is the contact for any
17 questions related to the safety review.

18 Documents related to the FitzPatrick
19 review may be found in the Penfield Library on the
20 SUNY Oswego campus, or the Oswego public library. At
21 the bottom of the slide is an Internet address where
22 you can directly access the FitzPatrick Supplemental
23 EIS.

24 And there are several ways you can provide
25 your comments on the FitzPatrick draft. You can

1 provide comments today during the comment period. If
2 perhaps you're not ready to provide comments today,
3 you can send your comments via e-mail to
4 FitzPatrickEIS@nrc.gov. You can also send them via
5 "snail mail" or hand-deliver them to us at the
6 headquarters.

7 And with that, I'm done. I'll hand it
8 over to Rani.

9 MS. FRANOVICH: Okay. Thank you, Jessie.

10 Before we go into comments, let me just
11 ask if anybody has any questions on Jessie's
12 presentation.

13 [No response]

14 MS. FRANOVICH: No questions?

15 Okay. We have one person who registered
16 to comment. Mr. Ken Schwartz. Is Mr. Schwartz here?

17 [No response]

18 MS. FRANOVICH: Okay. Is there anyone who
19 did not register to comment, who would like to comment
20 at this time?

21 [No response]

22 MS. FRANOVICH:

23 Okay. Then that concludes our meeting. Let me
24 just thank everyone for coming. We appreciate your
25 attendance at our meeting, and if you have any

1 questions at the end of the meeting, the staff will be
2 here for a few minutes. You're welcome to come up and
3 ask us any questions you may have.

4 And I wanted to remind everyone that we
5 are accepting comments until September 5th on the
6 Draft Environmental Impact Statement for FitzPatrick.

7 And also, if you have any suggestions for
8 how we can do our meetings in the future, areas we can
9 improve on, things we might want to do different, we
10 have a meeting feedback form in the back of the room.
11 You're welcome to fill one of those out, hand it to a
12 member of the staff, or you can just fold it up and
13 mail it to us. The postage is prepaid.

14 And thanks again for coming.

15 [Whereupon, at 7:18 p.m., the public
16 meeting was concluded.]
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