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NUCLEAR REGULATORY COMMISSION

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ENCLOSURE 1

1 UNITED STATES OF AMERICA

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3 NUCLEAR REGULATORY COMMISSION

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5 PUBLIC MEETING TO COLLECT COMMENTS ON THE DRAFT

6 ENVIRONMENTAL IMPACT STATEMENT FOR QUAD CITIES

7 NUCLEAR POWER STATION, LICENSE RENEWAL

8 + + + + +

9 TUESDAY

10 DECEMBER 16, 2003

11 + + + + +

12 MOLINE, ILLINOIS

13 + + + + +

14 The NRC Public Meeting met at The Mark of the

15 Quad Cities, 1201 River Drive, at 1:30 p.m., Chip

16 Cameron presiding.

17 PRESENT:

18 Chip Cameron

19 John Tappert

20 Duke Wheeler

21 Bruce McDowell

22 Robert Palla

23 ~~Kimberly~~ Kimberley Corp

24

25

1 I N D E X

AGENDA ITEM	PAGE
Welcome and Purposes of Meeting	3
Overview of License Renewal Process	~~9~~ 10
Overview of Environmental Review Process	~~11~~ 15
Results of the Environmental Review	~~39~~ 18
How comments can be Submitted	~~42~~ 47
Public Comments	~~45~~ 53
Closing	~~56~~ 62

1 P-R-O-C-E-E-D-I-N-G-S

2 (1:30 P.M.)

3 MR. CAMERON: All right. Good afternoon
4 everyone. My name is Chip Cameron. I'm the Special
5 Counsel for Public Liaison at the Nuclear Regulatory
6 Commission. And I just want to welcome you to the
7 NRC's public meeting today. And the subject of the
8 meeting is the Draft Environmental Impact Statement
9 that was prepared to help the NRC review an
10 application that we have from the Exelon Company to
11 renew the license for the Quad Cities Power Generating
12 Station. And it's my pleasure to serve as your
13 facilitator for today's meeting.

14 And in that role I'm just going to try to
15 help you have a productive meeting. We want to get to
16 the substance of today's discussions quickly. So I'm
17 just going to briefly cover what the format for the
18 meeting is going to be and the ground rules and just
19 give you an idea of what the agenda is so that you
20 know what to expect.

21 The format of the meeting is going to be
22 divided into two parts. The first part is to give all
23 of you information on the NRC's license renewal
24 process, and specifically the environmental review
25 part of the NRC's review process. And we also want to

1 talk to you about the findings in the Draft
2 Environmental Impact Statement. So, we'll be giving
3 you information on that.
4 And the second part of the meeting is to
5 hear from you a little bit more formally. Any formal
6 comments that you might want to give us today on the
7 Draft Environmental Impact Statement or any concerns
8 that you want to express about the license renewal
9 process generally.
10 And ground rules are real simple. If you
11 have a question that you want to ask, just signal me
12 and I'll bring you this cordless mike. And just tell
13 us your name and affiliation, if appropriate. I would
14 ask that only one person speak at a time. We are
15 keeping a transcript. Mr. LeGrand is our stenographer
16 this afternoon. And we not only want to pay attention
17 to whomever has the floor at the moment, but one
18 person at a time will allow us to get a clean
19 transcript. And that will be the public record of
20 this meeting and it will be available to whoever wants
21 to look at it.
22 I would also ask you to just follow a
23 little brevity in your remarks so that we can make
24 sure that we hear from everyone. I don't think we're
25 going to have a problem with time today, so just think

about that when you're talking. When we get to the formal comment part, usually we use the guideline of five minutes for formal presentations, comments. But, as I said, I think we'll be able to have some leeway on that today.

The NRC is also taking written comments on the Draft Environmental Impact Statement. But I just want to assure you that anything that you say today will carry the same weight as comment that we receive in writing. And you may, you may hear things today either from the NRC or from others in the audience that will either encourage you to submit a written comment or perhaps inform any written comments that you do, that you do submit.

And we were here a few months back doing scoping. And we hopefully addressed all of the comments that you made in the Scoping Meeting in the Draft Environmental Impact Statement. But that's another thing you may want to focus on is see how your comments were treated in the Draft Environmental Impact Statement and if you want to put a finer point on that for us, do that by submitting a written comment. And the staff is going to tell you in a minute how you do that.

1 In terms of the agenda, we're going to go
2 to John Tappert, who's right here, for a more formal
3 welcome for you. And John is the Chief of the
4 Environmental Section in our Office of Nuclear Reactor
5 Regulation back in Washington, D.C. And John and his
6 staff are responsible for supervising the preparation
7 of any type of environmental review, be it for license
8 renewal or some other type of activity.
9 We are then going to go for an overview of
10 the entire license renewal process. That includes
11 more components than just an environmental review.
12 And we're going to ask ~~Kimberly~~ Kimberley Corp, who's
13 right here, to do that for us. And ~~Kimberly~~ Kimberley
14 is relatively new to the agency. She's been here
15 three years but she's worked on every license renewal
16 application on the safety evaluation side. And that
17 will become clear as we go through some of the
18 comments.
19 After that we're going to go to Mr. Duke
20 Wheeler, who's the Project Manager for the
21 environmental review on the Quad Cities' license
22 renewal application. He'll take us through the
23 environmental review process. We'll then go on to you
24 for any questions that you might have about the
25 process. Then we're going to the heart of the

meeting, so to speak. And we have Mr. Bruce McDowell, right here, who's going to take us through the findings in the Draft Environmental Impact Statement. Now Bruce is a team leader. The NRC uses expert consultants and contractors to help us to do the environmental review. And Bruce is ~~a~~ the leader of that team. He's an environmental assurance manager from Lawrence Livermore National Lab, Master's in Business Administration and a Master's in Resource Economics. A lot of experience in the environmental review. He'll take us through that.

And then we're going to go to Mr. Robert Palla, who's right here. And Bob is with the NRC and he's going to talk about something called Severe Accident ~~Litigation~~ Mitigation Alternatives or SAMA's, as they're known. And Bob has been with the agency for about 20 years in the, some call it the ~~D~~dark ~~S~~science of Probablistic Risk Assessment. So he has lots of experience with that. I would just thank all of you for being here today and we just want to try to answer your questions as well as we can, address any concerns here which you have to tell us.

And, John, would you like to talk at this point?

1 MR. TAPPERT: Thank you, Chip, and good
2 afternoon and welcome. As Chip said, my name is John
3 Tappert. And on behalf of the Nuclear Regulatory
4 Commission, I'd like to thank everyone for coming out
5 today and participating in this process.
6 I hope that you find the information we will
7 share with you today to be helpful. And we look
8 forward to receiving your comments both today and in
9 the future.
10 I'd like to start off right now by going
11 over briefly the agenda and the purpose of this
12 meeting. First of all, we're going to have a brief
13 overview of the entire license renewal process. And
14 this includes both the safety review as well as the
15 environmental review, which is the principle focus of
16 today's meeting.
17 Then we'll go over the preliminary
18 findings in our Draft Environment Impact Statement,
19 which assesses the impacts associated with extending
20 the operation to the Quad Cities Units 1 and 2 for an
21 additional 20 years. Then we'll give you some
22 information on the schedule for the balance of our
23 review and how you can submit comments in the future.
24 And then finally we get to the real heart of the

1 meeting today, which is to receive any comments that
2 you may have today.
3 But first we can provide some brief
4 context for the License Renewal Program itself. The
5 Atomic Energy Act gives the NRC the authority to issue
6 operating licenses to commercial nuclear power plants
7 for a period of 40 years. For Quad Cities Units 1 and
8 2, those operating licenses will expire in 2012. Our
9 regulations also made provisions for extending those
10 operating licenses for an additional 20 years as part
11 of a license renewal program. And Exelon has
12 requested a renewal for both units.
13 Now, an important part of the NRC's review
14 of that license renewal application is an assessment
15 of the environmental impact associated with extended
16 operation. Now, we had a public meeting here last
17 April to seek your ~~impact~~ input early in our
18 environmental review. As we indicated at that earlier
19 scoping meeting, we return here now today to present
20 the preliminary results of our review.
21 And again, the real purpose of today's meeting
22 here ~~today~~ is to receive your comments on our draft
23 review.

1 So with that brief introduction, I'd like
2 to ask ~~Kimberly~~ Kimberley to provide some more
3 information on the safety review.
4 MS. CORP: Thanks, John. As Chip said, my
5 name is ~~Kimberly~~ Kimberley Corp and I'm the NRC's
6 Backup Project Manager supporting the safety review of
7 Exelon's license renewal application for both Quad
8 Cities and Dresden. Before I get into the discussion
9 of the license renewal process I'd like to take a
10 minute to talk about the Nuclear Regulatory Commission
11 in terms of what we do and what our mission is.
12 As John just said the Atomic Energy Act of
13 1954 is a legislation that authorizes the NRC to
14 regulate the civilian use of nuclear materials. In
15 carrying out that authority, the NRC's mission is
16 threefold. One is to ensure adequate protection of
17 public health and safety, two is to protect the
18 environment, and three is to provide for a common
19 defense and security.
20 The NRC accomplishes its mission through
21 a combination of regulatory programs and processes
22 such as inspections, enforcement actions, assessment
23 of licensees' performance and the evaluation of
24 operating experience of the nuclear power plants
25 throughout the country.

1 The NRC's license renewal review is
2 similar to the original licensing process and that it
3 involves two parts; a safety review, which includes a
4 safety evaluation, plant inspections and also an
5 independent review by the ACRS or the Advisory
6 Committee on Reactor Safeguards as well as an
7 environmental review, which Duke will discuss next.
8 First you might ask what does the safety
9 review consider. There are two types of safety
10 issues; current operating issues which are dealt with
11 now and aging management issues that are dealt with in
12 license renewal. Under the current operating license,
13 the NRC's regulatory oversight deals with current
14 safety issues. We do not wait for a plant to come in
15 for license renewal before requiring them to address
16 any issue.
17 Because the NRC ~~is~~ has or is dealing with
18 those issues such as security or emergency planning,
19 we do not reevaluate them in license renewal. The
20 license renewal safety review focuses an aging
21 management issues and the program that the licensee
22 has already implemented or will implement to maintain
23 the equipment safely.
24 The safety evaluation report is
25 independently reviewed by the ACRS. The ACRS is a

1 group of nationally recognized technical experts in
2 the nuclear safety area that basically serves as a
3 consulting body to the Commission itself. They review
4 each application as well as the staff safety
5 evaluation report and they form their own conclusions
6 and recommendations and report them directly to the
7 Commission.
8 The environmental review evaluates the
9 impact of license renewal on a number of areas. These
10 areas include, among others, ecology, hydrology,
11 cultural resources and socioeconomic issues. As I
12 said earlier, Duke will discuss these in the
13 environmental review in greater detail next.
14 The next slide will discuss the license
15 renewal process. This slide really gives the big
16 picture overview of the license renewal process. And
17 as you can see from this slide, the process involves
18 two parallel paths; safety review and environmental
19 review. The safety review involves the NRC staff
20 review and assessment of the technical information
21 that is contained in the licensee's application.
22 There's a team of about 30 NRC technical
23 reviewers and contractors back at the NRC Headquarters
24 in D.C. who are conducting the safety review right
25 now. And the team is also supported by the technical

1 experts at three different national laboratories,
2 including ~~Argon~~ Argonne, outside of Chicago;
3 Brookhaven in Long Island, New York; and Pacific
4 Northwest in Washington State. So there's a lot of
5 expertise in the team to conduct this safety review.
6 The staff's safety review focuses on the
7 effectiveness of the proposed aging management program
8 for those plant systems, structures and components
9 that are within the scope of license renewal. The NRC
10 staff reviews the effectiveness of these programs to
11 ensure that the plant's safety can be maintained
12 throughout the term of license renewal.
13 The safety review also focuses on the
14 applications, time limited aging analysis. Each
15 original design analysis that assumed a 40 year life
16 must be reevaluated to extend the 40 year term to the
17 60 year renewal term. This safety process also
18 involves audits and on-site inspections. These
19 inspections have been conducted by a team of
20 inspectors pulled together from both the NRC
21 Headquarters and NRC's Regional office in Chicago.
22 The results of inspections were documented
23 in separate inspection reports and the results of the
24 staff's safety review, as well as the results of the
25 inspection, will be documented in the Safety

1 Evaluation Report. And a copy of that will be
2 provided to the ACRS for an independent evaluation.
3 Both the Regional scoping and aging management review
4 inspections have been completed and we are in the
5 process of writing a Safety Evaluation Report right
6 now.
7 The second part of the~~ir~~ review process
8 involved an environmental review, which involved
9 scoping activities and developing the Draft Supplement
10 to the GEIS, Generic Environmental Impact Statement
11 for License Renewal ~~at~~ of Nuclear Plants. And
12 eventually we will be issuing a final supplemental to
13 the GEIS for license renewal which will address the
14 comments received from the meeting today as well as
15 written comments received later.
16 So as you can see from the slide, the
17 final agency decision on whether to approve or deny
18 the application will require a number of things. A
19 Safety Evaluation Report, which documents the results
20 of the safety review, the final supplement to the
21 GEIS, which documents the results of the environmental
22 review. And then inspection reports, which document
23 the results of the Regional inspection.
24 All three of these reports will be factored in

1 as well as the independent report from ACRS into the
2 final agency decision.
3 And that concludes the license renewal
4 overview process.
5 MR. CAMERON: Okay, thank you, ~~Kimberly~~
6 Kimberley. And we'll hold questions until we hear
7 from Duke on the environmental review process. Then
8 we'll go out to see if there's any questions that you
9 have.
10 MR. WHEELER: Good afternoon. My name is
11 Duke Wheeler, and I am the Environmental Project
12 Manager responsible for coordinating the efforts of
13 the NRC staff and the national labs for the
14 environmental review that supports Exelon's
15 application for license renewals for Quad Cities Units
16 1 and 2.
17 The National Environmental Policy Act of
18 1969 requires a systematic approach in evaluating
19 environmental impacts of proposed major Federal
20 actions. Consideration is to be given to the
21 environmental impacts of the proposed action and
22 mitigation for any impacts believed to be significant.
23 In addition, alternatives, including taking no action
24 on the applicant's request are also to be considered
25 in our environmental review.

1 The environmental impact statement is a
2 disclosure tool and it does involved public
3 participation. NRC regulations required that an
4 environmental impact statement will be prepared for
5 proposed license renewals.
6 Simply stated, our decision standard
7 basically asks are the environmental impacts of the
8 proposed action great enough that maintaining the
9 license renewal option is unreasonable. And I'd like
10 to point out that we do not decide whether or not a
11 plant's going to run for an additional 20 years.
12 Other regulatory agencies and the licensee make that
13 decision.
14 ~~Kimberly~~ Kimberley had shown you a slide
15 of the overall license renewal process. And the
16 bottom line along that slide indicated the steps that
17 we go through for an environmental review. And this
18 is an expansion of that slide. And basically we start
19 with the application being submitted by Exelon. That
20 took place January 3rd of this year. And then we make
21 known to the public via the *Federal Register* and other
22 means that we are going to be doing an environmental
23 impact statement. We publish what is referred to as
24 a Notice of Intent to develop an environmental impact
25 statement.

1 That leads us right into the scoping
2 process. And this is our first opportunity for
3 significant public participation in what we do. The
4 purpose of the scoping process is basically to give
5 the public an opportunity to provide information to us
6 to help us basically scope out the bounds of the
7 environmental interest that we should take as we
8 continue on with our review.
9 We conducted a site audit and we were out
10 at the site in Quad Cities March 2003 of this year to
11 gather substantial amount of information. And for
12 whatever additional information we require, we'll send
13 a formal request for additional information to the
14 licensee. We did that. The licensee responded. We
15 now take into consideration all the information that
16 we have in our hands and we publish a draft of our
17 environmental impact statement.
18 And this is where we are right now. We
19 published that draft last month and then one of the
20 things that we do, it's published for public comment.
21 And to assist, to provide one additional avenue of the
22 public providing us comments on the draft
23 environmental impact statement is we have this meeting
24 put together for that purpose.

1 There are also other ways you can provide
2 information to us. As Chip indicated, I'll get to
3 that as we get toward the end of the meeting.
4 The final step is after we've gotten all
5 the comments that we received on the draft of our
6 environmental impact statement, we will publish a
7 final environmental impact statement. And our
8 schedule provides for us to produce that final
9 environmental impact statement in July of 2004.
10 This concludes my overview up to this
11 point. I'd like to turn the meeting back over to
12 Chip. And then we'll get into the meat of our
13 findings.
14 MR. CAMERON: Okay, thanks, Duke. I
15 wanted to see if there's any questions about the
16 process, license renewal process, either safety or
17 environmental before we go on. And for those of you
18 who don't have a copy of this draft, ~~VIS~~ EIS is on the
19 table outside the meeting room.
20 Any questions about the process at this
21 point? Okay. Let's go to Bruce for a description of
22 the findings and the draft environmental impact
23 statement. Bruce?
24 MR. MCDOWELL: I'm Bruce McDowell from the
25 ~~Lower~~ Lawrence Livermore Laboratory. I'm the task

leader for the team that wrote the supplemental environment impact statement for the Quad Cities.

This slides shows our analysis approach. The Generic Environmental Impact Statement for License Renewal, ~~New Reg~~ NUREG-1437, identifies 92 environmental issues that are evaluated for license renewal. 69 of these issues are considered generic for Category 1, which means that the impacts are the same for all reactors with certain features such as plants ~~they~~ that use water from large rivers.

For the other 23 issues referred to as Category 2, the NRC found that the impacts were not the same at all sites. And therefore site specific analysis was needed. Only certain issues addressed in the GEIS are applicable to the Quad Cities plant. For those generic issues that are applicable to Quad Cities, we accessed if there was any new and significant information related to the issue that might change the conclusion in the guidance.

If there is no new information then the conclusions of the GEIS are adopted. If new information is identified and determined to be significant, then a site specific analysis would be performed. For the site specific issues related to Quad Cities, the site specific analysis was performed.

1 Finally, during the scoping period the public was
2 invited to provide information on potential new
3 issues. And the team, during their review, looked to
4 see if there were any new issues that needed
5 evaluation.
6 For each issue identified ~~int~~ in the GEIS,
7 an impact level is assigned. These impact levels are
8 consistent with the Counsel on Environmental Quality.
9 For a small impact, the effect is not detectable or
10 too small to ~~distabilize~~ destabilize or noticeably
11 alter any important attribute of the resource. For
12 example, the plant may cause the loss of adult fish at
13 the ~~intact~~ intake structure. If the loss of fish is
14 so small that it cannot be detected in relation to the
15 total population of the river, the impact would be
16 small. For a moderate impact, effect is significant
17 to alter noticeably but not ~~distabilize~~ destabilize
18 important attributes of the resource. Using the fish
19 example again, if loses at the ~~intact~~ intake causes
20 the fish population to decline and then stabilize at
21 a lower level, the impact would be moderate.
22 And finally for an impact to be considered
23 large, the affect must be clearly noticeable and
24 sufficient to destabilize important attributes of the
25 resource. So if the losses at the ~~intact~~ intake cause

1 the fish population to decline to the point where it
2 cannot be stabilized and continues to decline, then
3 the impact would be large.
4 The team that evaluated the impacts for
5 the Quad Cities plant, evaluated several different
6 areas and they're shown on this slide; socioeconomic
7 and environmental justice, -- science, terrestrial
8 ecology, land use, archaeology and historical
9 resources, radiation protection, nuclear safety,
10 regulatory compliance in aquatic ecology and
11 hydrology.
12 The staff has considered information from
13 a broad range of sources during the development of
14 this draft supplemental EIS. We have considered the
15 licensee's evaluation of environmental impacts that
16 was submitted with the license application. We have
17 conducted a site audit which is the site visit. The
18 staff visited the plant and interviewed plant
19 personnel. We have talked to Federal, State and local
20 officials as well as local service agencies.
21 In addition, we have also considered all
22 of the comments received from the public during the
23 scoping period. These comments are listed in Appendix
24 A, along with NRC's responses. The information
25 received from all these sources is the basis for the

1 analysis and the preliminary conclusions in the draft
2 SEIS that you have in front of you.
3 In Chapter 2 of the draft SEIS, we discuss
4 the plant and the environment around the plant. In
5 Chapter 4, we then looked at the potential
6 environmental impacts for additional 20 years of
7 operation for the Quad Cities nuclear station. The
8 team looked at issues related to the cooling system,
9 transmission lines, radiological impacts,
10 socioeconomic impacts, ground water use and quality,
11 threatened and endangered species.
12 Each of these issues are discussed in
13 detail in the draft SEIS and I'll take a few minutes
14 to highlight, to identify the highlights of our
15 review.
16 One of the issues we looked closely at is
17 the cooling system for the Quad Cities plant. This
18 slide shows the layout of the cooling system ~~intact~~
19 intake and discharge canals. Although there are a
20 number of Category 1 issues related to the cooling
21 system, and remember we said the Category 1 issues are
22 those that have been determined to have the same
23 significance for all plants.
24 No new and significant information was

1 identified during scoping by the applicant or by the
2 staff during their review of the issues.
3 The issues that the team looked at on a
4 site specific basis include entrainment and
5 impingement of fish and shellfish, heat shock and
6 enhancement of microbiological organisms. The
7 potential impacts in these areas were determined to be
8 small and no additional mitigation was warranted.
9 Radiological impacts are a Category 1
10 issue. As you recall this means that the NRC has made
11 a generic determination that impacts resulting from
12 radiological releases during nuclear plant operations
13 are small. But because it is often a concern to the
14 public I wanted to take just a minute to briefly
15 discuss it.
16 During the site visit we looked at the
17 release and monitoring program documentation. We
18 looked at how the gaseous and liquid ~~ethelents~~
19 effluents were treated and released as well as how the
20 solid waste were treated, packaged and shipped. This
21 information is found in Chapter 2 of the draft SEIS.
22 We looked at how the applicant determines and
23 demonstrates that they are in compliance with the
24 regulations for release of radiological ~~effluence~~
25 effluents.

1 The licensee monitors the near site and on
2 site locations for airborne releases and direct
3 radiation. There are other monitoring stations beyond
4 the site boundary including locations where water,
5 milk, fish and food products are sampled. The
6 releases from the plant and the resulting outside
7 potential doses are not expected to increase on a year
8 to year basis during the 20 year license renewal term.
9 No new and significant information was identified
10 during the staff's review, the public input during the
11 scoping process or the evaluation of other available
12 information.
13 The generic EIS determined that the
14 impacts of the 69 Category 1 issues were small based
15 on the information known at that time. As part of my
16 team's review, we looked at all information collected
17 during the scoping process to identify any information
18 that was both new and significant with regard to any
19 of these issues.
20 We looked at information developed by the
21 licensee, information developed independently by my
22 team and information received during the public
23 comment process. We determined that none of the
24 information was both new and significant. Therefore,

1 the conclusions of the generic EIS or adopted in this
2 draft supplemental EIS.
3 The last issue from Chapter 4 I'd like to
4 discuss is that of threatened and endangered species.
5 The only Federally listed aquatic species that
6 currently occurs in the vicinity of Quad Cities site
7 is the Higgins Eye pearly ~~Muscle~~ mussel. Essential
8 habitat for this species is located about one mile
9 downstream from the plant.
10 There are a number of terrestrial species
11 listed as threatened or endangered that could occur in
12 the range of the Quad City site and the transmission
13 lines. These include the bald eagle, Indiana bat, the
14 river otter, the Iowa Pleistocene Snail and the
15 western hognosed snake. During winter migration bald
16 eagles visit open water in the Mississippi River
17 caused by the plant's thermal discharges. They also
18 use the area for summer nesting and a known nest is
19 about eight miles north of the site.
20 The Indiana bat, river otter, Iowa
21 Pleistocene Snail and western hognosed snake could
22 occur in the counties where the plant's transmission
23 lines are located. But since the licensee does not
24 plan any refurbishment or construction as part of

1 relicensing, the natural area where these species
2 would be found would not be disturbed.
3 This would also be true for the three
4 threatened plant species; the eastern and western
5 prairie fringe ~~Clover~~ orchid and the prairie bush
6 clover. The staff's preliminary determination is that
7 the impact of operation of Quad Cities plant during
8 the license renewal period on threatened and
9 endangered species would be small.
10 The staff also considered cumulative
11 impacts. These are impacts that are minor when
12 considered individually but significant when
13 considered with other past, present or reasonably
14 foreseeable future actions regardless of what agency
15 or person undertakes the other actions.
16 The staff considered cumulative impacts
17 resulting from operation of the cooling system,
18 operation of the transmission lines, releases of
19 radiological and radiation material, sociological
20 impacts, ground water use and quality impacts and
21 threatened and endangered species impacts.
22 These impacts were evaluated to the end of
23 the 20 year license renewal term. The geographical
24 boundary of the analysis was dependent upon the
25 resource. For instance, the area analyzed for

1 transmission lines was different than the area
2 analyzed for the cooling water system. The staff's
3 preliminary determination is that ~~in an accumulative~~
4 cumulative impacts resulting from the operation of the
5 Quad Cities plant during the license renewal period
6 would be small.
7 The team also looked at uranium fuel cycle
8 and solid waste management and decommissioning. All
9 issues for uranium fuel cycle and solid waste
10 management as well as decommissioning are considered
11 Category 1. For these issues, no new and significant
12 information was identified.
13 Our team evaluated the potential impacts
14 associated with the Quad Cities plant not continuing
15 operation and replacing this generation with
16 alternative power sources. In 2001, Quad Cities Units
17 1 and 2 generated 13 billion kilowatt hours of
18 electricity. The team looked at no action
19 alternative, new generation from coal-fired, gas-fired
20 and nuclear, purchased power, alternative technology
21 such as wind, solar and hydropower and then a
22 combination of alternatives.
23 For each of the alternatives, we looked at
24 the same type of issues. For example, land use,
25 ecology, socioeconomics, these same issues that we

1 looked at for the operation of the Quad Cities during
2 the license renewal term. And for two alternatives,
3 solar and wind, I'd like to describe the scale of the
4 alternatives that we considered because the scale is
5 important in understanding our conclusions.
6 First solar. Based upon the average solar
7 energy available in Illinois and the current
8 conversion efficiencies of solar panels, these cells
9 would produce about 100 kilowatt hours per square
10 meter per year. As such, 120 million square meters or
11 about 46 square miles cells would be required to
12 replace the generation of the Quad Cities plant.
13 Regarding wind power, wind ~~turbans~~
14 turbines have a capacity factor between 30 and 35
15 percent. As such, at least 4,200 megawatts of wind
16 power would have to be developed to replace Quad
17 Cities 1800 megawatts. To put this in context, in
18 2002 total wind power capacity in the United States
19 was 4,500 megawatts. In other words, the total wind
20 power in the United States would have to double to
21 replace the generation from Quad Cities.
22 Due to these scale issues and other siting
23 requirements of reasonable alternatives, the team's
24 preliminary conclusion is that the environmental

1 impacts of alternatives, at least in some impact
2 categories, is moderate or large.
3 So to review our approach. In their
4 Generic Environmental Impact Statement, NRC examined
5 environmental issues at all sites and found that the
6 same conclusion could be made for 69 Category 1
7 issues. In our analysis we found no information that
8 was new and significant. And we adopted the generic
9 EIS conclusions. We also performed site specific
10 analysis for Category 2 issues applicable to Quad
11 Cities, as I've just discussed.
12 Lastly, we found no new impacts that were not
13 discussed in the Generic Environmental Impact
14 Statement.
15 To summarize our findings, for 69 Category
16 1 issues presented in the generic EIS, we found no
17 information that was both new and significant.
18 Therefore, we adopted the conclusions of the generic
19 EIS. Our team analyzed the remaining issues in this
20 supplemental EIS. And we found that the environmental
21 affects resulting from these issues were also a small
22 significance with one exception.
23 On one segment of the transmission lines,
24 the induced currents were calculated to be six
25 milliamps. Since this slightly exceeds the NESC

1 standard of five milliamps, we judge the impact to be
2 of moderate significance. Since this line is not
3 owned by the licensee, NRC has notified the owner of
4 our findings.
5 And I will take it back to Chip if there's
6 any questions.
7 MR. CAMERON: Okay, we're going to go to
8 Bruce before questions in a minute and also hear from
9 Bob Palla on accidents. But we're going to exercise
10 a little bit of flexibility now to allow one of our
11 local government officials to present some remarks to
12 us so he can make another meeting. And Mr. Jim
13 Bohnsack, who is the Chairman of the Rock Island
14 County Board of Supervisors.
15 Jim, do you want to come up and we'll ask
16 Bruce to take a seat and you can come up here and give
17 us your comments. Thank you.
18 MR. BOHNSACK: Thanks, Chip. And I
19 appreciate it and I apologize. It's difficult to meet
20 but I really appreciate having an opportunity to
21 speak. And my opportunity to speak is the same what
22 I did the last time. And one of the problems we're
23 having with Exelon is, and it's the major company,
24 that's refusing to pay any property taxes in the Quad
25 City area and that comes to about four million dollars

1 a year. And they protested their taxes last year.
2 They also did it again this year. And if we were to
3 lose that that's $8 million that comes out of the
4 coffers out of the county and somebody has to make
5 that up.
6 And all we're asking in Rock Island County
7 is for the people to pay their fair share. People
8 that own homes do pay their fair shares. All
9 companies have the right to protest their taxes and
10 they do and we have a settlement. But when you have
11 a company like Exelon that comes in and tells you that
12 ~~they're~~ their property is worth nothing and when
13 they're generating what we understand is a million
14 dollars a day out of that facility and their taxes are
15 about $4 million, it's pretty hard for us to believe
16 that that facility is worth nothing.
17 Also they've come back and made an offer
18 of $33 million of a ramping down, as they call it.
19 And they've done that to other ones. And now just
20 last week they came and protested them again. Now
21 they're saying $22 million. So, when you look at a
22 large company like that that I think is very ruthless
23 to talk about the value is zero. It's $33 million,
24 it's $22 million. And so we have concerns on really
25 how to operate their facility. And I understand the

1 local people doing an excellent job. And we don't
2 want them to leave, that's for sure. We want them to
3 pay their fair share.
4 If they don't pay that and we look at
5 endangered species, you're going to see some very big
6 children that are going to be endangered in that area
7 school system. They pay about $2 million in that
8 school system. And I believe it's very important that
9 they pay their fair share of taxes. And I'm just sure
10 that the farmer's not going to be able to pay that
11 kind of money for their children. And they shouldn't
12 if you have businesses that are very, very good at
13 doing what they're doing and making money. They ought
14 to pay their fair share.
15 So I guess my biggest comments are that we
16 do need your help from the environmental to some how
17 put the pressure on companies like Exelon that they
18 pay their fair share of taxes and then they should be
19 able to continue to operate for 20 years. But if they
20 operate for another 20 years and they pay no taxes,
21 I'm telling you we are spending a considerable amount
22 of money trying to get it accessed, the value that we
23 believe that it should get accessed at.
24 Preliminary says we've got them valued at
25 $68 million and that it should be somewhere around

1 $120 million from a company that we've hired. And
2 it's costing us thousands and thousands and thousands
3 of dollars to get that kind of information, which is
4 taking money out of everybody's coffers and making
5 everybody else pay more money so we can provide the
6 services in Rock Island County that we should do.
7 I appreciate you letting me speak early.
8 I apologize that meetings are getting pretty complex.
9 But thank you very much.
10 MR. CAMERON: Okay, thank you, Mr.
11 Bohnsack. And his remarks will be reflected in the
12 record of today's proceeding.
13 We are going to go to others who want to
14 speak after we get done with the information portion
15 of the session. And before we go to severe accident
16 ~~litigation~~ mitigation alternatives, why don't we see
17 if there's any questions for Bruce on the findings in
18 the draft Environmental Impact Statement. He covered
19 a lot of different -- the team looked at a lot of
20 different potential impacts including socioeconomic.
21
22 Any questions for Bruce at this point?
23 Yes, and let me get you on the transcript.
24 And if you could just give us your name and
25 affiliation, if appropriate.

1 MS. ~~PARRIGO~~ PERRIGO: Hi, I'm Leslie
2 ~~Parrigo~~ Perrigo with IECAN. I was just wondering if
3 you could repeat the figure on the amount of wind
4 power we would need to make up for the power plant?
5 MR. MCDOWELL: I can repeat all the
6 figures. Wind capacity factors between 30 and 35
7 percent. As such, at least 4200 megawatts of wind
8 power would have to be developed to replace Quad
9 Cities 1800.
10 Is that it?
11 MR. CAMERON: And Leslie, what's the full
12 name of your group?
13 MS. ~~PARRIGO~~ PERRIGO: The Independent
14 Environmental Conservation Act is the Network.
15 MR. CAMERON: And the acronym is
16 pronounced?
17 MS. ~~PARRIGO~~ PERRIGO; IECAN.
18 MR. CAMERON: IECAN, okay. Thank you,
19 Leslie. Other questions? Let's go right here and
20 then we'll go back to Neill. Please tell us your
21 name.
22 MR. WHITT: Joshua Whitt, we represent the
23 Rock Island Taxing Bodies. And we just had a quick
24 question. Where you have your conclusions and
25 recommendations, we understand that these are generic

1 statements, but what does this mean for the entire
2 process? I mean, does it make it more likely? Less
3 likely? What affect does it have on the process of
4 relicensing the facility?
5 MR. MCDOWELL: Are you talking about the
6 decline in the tax revenues?
7 MR. WHITT: No, I'm just talking about
8 conclusions and recommendations. What affect does
9 that have on the likelihood of renewing the license?
10 MR. MCDOWELL: Any particular conclusion
11 and recommendation?
12 MR. CAMERON: I think what he wants,
13 perhaps, and I'm sorry to interrupt you, Mr. Whitt,
14 but maybe it would be useful if someone described how
15 the environmental review comes together with the
16 safety review and how that decision, all of that is
17 weighed perhaps. Is that what you need to know? All
18 right. John Tappert.
19 MR. TAPPERT: Your question is is the
20 conclusion and how is that factored into the decision?
21 MR. WHITT: Yes.
22 MR. TAPPERT: The reason we're doing these
23 environmental reviews is because of the law that Duke
24 referred to, which is the National Environmental
25 Policy Act. And the purpose of that law was to make

1 sure that agencies made informed decisions. What
2 we're trying to do with this review is reveal all the
3 environmental impacts, to provide our senior decision
4 makers all the information available when they make
5 their final decision.
6 The finding that we make ~~is~~ preliminarily
7 in this draft is that the impacts from license renewal
8 are not so adverse to preclude future energy policy
9 makers renewing the license or using the facility.
10 So, it's not ~~desponsitive~~ dispositive. It doesn't
11 determine whether it's going to be renewed or not.
12 But if we make that finding in the safety review,
13 which ~~Kimberly~~ Kimberley spoke about, also comes out
14 with no safety issues, it's highly likely that the
15 Commission will renew the license.
16 MR. WHITT: Just out of curiosity, at what
17 point is the safety analysis at right now and when
18 will that report be coming out?
19 MR. CAMERON: And can we go through the
20 full schedule of when the safety analysis is done,
21 when the environmental review is done and when we
22 expect a final decision on the license renewal
23 application?
24 MS. CORP: The Safety Evaluation Report will be
25 issued with open items February 16th of next year.

1 Then it will go to the ACRS for their independent
2 review and analysis. And then they will give their
3 recommendation to the Commission. And we will issue
4 the final SER in July of next year. And according to
5 the schedule, since there were no petitions to
6 intervene, the Director of NRR has the capability to
7 make the decision. So the recommendation will be
8 given to the Director of NRR. And that is set to be
9 given to him in November.
10 MR. CAMERON: Okay, so it's ~~Nuclear~~ Office
11 ~~and~~ of Nuclear Reactor Regulation~~s~~. So basically we
12 have the final environmental impact statement in the
13 April, in the July time frame. We have the final
14 Safety Evaluation Report in the same time frame. And
15 that is after the Advisory Committee on Reactor
16 Safeguards looks at it. So, pardon me?
17 MS. CORP: The ACRS --
18 MR. CAMERON: Okay, the ACRS looks at it
19 in April and then a final decision will be made in the
20 November time frame. Okay? All right. Thanks for
21 asking that question because that's good information
22 to have on the record.
23 Is there any other questions about
24 process, schedule? Oh, Neill has a question. And
25 introduce yourself to us, please.

1 MR. HOWEY: I'm Neill Howey from Illinois
2 Emergency Management. I just had a curiosity
3 question, follow up to this young lady's question
4 about wind ~~turbans~~ turbines. Do we know what a
5 typical electrical output of one of those single wind
6 ~~turban~~ turbine generators is?
7 MR. MCDOWELL: I think the assumption that
8 we used was, I can get to you after the meeting. I
9 can show you the assumptions that we used in our
10 analysis.
11 MR. CAMERON: Okay. And was there any
12 implication or concern behind the question, Neill,
13 that you want to follow up?
14 MR. HOWEY: I just wondered how many --
15 MR. CAMERON: Okay, just wondered how many
16 it would take to replace it.
17 MR. MCDOWELL: We have that in the
18 document. I can --
19 MR. CAMERON: Okay. And if you find it
20 before we're done we can put it on the record.
21 MR. MCDOWELL: Sure.
22 MR. CAMERON: Yes, and just tell us your
23 name.
24 MR.MAHER: Bill Maher with Exelon
25 Corporation. The answer to Neill's question is

1 anywhere from 2,800 to 4,900 of the wind ~~turbans~~
2 turbines, depending on whether the capacity is one
3 megawatt to one and-a-half megawatts.
4 MR. CAMERON: Okay. And Bruce, you can,
5 if you have anything else on that later we'll put that
6 on the record.
7 MR. MCDOWELL Well, I remember that it was
8 around one megawatt.
9 MR. CAMERON; Okay, other questions before
10 we go to severe accident ~~litigation~~ mitigation
11 alternative? All right, thank you very much, Bruce.
12 Let's go to Bob Palla from the NRC on
13 severe accidents.
14 MR. PALLA: Hi, my name is Bob Palla and
15 I'm with the Probabalistic Safety Assessment Branch of
16 the NRC. And I'm going to be discussing the
17 environmental impacts of postulated accidents.
18 Section 5 of the GEIS is entitled, Environmental
19 Impacts of Postulated Accidents. The GEIS evaluates
20 two classes of accidents; design~~ed~~-basis accidents and
21 severe accidents.
22 Design~~ed~~-basis accidents are those
23 accidents that both the licensee and the NRC staff
24 evaluate to ensure that plant can safely respond to a
25 broad spectrum of postulated accidents without risk to

1 the public. The environmental impacts of design basis
2 accidents are evaluated during the initial licensing
3 process and the ability of the plant to withstand
4 these accidents has to be demonstrated before the
5 plant is granted a license.
6 Most importantly, a licensee's required to
7 maintain an acceptable design and performance
8 capability throughout the life of the plant including
9 any extended life operation. Since the licensee has
10 to demonstrate acceptable plant performance for the
11 design-basis accidents throughout the life of the
12 plant, the Commission has determined that the
13 environmental impact of the designed basis accidents
14 are of small significance.
15 Neither the licensee nor the NRC is aware
16 of any new and significant information on the
17 capability of the Quad Cities plant to withstand
18 design basis accidents. Therefore, the staff
19 concludes that there are no impacts related to
20 design~~ed~~-basis accidents beyond those discussed in the
21 GEIS.
22 The second category of accidents evaluated
23 in the GEIS are severe accidents. Severe accidents
24 are, by definition, more severe than design~~ed~~-basis
25 accidents because they result in substantial damage to

1 the reactor core. The Commission found in the GEIS
2 that the risk of a severe accident in terms of
3 atmospheric releases fall out onto open bodies of
4 water, releases the ground water and societal impacts
5 are small for all plants. Nevertheless, the
6 Commission determined that alternatives to mitigate
7 the consequences of severe accidents must be
8 considered for all plants that have not done so.
9 We refer to these alternatives as severe
10 accident mitigation~~al~~ alternatives or SAMA, for short.
11 The SAMA evaluation is a site specific assessment and
12 is a Category 2 issue as explained earlier. The SAMA
13 review for Quad ~~City~~ Cities is summarized in Section
14 2 and described in detail in Appendix G of the GEIS
15 supplement.
16 The purpose of performing the SAMA
17 evaluation is to ensure that plant changes with the
18 potential for improving severe accident safety
19 performance are identified and evaluated. The scope
20 of potential plant improvements that were considered
21 included hardware modifications, procedure changes,
22 training program improvements as well as other
23 changes. Basically a full spectrum of plant changes
24 and other potential changes. The scope includes
25 SAMA's that would prevent core damage and SAMA's that

1 improve containment performance given that a core
2 damage event would occur.
3 The SAMA evaluation consists of a four
4 step process. The first step is to characterize
5 overall plant risk and leading contributors to risk.
6 This typically involves the extensive use of the plant
7 specific probabalistic risk assessment study, which is
8 also known as the PRA. The PRA is a study that
9 identifies the different combinations of system
10 failures and human errors that would be required for
11 an accident to progress to either core damage or
12 containment failure.
13 The second step in the evaluation is to
14 identify potential improvements that could further
15 reduce risk. The information from the PRA such as a
16 dominant accident sequences is used to help identify
17 plant improvements that would have the greatest impact
18 in reducing risk. Improvements identified in other
19 NRC and industry studies as well as SAMA analysis for
20 other plants are also considered.
21 The third step in the evaluation is to
22 quantify the risk reduction potential in the
23 implementation costs for each improvement. The risk
24 reduction in the implementation cost for each SAMA are
25 typically estimated using a bounding analysis. The

1 risk reduction is generally over estimated by assuming
2 that the plant improvement is completely effective in
3 eliminating the accident sequences it is intended to
4 address.
5 The implementation costs are generally
6 under estimated by neglecting certain cost factors
7 such as maintenance costs and surveillance costs
8 associated with the improvement. The risk reduction
9 and cost estimates are used in the final step to
10 determine whether implementation of any of the
11 improvements can be justified.
12 In determining whether an improvement is
13 justified, the NRC staff looks at three factors. The
14 first is whether the improvement is cost beneficial.
15 In other words, is the estimated benefit greater than
16 the estimated implementation cost of the SAMA. The
17 second factor is whether the improvement provides a
18 significant reduction in total risk. For example,
19 does it eliminate a sequence or a containment failure
20 mode that contributes to a large fraction of plant
21 risk.
22 The third factor is whether the risk
23 reduction is associated with aging affects during the
24 period of extended operation, in which case, if it

1 was, we would consider implementation as part of the
2 license renewal process.
3 The preliminary results of the Quad Cities
4 SAMA evaluation are summarized on this slide. 280
5 candidate improvements were identified for Quad Cities
6 based on review of the plant specific PRA, relevant
7 industry and NRC studies on severe accidents and SAMA
8 analysis performed for other plants.
9 Exelon reduced this list to a set of 15
10 potential SAMA's based on a multi-step screening
11 process. Factors considered during the screening
12 included whether the SAMA is applicable to Quad
13 Cities. It may not be applicable if it was, for
14 example, identified for a different reactor type. We
15 also considered whether the SAMA would involve major
16 plant modifications that would clearly exceed the
17 maximum obtainable benefit or whether the SAMA would
18 provide only a minimal risk reduction based on the
19 review of the PRA.
20 A more detailed assessment of the
21 conceptual design and cost was then performed for each
22 of the 15 remaining SAMA's. This is described in
23 detail in Appendix G of the GEIS supplement. The cost
24 benefit analysis shows that four of the 15 SAMA's are
25 cost beneficial when evaluated in accordance with NRC

1 guidance for performing regulatory analysis. All four
2 cost beneficial SAMA's involved procedure improvements
3 rather than hardware modifications.
4 As shown on this next slide, the cost
5 beneficial SAMA's involve developing procedures to
6 operate equipment locally during the loss of 125 volt
7 buss by using temporary connections to the second
8 unit. The second SAMA involves procedures to manually
9 control feedwater given the loss of 120 volt DC
10 control power. The third SAMA involves developmental
11 procedures to terminate reactor depressurization prior
12 to the lose of the steam driven injection pump so that
13 core cooling could be maintained.
14 And the fourth SAMA involves procedural
15 changes to control containment pressure during
16 containment venting in order to assure that adequate
17 suction head for injection pumps is maintained. None
18 of these SAMA's are related to managing the affects of
19 plant aging. Therefore, none of the SAMA's are
20 required to be implemented as part of license renewal.
21 So to summarize, the NRC's staff's
22 preliminary conclusion is that additional plant
23 improvements to further mitigate severe accidents are
24 not required at Quad Cities as part of license
25 renewal.

1 I'll take any questions you may have.

2 MR. CAMERON: Okay, thank you, Bob. I

3 suppose one question that people might have is if the

4 four cost beneficial SAMA's are not required for

5 license renewal, what happens to those in terms of the

6 NRC process, licensee implementation?

7 MR. PALLA: Well, at this stage, these are

8 preliminary conclusions. We would expect to have some

9 further dialogue with the licensee in these areas, and

10 conceivably would transfer these over to the safety

11 side. These are not real issues for part of renewal.

12 But we would pursue these as operating plant issues

13 under the current operating license.

14 MR. CAMERON: Because ~~Kimberly~~ Kimberley

15 pointed out that current operating framework, you

16 would plug these into that framework.

17 MR. PALLA: Yes, we would consider whether

18 they were justified.

19 MR. CAMERON: All right. Questions for

20 Bob on the SAMA evaluation? Anything on that?

21 Okay, Bob, thank you very much.

22 I'm going to ask Duke to wrap up here in

23 terms of conclusions and more importantly, perhaps,

24 how you submit comments on everything in the draft EIS

25 including the SAMA evaluations. Duke?

1 MR. WHEELER: Thank you, Chip. Our
2 preliminary conclusions after all of that are first of
3 all that the impact of license renewal are small for
4 all the areas with the exception that Bruce pointed
5 out. There's one part of the North Nelson
6 Transmission line where the report that we got from
7 Exelon was that the calculated induced current was 6
8 milliamps compared to the National Electric Safety
9 Code specification of 5 milliamps.
10 And what we did with that was informal
11 correspondence. I did send a letter out to the
12 corporate entity that owns, operates and maintains
13 that transmission line and basically said, here's what
14 we found. In line with the intent of the National
15 Environmental Policy Act, we are disclosing this to
16 you.
17 The impacts of alternatives to license
18 renewal range anywhere from small to large, to
19 summarize a good part of Bruce's presentation. And so
20 our bottom line, preliminary recommendation is that
21 the adverse impacts of license of renewal for Quad
22 Cities Units 1 and 2 are not so bad that preserving
23 the option would be unreasonable.
24 And this just gives us a couple more of
25 the key dates coming up for the environmental review.

1 We did issue the environmental impact statement back
2 in November per the prescribed schedule. For the
3 comment period that we are in presently ends on
4 January the 27th next year.
5 I make one comment on that. Any comments
6 that I receive prior to that time will be addressed in
7 the final environmental impact statement that's going
8 out in July. But I'm not going to slam the door shut
9 on July the 27th as I leave the office. If comments
10 come in later and it is still practical for me to
11 consider those comments and address them in the final
12 EIS before we go into our final manuscript and send it
13 out to the print plant, then I will do that. And the
14 final date is noted on the slide for issuing the
15 environmental impact statement is July of 2004.
16 This slide just identifies myself as your
17 primary point of contact with our staff on this
18 environmental impact statement. And a few other ways
19 that the document is made available to you, three
20 libraries in the local area, the Cordova District
21 Library and, welcome aboard, the River Valley Library
22 at Fort Byron and also the Davenport Public Library.
23 I've been on the phone with them and when we did mail
24 out the environmental impact statement to our mailing
25 list, they all did receive copies of the environmental

1 impact statement. It's there for you to take a look
2 at.
3 In addition, if you have a computer at
4 home and can get on line, there's information on this
5 slide which let's you know how you can go about
6 accessing the environmental impact statement
7 electronically. It's kind of a long drawn out link.
8 If you have any problems with it, give me a phone call
9 and you and I will sit there at the keyboards, you at
10 yours and me at my keyboard and we'll go through it
11 one keystroke at a time if that's what it takes for
12 you to access this through our external web site.
13 Other ways of providing comments. That
14 you may certainly also send snail mail, if you will,
15 to the NRC staff. And I would ask that you use the
16 address that's on this slide. The Chief of our Rules
17 and Directives Branch, one of the advantages of using
18 that part of our staff is that guarantees that your
19 comments will go into the public record.
20 And if just by chance somebody happens to
21 be in the area of Rockville, Maryland, during the
22 comment period, you're certainly welcome to stop by
23 and make comments to me. I will jot them down and
24 they will go into the public record. And also we have
25 established an e-mail address for the expressed

1 purpose of receiving comments on the Quad Cities
2 license renewal environmental review. And that e-mail
3 address is at the bottom of the slide there. And I'm
4 the person that opens up that e-mail address every
5 day. And if I'm not in, there's two other, two or
6 three other people who have access to it. And you may
7 certainly do that. Anything that comes in by way of
8 e-mail will become part of the official record.
9 And there's kind of an underlying thought
10 on ways that we will and will not accept public
11 comment. Bottom line is we want it in a form that we
12 can make it a matter of public record, which means at
13 the open house out here, preceding this meeting. We
14 would discourage you from coming up to one of the
15 staff with your comments unless you had a piece of
16 paper to hand to us. We want it to be something that
17 can be made a matter of record. And words that just
18 disappear into the air don't fit that.
19 If you have any documents that you would
20 like attached to the transcript that is being
21 developed for this meeting, give those documents to me
22 and I will attach those documents to the transcript as
23 long as it is not completely impractical, if it's not
24 three ring binders full of stuff.

1 This concludes my prepared remarks and if
2 there are any questions, I'd be happy to entertain
3 them. Otherwise, I'll turn it back over to Chip.
4 MR. CAMERON: And Duke, just to put
5 another sort of a slant on what you said about
6 discouraging comments, you're not talking about
7 discouraging people from talking to us about issues.
8 But if they want to get their comment on the record
9 they should do it in here or in writing.
10 MR. WHEELER: Absolutely. If it's a
11 comment that's substantive, it's related to one of the
12 environmental disciplines that we examine. If you
13 meet me outside in the hallway and just say, hey, I
14 know of four more bald eagle nests within eight or ten
15 miles of the site, I would ask, at a minimum, that you
16 either write that down and hand it to me and I'll put
17 it on the transcript or take my e-mail address, go
18 back to a keyboard, send it in to me, give it to me in
19 some form that I can get it into the record.
20 Now, if it's a comment about general
21 process, well, how long does it take to get the
22 environmental impact statement out? How sacred is
23 that July date? That I don't take as a comment on the
24 substance of the environmental review. And we can

1 talk that over the telephone or face to face without
2 it having to be written.
3 MR. CAMERON: Okay. And just one other
4 question in terms of the comments that do come into
5 us, Duke, can people look at the web site and see what
6 comments other people have submitted? Is that part of
7 the public, you mentioned it's part of the public
8 record. But is it part of the public record then so
9 that people can look at them.
10 MR. WHEELER: Yes, after a fashion. Now,
11 people cannot get into this e-mail address and go look
12 and see all the e-mails that's been received.
13 However, I will print out that e-mail and I'll send it
14 over to our document control people. And, you know,
15 with a specification that this be scanned into the
16 public record. And then you get into another arena
17 that a lot of people have come to know and love with
18 the NRC, the ADAMS, Agency Document Management Access
19 System. And that is publicly available.
20 So after a period of time through a
21 process, yes. If anybody here would like to see what
22 I received at that e-mail address, you'll be able to
23 do it. What I would strongly suggest doing is getting
24 on the phone with me telling me of your interest and
25 I'll help you through it.

1 MR. CAMERON: That's great, Duke, to offer
2 to do that. Thank you very much.
3 Are there any final questions before we go
4 to hear from those of you who wanted to make comments?
5 Any questions for Duke about schedule and as Mr. Whitt
6 question emphasized, the answer to that question is
7 that the environmental review is one part of what the
8 NRC looks at in making its decision on the license
9 renewal application. There's also the safety
10 evaluation that ~~Kimberly~~ Kimberley talked about.
11 Questions? Okay, thank you very much,
12 Duke. And we have three commentors. And there's
13 Leslie ~~Parrigo~~ Perrigo from IECAN and then we're going
14 to go to Joshua Whitt -- Bohnsack? Okay, great. So
15 we're going to go to Leslie ~~Parrigo~~ Perrigo first and
16 then we're going to go to Mr. Timothy ~~Tulan~~ Tulon
17 from, he's the Site VP, Vice President, Site Vice
18 President at the Quad Cities Nuclear Power Station.
19 So, Leslie, would you like to come up here
20 and talk to us please? Thank you.
21 MS. ~~PARRIGO~~ Perrigo: Hello. I'm Leslie
22 ~~Parrigo~~ Perrigo. My organization is IECAN, as I said,
23 Independent Environmental Conservation and Activist in
24 that work. We work on energy reform and public

1 issues, sort of like a much smaller version of Public
2 Citizens.
3 There are a couple of concerns which I
4 feel need to be addressed as they are legitimate
5 concerns that relate directly to the health, safety
6 and general well being of the environment surrounding
7 the Quad Cities Nuclear Power Station. Regarding
8 plant performance, failure to comply with the NRC
9 procedures and complete basic routine maintenance on
10 schedule has incurred preliminary wear and
11 irreversible damage to vital reactor components
12 increasing the possibility of a mechanical failure and
13 the likelihood of a major accident.
14 In June of 1996 a fine of $100,000 was
15 proposed against the utility for failing to correct
16 design deficiencies for components in one of the
17 plant's emergency core cooling systems. Modifications
18 to pipe supports and structural steel in the 1980's
19 had resulted in additional loads on steel beams. In
20 some cases, exceeding those permitted in the original
21 plant design. These deficiencies were not corrected
22 until 1996.
23 In June of 1997, a fine of $50,000 was
24 proposed for deferring repairs to the interior and
25 exterior siting of the reactor building at Quad Cities

1 Nuclear Power Station. Both interior and external
2 siting are needed for the reactor building to fulfill
3 its designed purpose, which is containment.
4 In 1998, the NRC proposed fines in excess
5 of $450,000 for failure to implement an adequate
6 program for monitoring maintenance, failure to develop
7 adequate procedures and systems to safely shut down
8 the Quad Cities Nuclear Power Station and for
9 performing pressure tests of the interior reactor
10 vessel in piping after the reactor had started up
11 instead of before the reactor start up in order to
12 detect any leaks in the reactor vessel and piping,
13 which is the NRC regulation.
14 Between June of 1999 and September of
15 2002, the utility neglected to correct multiple switch
16 failures, which impacted the availability, reliability
17 and capability of equipment used to respond to
18 initiating events and prevent undesirable consequences
19 from a plant fire. In March of 2003, the NRC staff
20 identified a number of human performance issues,
21 including damage to a control drive pump due to
22 improper setting of a lubricating device, failure to
23 recognize the unit to shut down cooling system was
24 inoperable for several months and several instances of
25 valves being placed in the wrong position.

1 These are but a few of the events which
2 have increased the amount of [undistressed] on the
3 reactor components and accelerated the aging process.
4 The NRC has confirmed that age-related degradation of
5 boiling water reactors will damage or destroy vital
6 internal components well before the standard 40 year
7 license expires. Yet the readiness of the industry to
8 meet the projected maintenance and repair challenges
9 is unclear.
10 For some components as in 1994,
11 methodologies were still in the conceptual phase of
12 development. The course route is one of many safety
13 related components that may be damaged or destroyed by
14 age related degradation and boiling water reactors.
15 A German utility operating a General Electric Mark 1
16 boiling water reactor of the same design as Quad
17 Cities 1 and 2 where extensive core shrouding was
18 found estimated the cost of replacement at $65
19 million. Germany's oldest boiling water reactor was
20 closed in 1995 after German nuclear regulators
21 rejected a plan to repair rather than replace the
22 cracked core shroud.
23 Extensive core shroud cracking was
24 discovered at Quad Cities Unit 1 in 1994. Reactor
25 aging will required a major continuous effort by the

1 industry officials to anticipate emergent age related
2 problems and resolve them before they become a crisis.
3 By dealing with the whole problem of age related
4 degradation now, Federal and State regulators can
5 insure the safety and engineering implications of
6 multiple failures in boiling water reactors.
7 Lastly, the continued operation of any
8 General Electric Mark 1 boiling water reactor relies
9 upon a nuclear waste storage and cooling pond that is
10 elevated six to ten stories up in the reactor's
11 secondary containment building and does not appear to
12 have any significant structure to reduce the
13 likelihood of penetration by deliberate attack. Only
14 four of the 103 operating nuclear reactors in the
15 United States have designed features intended to
16 resist aircraft impact.
17 Mark 1 and 2 and Seivert [?] Reactors have
18 design features that intend to resist aircraft impacts
19 up to six times and Three Mile Island, Unit No. 1 was
20 designed to resist aircraft impact up to 90 times. No
21 other US reactor was designed to withstand aircraft
22 impact.
23 The identified structural vulnerability of
24 Mark 1 radiated fuel storage and cooling pond
25 constitutes an unreviewed safety issue. Attack on a

1 reactor could lead to rapid onset -- with open
2 containment and a raging fire. An NRC study concluded
3 that a generic estimate of 100 percent of the
4 radioactive isotope -- 137 in the field pool would be
5 released in the event of a spent fuel pool fire.
6 A spent fuel pool contains, a full spent fuel
7 pool contains 74 million curies of -- 137.
8 Defense of nuclear facilities should be
9 seen as a key component to Homeland Security. As
10 such, spent fuel pools should be reequipped with low
11 density racks and all other spent fuel should be
12 hardened and dispersed throughout the site to make it
13 a less attractive target.
14 In conclusion, I would just like to point
15 out that the useful life time of a nuclear power plant
16 is 25 years in actual practice. This comes directly
17 from something we found on the NRC web site. It is
18 becoming abundantly clear that aging of reactor
19 components poses serious economic and safety risk at
20 boiling water reactors. The General Electric Mark 1,
21 in particular, has significant inherent design flaws
22 and lost containment integrity during nuclear
23 accident.
24 Under the circumstances, it would be
25 prudent to retire the Quad Cities Nuclear Power

1 Station in 2012 and seek out safer more financial
2 viable solutions for the community. Thank you.
3 MR. CAMERON: Thank you, Leslie. And,
4 Leslie, do you want us to put a, we can attach the
5 written version if you want to the record.
6 MS. ~~PARRIGO~~ PERRIGO: Yes.
7 MR. CAMERON: Okay. Good, thank you very
8 much, Leslie, for those comments. Let's go to Mr.
9 ~~Tulon~~ Tulon to talk to use for a few minutes.
10 MR. ~~TULAN~~ TULON: Chip, thank you. I
11 appreciate the opportunity to comment today. And I
12 just want to thank Leslie for her comments because
13 it's important within our environment that we have a
14 very open commentary and debate on the issue.
15 But really what I want to comment on here
16 in closing is the property tax issue because the
17 property tax issue is a very difficult issue for both
18 sides. Taking a look at a little background on the
19 topic is the laws in the State of Illinois have
20 changed. And they changed in 1997 to the year 2000.
21 And basically what happened is you changed
22 the way the plant was accessed from going from
23 essentially cost minus depreciation to what's termed
24 the fair market value. And so here's the question,
25 right? Is what is the fair market value of Quad

1 Cities. We listened to Chairman Bohnsack talk about
2 this offer and this value. It's a very difficult
3 question to come around with.
4 And we have publicly stated in the past,
5 and I am publicly stating here again today is that we
6 intend to pay taxes and that the position of zero
7 assessment for Quad Cities is really an extreme
8 position. So I would tell you is we remain committed
9 to solving this issue going forward. And we recognize
10 the impact that this potentially has on local taxing
11 bodies. And we are optimistic that we can reach
12 agreement that's going to minimize the impact of the
13 tax issue on Quad Cities.
14 Chip, I appreciate the opportunity to
15 comment, thank you.
16 MR. CAMERON: All right. Thank you.
17 Because we do have some time left, Duke had mentioned
18 the open house and the opportunity to talk to the NRC
19 staff. I just wanted to introduce some of the other
20 NRC staff that are here from Headquarters and the
21 Region in case any of you want to have any
22 conversations with them after we formally conclude the
23 meeting.
24 And you know the people who spoke. From
25 Headquarters we have Jenny Davis right here who is on

1 the Environmental Review Team, License Renewal. We
2 have ~~Lars~~ Laura Zaccari, who's from our Office of
3 General Counsel. Headquarters, Mr. Rich Emch back
4 there. And Rich is a Health Physicist. If you have
5 health physics types of questions, please talk to him.
6 And we're lucky to have a strong contingent here from
7 our Regional Office.
8 And I first want to introduce the Resident
9 Inspectors for Quad Cities. And these are the people
10 who really are at the plant. They live in the
11 community. They're looking to make sure the NRC
12 regulations are met. And we have Carla Stoedter.
13 Carla is the Senior Resident. And we have Mike Kurth
14 who is with us right here. And also Laura Kozak, who
15 used to be a resident here and now she is the Lead
16 Inspector in our Region 3 Office for license renewal.
17 And we have Mark Ring here who's a Branch Chief within
18 the Reactor Projects Division. And Theresa Ray, who's
19 right over here from our Regional Office too.
20 And I didn't know whether, if Mark or any
21 of you wanted to say anything about anything that you
22 heard today. I'm not trying to put you on the spot
23 but I just wanted to give you the opportunity if you
24 wanted to say anything.

1 The staff is here and if you want to talk
2 to them, please do so. And I just thank all of you
3 for coming out and I'm going to turn it over to John.
4 Do you want to say, John Tappert, say a few words to
5 close the meeting out?
6 MR. TAPPERT: Just to thank everyone for
7 coming out today. And notwithstanding Duke's caveats
8 on the formal commenting process, if anyone wants to
9 stay after the meeting and discuss any issues, we'll
10 be happy to do that. And thanks again.
11 MR. CAMERON: We're adjourned.
12 (Whereupon, the above meeting
13 was adjourned at 2:50 p.m.)