ORIGINAL

# OFFICIAL TRANSCRIPT OF PROCEEDINGS

# UNITED STATES OF AMERICA

# NUCLEAR REGULATORY COMMISSION

Title: PUBLIC MEETING –
ENVIRONMENTAL SCOPING
MEETING FOR CALVERT CLIFFS
LICENSE RENEWAL APPLICATION
(AFTERNOON SESSION)

Case No.:

Work Order No.: ASB-300-372

LOCATION: Solomons, MD

DATE: Thursday, July 9, 1998 PAGE 1 - 123

ANN RILEY & ASSOCIATES, LTD.
1250 I Street, NW, Suite 300
Washington, D.C. 20005
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UNITED STATES OF AMERICA

NUCLEAR REGULATORY COMMISSION

***

PUBLIC MEETING

***

ENVIRONMENTAL SCOPING MEETING

FOR CALVERT CLIFFS

LICENSE RENEWAL APPLICATION

Holiday Inn Select

Cove Point Room

155 Holiday Drive

Solomons, Maryland

Thursday, July 9, 1998

The above-entitled meeting, commenced, pursuant to notice, at 2:06 p.m.

PARTICIPANTS:

CHIP CAMERON, NRC

CLAUDIA CRAIG, NRC

CHRISTOPHER GRIMES, NRC

P R O C E E D I N G S

[2:06 p.m.]

MR. CAMERON: Okay. Good afternoon, everybody. I'd ask all of you to take a seat. We're going to get started now.

I'd like to welcome all of you to the Nuclear Regulatory Commission's public meeting on the scope of the environmental impact statement on the license renewal application for the Calvert Cliffs nuclear plant.

I'm Chip Cameron. I'm the Special Counsel for Public Liaison at the NRC, and I'm going to serve as your facilitator for today's meeting.

My role is to generally help you to have an effective meeting, but specifically, what I'm going to do is try to make sure that all of you who are interested have an opportunity to speak today and also to make sure that the NRC clarifies any points that you don't understand about our process and, finally, try to keep us focused and relevant and on schedule, and in this regard, the focus of today's meeting is on the preparation of the environmental impact statements for the Calvert Cliffs license renewal application.

This meeting is called a scoping meeting under the National Environmental Policy Act and the Commission's regulations, and Claudia Craig from the NRC staff is going

to go into this in more detail shortly, but scoping, very simply, means helping the NRC to identify the scope of environmental impacts and alternatives from a particular action -- in this case, the evaluation of the license renewal application -- and we do this early in the process so that we can prepare a more useful environmental impact statement for our decision-making process.

The NRC's objective today is to explain the license renewal process to you, specifically the environmental impact statement process, to answer your questions on this process, and to hear your comments and suggestions on the issues that should be included in the environmental impact statement.

Now, we're also going to be soliciting written comments on these issues, but we're here today to discuss them with you in person, and I'd like to go over the agenda for today's meeting.

We're going to start off, after I'm done, which will finish soon, with a presentation by Chris Grimes of the NRC staff on the license renewal process generally.

I mentioned the main focus is the environmental impact statement, but we want you to have an understanding of the context in which the environmental impact statement occurs, so Chris is going to cover that, and the second presentation is going to be specifically on the

environmental impact statement process by Claudia Craig.

We want to try to be as interactive as possible with you, so after each of these presentations we're going to ask you if you have any clarifying questions on that presentation, so that we make sure that you understand this and so that we can start having a discussion.

Now, after the presentations, then we're going to turn to you for comments and suggestions, and we have several people who have signed up in advance, and I'm sure more have done so today, and there may be some of you who are struck on the spur of the moment who might want to say something in regard to what you're hearing today.

The ground rules are pretty simple. For those of you who have registered in advance, I'm going to go to you to ask you to make your presentation, and I'm going to proceed with a certain order on that, and then we'll go to people who want to talk.

I would ask you to raise your hand if you want to say something. I'll call on you. You can use the microphone up here. You can use that mike. If you're stuck in the back, we'll try to take that mike back to you. And I would ask you to state your name and affiliation, if appropriate, for the record.

We are keeping a transcript of the meeting. That transcript will be made publicly available. I believe that

we're going to be doing a summary of the meeting that will be mailed to everybody who's provided us with a name and address out there.

We do want to listen to each one of you, so I would just ask that only one person speak at a time.

We're not assigning a specific time limit to comments, but I would just ask everybody to be concise and try to keep your comments in the 10-minute range, but I know that we're probably going to have presentations in the 15-minute range, too, but that would be the outside for us.

We do want to hear everybody. I may ask people to summarize their remarks so that we can get on to other people, and I guess, as a final point, we realize that license renewal is a pretty basic issue, and we're here specifically to get comments on the environmental impact statement part of this process, but we also realize that there are other issues of concern here, and we're prepared to listen to them.

Some of these issues may relate to other aspects of NRC activities, and we will take those remarks back to the appropriate staff back at the agency.

There may be issues that relate not to environmental impact but to the safety issues that Chris Grimes is going to talk about. There may be economic concerns related to rates and items like that or concerns

related to new technology.

Some of these issues may be more appropriate for other forums.

Our goal is to get the comments on the environmental impact statements, but we're prepared to listen to a lot of other related activities, and we look forward to all of your comments.

We're trying to go through without a break, and in that regard, the rest-rooms are down to the left, and there is a sign-up sheet out there, for those of you who haven't signed up, if you want to get the evaluation -- not the evaluation but the summary of this meeting, as well as notification of future meetings.

So, for right now, what I'd like to do is turn it over to Chris Grimes to talk about the -- give us an overview of the license renewal process.

MR. GRIMES: Thank you, Chip.

My name is Chris Grimes. I'm the Director of the License Renewal Project Directorate at the Nuclear Regulatory Commission.

Could I have slide two, please?

The Nuclear Regulatory Commission's mission is to regulate the civilian use of nuclear materials to ensure adequate protection of public health and safety, to provide the common defense and security, and to protect the

environment.

The NRC's authority is derived from the Atomic Energy Act of 1954 and the Energy Reorganization Act of 1974, primarily, and as those -- and as the legislation has subsequently been amended, as well as a number of other pieces of legislation involving security, nuclear waste, and energy policies.

The NRC's regulations that stem from that legislation are issued under Title 10 of the United States Code of Federal Regulations, which we'll probably refer to several times today as 10 CFR. That's Title 10 of the Code of Federal Regulations.

That's where you'll find most of the regulatory requirements associated with the licensing activities that we'll be describing today.

For commercial power reactors, the NRC's regulatory functions include licensing. The license is based on a set of established regulatory requirements that are intended to ensure that the design and proposed operation of the facility can be conducted safely.

The NRC conducts routine inspections to ensure that the plant design and operation conform to the license requirements, and enforcement actions are taken in the event that any of those license requirements are not being satisfied. That's the basic structure of our regulatory

practice.

And now I'm going to test you, Kim. Could I have slide four, please?

Before I get into describing the license renewal process, I want to first basically describe where it comes from.

The Atomic Energy Act and the NRC regulations limit commercial power reactor licenses to 40 years, but they also permit the renewal of such licenses can be made for up to an additional 20 years.

The 40-year term was originally selected on the basis of economic and antitrust considerations, not technical limitations, but once selected, the design of several systems, structures, and components were engineered on the basis of that expected 40-year life.

The requirements for the initial 40-year license are contained in 10 CFR Part 50, primarily.

When the first reactors were constructed, major components were expected to last at least 40 years. Operating experience has since demonstrated that that expectation was unrealistic for some major plant components such as steam generators and pressurized water reactors.

However, research over the past decade has concluded that there are no technical limitations to a plant life, since major components and structures can either be

replaced or refurbished.

Thus, the plant life is determined primarily on the basis of economic factors concerning the cost of maintaining a plant.

The analogy that I like to use is an automobile. Many of you who are at least as old as I am remember that plants in the '50s and the '60s would only last a few years. Plants these days, with improved maintenance techniques and procedures, they can be expected to last for even longer periods of time, and those of you who are antique car buffs expect that some of the Model T's will probably last forever.

As a result of this conclusion, the NRC established regulatory requirements in 10 CFR Part 54 to provide for license renewal. The rule, which was initially issued in 1991 and amended in 1995, provides that the basis on which a plant was originally licensed remains valid after 40 years and can be carried over for a 20-year period of extended operation. Additional license renewal applications could be processed even beyond that, there is no limit, provided that the basic requirements can continue to be fulfilled.

A new license can be granted upon a finding by the Commission that the licensee has adequately demonstrated that plausible aging effects will be adequately managed for

a defined scope of passive long-lived systems, structures, and components. In addition, the rule requires that certain time-dependent design analysis be identified and evaluated.

Calvert Cliffs is the first plant to apply for license renewal. The second renewal application for the Oconee plant in South Carolina was received on July 7, 1998, the day before yesterday.

Although these licenses do not expire until the year 2013 or later, many utilities are interested in license renewal today to ensure that they clearly understand what requirements will be necessary for extended licensed operation for their future financial planning.

Now, could I have slide three, please?

For those of you who are following along in the handout, slide three did not shrink as nicely as the others, and you'll find it at the back of the package. It's the next-to-the-last page, I believe.

The licensing process consists of parallel technical and environmental reviews. This figure does not show that there is a third parallel path, and that is a path of legal adjudication of the issues that are also briefly described. But the basic review process reflected on this slide represents the work that's done by the NRC staff.

The process starts with the submittal of the license renewal application, which includes technical

information under Part 54 -- that's the safety information -- and the technical information under Part 51 -- that's the environmental impact information.

The results of the staff's review will be documented in a safety evaluation report that addresses aging management aspects of the renewal application and a supplement to the generic environmental impact statement for the environmental impact reviews, and that Claudia Craig will discuss in more detail in just a moment.

The aging management findings -- that is, the technical aspects of the plant design and operation -- will be verified by NRC inspections, and the results of our safety evaluation will then be presented to a review by the NRC's Advisory Committee on Reactor Safeguards, which is reflected on this figure as the ACRS. That review practice is in accordance with the usual practices for issuance of a license.

The public can formally participate in the license renewal process in the same way that public participation was provided in the original licensing.

Toward that end, a notice of opportunity for a hearing was published in the Federal Register on July 8, 1998, related to the license renewal application for Calvert Cliffs.

That notice provides that any person whose

interests might be affected by the license renewal decision and who wishes to participate as a party in a proceeding may file a written request for a hearing and a petition for leave to intervene.

The NRC will also be issuing a press release either today or tomorrow related to the notice of opportunity for hearing.

For those of you who are interested in learning more about the NRC's adjudication process, the hearing process that is used to formally address public concerns, there are brochures outside the meeting room that describe the Atomic Safety and Licensing Board functions.

As Chip mentioned, today's meeting is not a formal hearing but an opportunity to gather information about potential concerns about the environmental impacts of the licensing action in accordance with the NRC's responsibilities under the National Environmental Policy Act.

The NRC staff intends to conduct additional future public meetings to keep interested members of the public informed about the overall license renewal process. In other words, I'll be back.

Are there any general questions that you have of my presentation before I turn the podium over to Claudia to talk about the environmental impact aspects?

Yes, sir.

MR. JOHNSTON: Bill Johnston. You talk about a supplement to the EIS. Why isn't it just PEIS?

MR. GRIMES: Claudia will go into the details about the generic environmental impact statement that has already been prepared and is now available and how that will be supplemented to address the specific issues related to this action for Calvert Cliffs.

MR. JOHNSTON: So, there's no short answer, that's shorter than what you just said.

MR. GRIMES: There's no short answer.

MR. JOHNSTON: Okay. What's the deadline for the petition that you advertised, apparently, only in the Federal Register?

MR. GRIMES: The petition has a 30-day requested response, and as I mentioned, it was published in the Federal Register, and the NRC is issuing a press release so that it will be more widely described in the media.

MR. CAMERON: Can we get people copies of that Federal Register notice and the press release?

MR. GRIMES: I don't have the press release, because they're probably issuing it today or tomorrow, but I will arrange to have copies of the Federal Register notice placed outside the meeting room.

MR. CAMERON: Okay. Good.

Any other clarifying questions for Chris?

[No response.]

MR. CAMERON: Okay. All right. Let's go to Claudia Craig for the environmental impact statement process.

MS. CRAIG: Thank you.

First of all, I'd like to thank everybody for coming. I know you all have very busy schedules, and I appreciate you taking time to attend. I think the public participation makes the whole process better, and we're anxious to hear your comments.

My name is Claudia Craig. I'm the Environmental Project Manager for the Calvert Cliffs license renewal project. I work in the Generic Issues and Environmental Projects Branch within the Office of Nuclear Reactor Regulation.

Can I have slide five, please?

What I'd like to do is sort of step you through the NEPA process, the National Environmental Policy Act process, and then I'll go into how that translates into the regulations at the NRC and then how that relates to the Calvert Cliffs license renewal application.

First of all, NEPA was enacted in 1969, and it requires all Federal agencies to use a systematic approach to consider environmental impacts during their

decision-making.

NEPA is a decision-making tool that we use. It's not the entire way that we base a decision on in the Federal agency for a proposed action, but it's one of the pieces.

It's a disclosure tool. It discloses information to allow Federal agencies to make better decisions.

NEPA results in a number of different kinds of documents -- environmental assessments, which are limited looks at the environmental impacts for a proposed action; environmental impact statements, which are also called EIS's, and those are much more detailed looks at the environmental impacts.

There are generic environmental impact statements, which look at generic impacts for proposed actions, and then supplemental environmental impact statements, where there may have been a main EIS issued and then there may have been other issues that came up later that we needed to supplement.

EIS's are required through NEPA for major Federal actions. License renewal is considered a major Federal action. Therefore, we're going to go through the EIS process for license renewal.

Can I have the next slide, please, number six?

As far as the NEPA process, there are certain steps that we need to follow, and these steps are consistent

for all EIS's that all Federal agencies do for any proposed action.

The first step is the notice of intent, and this is a notice that's published in the Federal Register that lets the public know that we're going to issue an environmental impact statement.

We issued a notice of intent in the Federal Register -- I believe the date was June 10th -- and it outlines what the process is going to be, invites participants to come and participate, identifies whether we'll have public meetings such as this, contacts at the Federal agency to contact for more information.

So, that's sort of the first step in the NEPA process, is this notice of intent.

The next step is the scoping process, which we're in right now, and scoping, as Chip and Chris have said, is the process where we identify issues that we're going to address in the EIS.

We get input from state, local, other Federal agencies, and the public in order to determine sort of the size and shape of the EIS that we're going to do, and I'm going to go into more details regarding the scoping process and what we want to get out of you today in a couple of more slides.

As far as the environmental review that we'll be

doing, every NEPA looks at the same things. It looks at the impacts of the proposed action, it looks at alternatives to the proposed action and those impacts that result from those alternatives, and it also looks at mitigation measures, things that can be done that would decrease the environmental impact of that proposed action.

Next slide, please.

After we've done our environmental review, we issue what we call a draft EIS for public comment. All the Federal agencies put these out for public comment. In some instances, they have public meetings to gather comments. The minimum comment period is 45 days.

After the agency gathers the comments, evaluates them, they may change portions of the EIS based on those comments, and then they issue a final EIS.

So, this is the process that we're going to be going through for the Calvert Cliffs license renewal application, and I'll get into more details of these steps in a little bit.

Next slide, please.

So, why are we all here today? Well, we're here for the scoping meeting, and the next two slides sort of lay out why we do scoping and the things that the Federal agency would like to get out of the scoping process.

We'd like to define the proposed action; we'd like

to determine the scope of the EIS by getting issues and items from the public and from other agencies. During scoping, we would identify things that may not be covered by the EIS or may be outside what the proposed action is looking at.

We also use the scoping process to identify other environmental assessments or EIS's that may be being prepared by other Federal agencies in the area. We'd like to think that all the Federal agencies know what everybody else is doing, but sometimes we don't, and this scoping process helps us work with the Federal -- other Federal agencies and other government agencies to cooperate and understand what everybody is doing.

Next slide, please.

Some other things that we'd like to get out of the scoping process is that we would identify other review and consultation processes.

In addition to the statute of NEPA that we need to meet, Federal agencies also have a number of other statutes that we need to comply with, such as the Coastal Zone Management Act, the National Historic Preservation Act, the Endangered Species Act, and what we've done is, in our EIS, we gather all these other consultation and review processes into our EIS so that they're all located in one document, so that it makes it easy for the public.

Otherwise, we'd have the endangered and threatened species report here and the coastal zone management report here. So, we try to compile all of our other regulatory activities into one EIS, and scoping will help us work with those other Federal agencies to identify those.

The scoping process also indicates the schedule that we're going to be following to go through each of those milestones for the NEPA process.

It also identifies cooperating agencies. Cooperating agencies are other Federal agencies who have specific jurisdiction in the same area as, say, the NRC would have.

It also describes the EIS process. Sort of what I'm doing today is going through what we expect from the EIS process and how we're going to prepare the EIS and the schedule along with that.

So, hopefully, today we're going to be able to address all the things on slides eight and nine.

Slide 10?

Slide 10 is just a flow chart of the items in the NEPA EIS process, and as you see, we're in the scoping process now.

Next slide?

So, now that we've gone through NEPA -- NEPA is a statute the Federal agencies are required to comply with --

then we need to implement those requirements into the NRC's regulations in our Code of Federal Regulations, and the environmental protection regulations are located in 10 CFR Part 51.

10 CFR Part 51 outlines when we do an environmental assessment, when we do an EIS. It outlines the outline of those EIS's, the process that the NRC will use in order to meet the NEPA requirements.

Specific to license renewal, early on in the license renewal process, in addition to the safety side of the regulations that were being revised, it was recognized that the original environmental impact statements written for the plants when they got licensed would need to be -- we'd need to go back and look at those again for this additional refurbishment activities and the additional 20 years of operation.

So, we underwent a rule-making effort to modify Part 51 and amend Part 51 to address license renewal environmental impacts.

As part of that, we developed a generic environmental impact statement, or what we like to call a GEIS, and the GEIS took a systematic look at all of the thousand hours of operating experience of all the nuclear power plants to help us identify environmental impacts that resulted from the operation of nuclear power plants, and the

GEIS is located at NUREG-1437, and it was issued in 1996, and it formed the basis for the rule revision, and there are copies of the GEIS outside, and they're available in the public document rooms.

The NRC worked with the states, CEQ, EPA, a number of other groups to develop the GEIS and work through it.

Based on the extensive interaction that we had, we limited the scope of what we were going to look at in license renewal.

We identified and categorized impacts that were specific to license renewal, both the refurbishment period and also the additional 20 years of operation. We identified a total of 92 impacts in that GEIS, and we evaluated those impacts in the GEIS.

In addition to the 92 issues that we looked at in the GEIS, we also amended Part 51 to address the process that we would go through for license renewal applications.

Next slide, please.

As I said, there were 92 issues identified in the GEIS, and when we looked at those, we found that some of those were generic to all plants, and so, we wanted to somehow separate those from the ones that would be more on a plant-specific basis.

So, we came up with three criteria, and if an impact met those three criteria factors, it would be

considered a category one impact and it would be considered generic.

The category one criteria were that the impact had to apply to all plants or a group of plants, all the pressurized water reactors or all the boiling water reactors; the second criteria was a single significance level -- it couldn't be a small impact at one site and a large impact at another site, it had to be a small or a moderate or a large impact at all the sites; the third criteria was mitigation measures. As part of the GEIS, we looked at mitigation measures, and if there were no other mitigation measures that could be taken on a plant-specific measure -- on a plant-specific basis, it could be considered a category one issue.

An example of a category one issue is a transmission line right-of-way. We considered those -- you know, they apply to all plants, all plants have transmission line corridors, the impact -- the significance level of the impact was the same at all the plants, and there were no further mitigation measures that could be taken on a plant-specific basis.

There were 68 category one issues identified. The rest of the impacts, the other 24, 22 of them were considered plant-specific, that would need to be addressed on a plant-specific basis, and there were two unassigned to

a category.

When we came out with the GEIS and did the 10 CFR 51 rule revision, the executive order on environmental justice had just been issued, and we didn't feel like we had enough information to categorize it one way or the other, but it was addressed in the rule that we would address environmental justice on a plant-specific basis.

The other un-assigned category was electro-magnetic frequency, EMF, issues, and we didn't categorize that one either, because the research is conflicting, and there wasn't a clear conclusion as far as the research, and so, the Commission decided to wait until there's a clear scientific conclusion to that before we decide on whether or not it's a category one or two.

Next slide, please.

As far as these category one and two issues, they're all codified in 10 CFR Part 51. There's a table of all 92 of them in there, with the identification code, category one or category two, and a licensee or an applicant for a license renewal will need to address and evaluate the category two issues, the plant-specific ones.

The applicant will need to let the NRC know if there's any new and significant information regarding the category one. If not, they can go ahead and adopt those generic conclusions from the GEIS.

The NRC will use the environmental standard review plan, NUREG-1555, supplement one, to perform our review of the applicant's environmental report that they're going to submit. The ESRP provides guidance to the staff on how we're going to do our review.

Next slide, please.

Okay. So, now we've gone NEPA to Part 51 and now we get to why you all are here today, the Calvert Cliffs application.

As you probably know, the application was received on April 10, 1998. We issued Federal Register notices identifying the receipt of the application and the acceptance of the application to begin the review.

The Calvert Cliffs license renewal application consists of three volumes. The first two volumes are the safety volumes that would be under Part 54, that meet the Part 54 regulations, and the third volume is the environmental piece, which is what we're here for today.

Next slide, please.

As far as what the NRC is going to do with its review, we're going to issue a supplement to the GEIS, which is a plant-specific to Calvert Cliffs. That supplement will cover the category one issues, category two issues, and any new and significant information that's identified throughout the review process.

Next slide, please.

Our review will also look at alternatives. As part of the scoping process, we're required to look at alternatives, and the alternatives right now that we're looking at are the no-action alternative, which would mean, you know, shut down and decommission the plant at the end of operation, as if, you know, there is no license renewal, and as part of that, to replace the generating capacity, we would look at the environmental impacts of alternative generating sources.

I might want to add there, here, that, in the GEIS, we did look at alternatives, but we did not reach any conclusions as to, you know, the acceptability or non-acceptability of alternatives. We took a look at a wide range of alternatives, evaluated them, looked at the impacts of them. So, the alternatives issue is going to be examined during each plant-specific license renewal application.

Slide 17, please.

Going back to that scoping process, one of the things that we need to do is identify other environmental assessments or environmental impact statements that are being developed.

At this time, we're not aware of any, but as I said, the scoping process should bring those to light if there are any going on that we don't know about.

Consultation process with other government agencies -- we're working with other Federal agencies to address threatened and endangered species issues; we're working with the State on coastal zone management and the Historic Preservation Act. So, we're working with other agencies to complete those other review requirements that we need to do.

We've contacted the Pacific Northwest National Laboratory to help support us on this effort. We had a team out at the site this week. We've been out, going -- walking the site, reviewing documentation, talking to BG&E.

So, we've already started to review their application and are starting to work through that, and they're here at the meeting. They wanted to hear the comments and the issues that people were going to bring up. So, that will help them do their review more smoothly.

Next slide, please.

As far as the decision that the Commission needs to make, the supplement to the GEIS will contain the NRC staff's recommendation regarding the environmental acceptability of the license renewal action.

As I said earlier, the environmental portion is just a piece of the overall decision as far as license renewal goes, but this is the standard that we need to -- this is the recommendation that we need to make, whether or

not -- the environmental acceptability of the license renewal action.

Hopefully, I got why we're here and how we're going to do our review. You're probably all interested in when we're going to do our review. So, that's the next slide, number 19.

As far as the schedule goes, as I said, the notice of intent was issued June 10, 1998. We're having the scoping meeting today. The written comment period to provide us written scoping issues closes August 7th.

At the conclusion of the scoping process, the NRC will issue a scoping summary report which will be a summary of the scoping activities, include a description of this meeting, and also a list of all of the issues that the public has identified throughout the scoping period.

The draft supplement to the generic environmental impact statement is scheduled for March 1999. We'll put that draft document out for public comment for 60 days and have a similar-type public meeting where we'll gather comments from the public, we'll accept oral comments, like we'll accept today, also written comments, and then, with those comments, we'll go back and review them and modify the EIS if we need to.

In the final supplement to the GEIS, scheduled for 1999, we'll take those comments that are brought to us and

somehow disposition them. So, there will be a listing of comments and where they were addressed in the supplement to the GEIS, so that they won't be lost in the process.

Next slide, please.

Public participation is key to the NEPA process. So, we're looking for comments from you all today, and there are various phases, as I've mentioned, where the public can participate in the environmental review for license renewal. There's the meeting today, there's the written comments that you can provide by August 7th, and then there is also the opportunity to provide written or oral comments during the review of the draft supplement to the GEIS.

Next slide, please.

As far as the point of contact, I'll be the point of contact within headquarters. We have a number of documents out on the back -- out in the hallway.

All of the documents, as far as the application, the GEIS, any future meeting summaries, meeting notices, etcetera, they will all be placed in the public document room and the local public document room up in Prince Frederick.

There's a number of ways you can provide comments -- orally, via e-mail, or via written mail. There's a point of contact sheet out on the back table, out in the hallway, so feel free to take that and contact me if you have any

questions or -- that way, you'll know where to send all your comments.

And if we could back to the flow chart, slide number 10.

Again, today's meeting is in support of the scoping process for license renewal.

MR. GRIMES: Slide three.

MS. CRAIG: Oh, I'm sorry, three. You're right. I'm just trying to confuse Kim.

Again, today's meeting is a scoping meeting in support of the overall license renewal process. It's important that you participate. We want your participation. We encourage your participation. I think it makes a better process if you do participate, and remember, the Calvert Cliffs license renewal process has just begun. This is really the first step in many to get to that final end point on a decision on license renewal.

I'd like to thank you for your attention, and if you have any quick clarifying questions --

MR. CAMERON: Let's ask Mr. Johnston if your question was answered by her presentation.

MR. JOHNSTON: I didn't see a handout that summarized the issues that have already been finalized, apparently, in the GEIS.

MS. CRAIG: Right. Those are the back-up slides.

They're headings. You should have back-up slides. They're slides -- the last two slides. Those are the headings. I didn't list out all 92 issues, because it got to be quite lengthy.

If you wanted to look at the 92 issues, there are copies of 10 CFR 51 out in the hallway, and you can look at the 92 issues there.

MR. JOHNSTON: As to those issues, those are essentially finalized and will be excluded from this supplemental EIS at this point?

MS. CRAIG: Well, the category one issues have been considered generic, and those need not be addressed by the applicant. The NRC will be addressing both category one and category two issues during their -- in writing the supplement --

MR. JOHNSTON: I'm sorry. I don't know what category one and category two issues are. Can you speak a little bit more to the layman, you know?

MS. CRAIG: Well, category one issues were 68 issues which the NRC evaluated and determined to be generic, such that each individual license renewal applicant need not address them on a plant-specific basis. We already did the analysis, looking at the mitigative factors, looked at the alternatives for those impacts, and determined them to be generic.

MR. JOHNSTON: So, like, for instance, the issues of population growth in the U.S. and the world and CO2 growth and our obligations to meet CO2 limits and alternatives to nuclear power and nuclear waste, you know, final disposal out west -- all those are issues that are not validly raised at this point?

MS. CRAIG: Well, there are some issues regarding decommissioning, those headings. Some of those issues are touched upon but not -- I'm not sure I'm answering your question.

MR. JOHNSTON: Well, I'm asking, is it valid to raise any of these questions at this point, in your planning process?

MS. CRAIG: You can certainly comment on them, yes. Please raise them, and then we'll take a look at them, and if they are a category one issue that we consider generic, we'll look at them to see if there is new and significant information such that we would need to reopen that issue.

MR. JOHNSTON: Oh. But unless there's something new --

MS. CRAIG: -- and significant --

MR. JOHNSTON: -- and significant --

MS. CRAIG: Right.

MR. JOHNSTON: -- essentially, it's closed.

MS. CRAIG: Right. Unless we go through another rule-making to change the rule.

MR. JOHNSTON: So, I would object to your characterizing of this meeting as a scoping meeting in support of overall licensing process. This is a very limited meeting.

MS. CRAIG: The rule limits the scope of the license renewal review for the environmental --

MR. JOHNSTON: Thank you.

MR. CAMERON: I believe you're signed up to speak later on, and we can hear those comments. Let's go for more questions of clarification, and I hope everybody understood that exchange with Mr. Johnston in terms of what's on the table here.

Anybody else have any questions?

[No response.]

MR. CAMERON: All right. We're going to go to the public comment section, and I'm going to ask Bart Doroshuk from Baltimore Gas & Electric to come up and give us the perspective of the license applicant. I'm then going to go to local and state government officials, and then we're going to move through the rest of you that signed up in more or less an arbitrary manner.

Go ahead, Bart.

MR. DOROSHUK: Thanks, Chip.

Good afternoon. My name is Bart Doroshuk, and I'm the Project Director for the Life-Cycle Management Project at the Calvert Cliffs Nuclear Power Plant in Calvert County, Maryland.

For the purpose of the record, I'm going to make my -- a copy of my remarks available after this session. So, when we break -- at a break -- or you can pick a copy of them up outside at the Calvert Cliffs booth.

I am representing Baltimore Gas & Electric Company at these U.S. NRC meetings, which are in support of the applications to renew the operating licenses for Calvert Cliffs.

On behalf of BGE and approximately the 2,000 men and women who work at Calvert Cliffs, let me express my thanks for the opportunity to make a statement regarding the license renewal of Calvert Cliffs.

As you all have seen or heard today, BGE made history in April by submitting the first applications requesting the renewal of NRC operating licenses for a commercial nuclear power plant.

These applications, available through the NRC public document room, either locally in Prince Frederick, Maryland, or at the NRC headquarters in Rockville or Washington, D.C., represent a considerable effort.

The effort has been a result of hard work by BGE

and many organizations across the United States and, in fact, the world. To recognize all the contributors who have assisted us would take more than the time allowed today. I will, however, recognize a few:

The significant efforts of the U.S. NRC in the establishment of the Federal rules regarding license renewal, the direct support and efforts of the Nuclear Energy Institute and the Electric Power Research Institute on technical and regulatory-related topics, the significant contributions over the years by the State of Maryland, and the sharing of technologies from across the U.S., Europe, and Asia between governments and utilities alike.

What we have concluded from all of our evaluations is compelling.

The continued operation of Calvert Cliffs beyond the original license terms will provide the people of Maryland with a safe and reliable energy source in the future.

The continued operation of Calvert Cliffs will continue to be a contributor to the environment by striking a careful balance between clean air and a stable fuel supply.

The continued operation of Calvert Cliffs will provide -- will continue to provide economic stability to Maryland and BGE.

The light we need at night, the heat we enjoy on those cold wintry storms, the music our children listen to, and the industrial muscle that makes Maryland a strong state -- these are some of the fibers of the world around us that Calvert Cliffs has contributed to.

The continued contributions and operation of Calvert Cliffs makes good sense.

We're here today to look at a specific part of the Calvert Cliffs application, the preparation of the supplement to the generic environmental impact statement by the NRC.

I want to provide you with an overview of our conclusions and some of the fact surrounding our decision to submit our applications.

Some of the facts submitting -- supporting our -- are the conclusions that it makes good sense to continue to operate the plant.

The facts fall into four categories -- environmental balance, safety and reliability, strong regulatory oversight, and economic impact.

Let me start with environmental balance.

In our state, nuclear energy produces more than one-fourth of all of our electricity, but more important for our environment is what it doesn't produce. Let me discuss this in terms of clean air, clean water, and the health of

the Chesapeake Bay.

Calvert Cliffs provides us with a balance for the heavily relied-upon fossil fuels and the effects they have relative to air quality -- for example, acid rain and global warming.

For more than 20 years, Calvert Cliffs has been an environmental steward on the shores of Chesapeake Bay. Years and years of scientific study and careful monitoring have continued to demonstrate that the plant's operation has been environmentally benign, or more simply, the water is clean around here.

The plant's strong environmental stewardship and record of reliable operation didn't just happen. The people who designed Calvert Cliffs, the people who operate Calvert Cliffs have made a conscious effort to protect the bay, the land, and the wildlife.

The plant sits on a 2,300-acre tract of the Chesapeake Bay shoreline. Of this property, only 380 acres, less than 20 percent of that, are actually used for plant facilities.

If you've ever been to the site, you may have noticed the bobwhite quail, the pheasant, wild turkeys, song birds, white-tailed deer, red and gray foxes, raccoons, gray squirrels, chipmunks, and rabbits, all who call it home.

A pair of bald eagles live in one corner of the

site, and there is an osprey nest in the platforms that Calvert Cliffs employees built for them. Bluebirds also have a special -- have special housing installed just for them.

Another creature living here is the endangered tiger beetle. The tiger beetle thrives only on beaches that don't get walked on by people. One species in particular likes the base of the cliffs. That makes Calvert Cliffs just the right place for these guys.

The 500 or so members of the two tiger beetle species represent more than 90 percent of Maryland's total population. Since 1992, BGE and the Nature Conservancy have been working together to protect tiger beetles living on the plant site.

Thousands of acres around the plant have been set aside for this wildlife habitat. Most of the scenic state is just the way it was when we found it. It makes good sense that it stay that way for the years to come, or more simply, the land is clean around here.

All industrial processes have byproducts, wastes. Although nuclear power plants produce far less than most industries, some of Calvert Cliffs waste require special handling.

Most of the waste that Calvert Cliffs produces is ordinary trash -- tools, protective clothing, wiping cloths,

and disposal items, some of which may have small amounts of radioactive dust or particles on them.

We, like hospitals, research facilities, and other industries, ship this low-level waste to licensed disposal facilities.

Another product of the plant is the fuel -- is the used fuel. This fuel is solid ceramic material inside metal rods. After it has made electricity for four to six years, it's considered spent.

Eventually, we will ship this spent fuel to the National Deposit Disposal Facility being developed by the Department of Energy. In the meantime, we store it safely at the plant.

Most of this fuel is stored inside the plant in a specially designed pool resembling a large swimming pool. As it cools off after use, we can also store it in a dry storage facility, where it is sealed in naturally cooled special containers, or more simply, it has no moving parts -- simple, safe, and reliable. It will await final shipment to the Department of Energy facility.

Looking to the future, it makes good sense to continue to protect the air, the land, and the bay and its natural resources by maintaining the environmental equilibrium established.

The recent world summit on global warming held in

Kyoto, Japan, underscored the importance of continued operation of emission-free nuclear power plants in maintaining this balance.

The positive impact in Maryland from this careful balance is very noticeable, or more simply, the air is clean around here.

Our surrounding communities are, of course, a vital part of our environment. Individually, Calvert Cliffs employees make contributions to the community as they go about their lives here in Calvert and in surrounding counties.

Whether it is coaching various sporting teams, sponsoring a little brother, helping out at a women's shelter, or bringing residents to the safety of the closest medical facility because they serve on a fire and rescue squad, our environment is better for it.

The environment around us is a complex one, and we believe change should be carefully considered. After all the scientific studies and considerations that go into alternative actions, BGE feels that it makes good sense to maintain the equilibrium established between the plant, the air, and the land and the bay, or more simply, it makes good sense to continue to preserve the Calvert Cliffs option into the future.

Let me move to safety and reliability.

In 1975, Unit 1 began generating electricity, and for the first time, Calvert Cliffs powered the lights and furnaces of our homes, played the radios for us and for our young, and became a part of that Maryland muscle I referred to earlier. Unit 2 joined the system two years later.

In more than 20 years of service, Calvert Cliffs has reliably and safely supplied nearly half of BGE customers' electricity. Its less expensive nuclear fuel has saved customers billions of dollars.

Throughout these years and still today, Calvert Cliffs has been instrumental in keeping our customers' rates among the lowest in the region.

The decision to renew the licenses at Calvert Cliffs was based in part on this record of reliability, good performance and thorough technical evaluations.

Over the last eight years, BGE has evaluated every facet of plant operations required for relicensing and beyond. Many engineers have worked full-time to evaluating the aging of the plant.

They have compared it to other sources of technology and energy available in the region to ensure that reasonable decisions are being made, and we'll continue to evaluate and assess the life-cycle of Calvert Cliffs into the future.

Based upon what we have found, it makes good sense

to continue to operate Calvert Cliffs. The plant's excellent track record of safety and reliability has not been built without lessons learned. During these times, we have acknowledged, we have corrected, and we have learned from our mistakes.

Even as we learned, the standards of nuclear safety were never reduced, and the public health and safety has always been maintained.

We will continue to be a vigilant sentinel for safety, as well as a reliable provider of competitive energy.

A measure of our commitment to continued reliable and safe power generation is the recently-announced plans to replace the steam generators in both units.

This $300 million effort illustrates our commitment to excellence and will enhance both the plant's safety and reliability and support operations throughout the license periods.

As the next century approaches and we begin to plan for the future, Calvert Cliffs will remain a major energy resource for Maryland.

Calvert Cliffs will enable the company to generate electricity using a variety of fuels, thereby maintaining a diverse and secure source of energy well into the 21st century.

It makes good sense to ensure that the customers will continue to have safe and reliable electric service at competitive rates.

Strong regulatory oversight is the third area we talked about in the beginning. The nuclear industry is probably the most monitored and scrutinized industry in the world.

The range of safety and environmental oversight covers many Federal agencies, primarily the U.S. NRC, but others such as the Environmental Protection Agency have responsibilities in this oversight, as well.

In addition, each state has its own requirements for safe operation which Calvert Cliffs must comply.

The U.S. NRC regulatory oversight programs ensure that plant safety is maintained.

In keeping with BGE's commitment to continuous improvement, modifications over time are made to reflect new information on technical topics so that continued operation continues to provide the established levels of protection for the public's health.

These continuous oversight activities will continue through the renewed license terms. At any time, should the Commission find that additional protection is needed, further changes could be ordered to be implemented at the plant.

This oversight, combined with BGE's strong commitment for safe operation and a history of being able to do so, gives us the confidence that continued operation is the right thing.

We continue to hold nuclear and personnel safety as our top goals and strongly believe that, if these goals are achieved, then good plant performance will follow.

Economic impact: Calvert Cliffs has brought many kinds of value to the residents of southern Maryland. Electric customers have enjoyed low rates over the years. The plant has created thousands of jobs. These jobs, combined with low electric rates, have contributed to an economy in southern Maryland that is robust and, in fact, praised by financial analysts.

We will continue to be a generous neighbor. These contributions have come in many ways, such as the property tax bills we pay, the charities we support, such as the United Way and others, and in other measurable ways, or more simply, besides generating electricity, Calvert Cliffs continues to add value to the quality of life in southern Maryland.

For the true economists, Calvert Cliffs, the physical plant, has substantial worth in today's dollars. The original construction cost was about $750 million in 1975. To build a viable equivalent today could take as much

as $6 billion.

As BGE and other utilities begin to transition to a deregulated market and customer choice, we have found that, through our economic analysis, that Calvert Cliffs can continue to meet all of the safety and reliability requirements and still produce low-cost electricity.

Calvert Cliffs' continued operation makes good sense to us, and I believe, when you consider customer choice, it will make good sense to you, too.

Let me draw some concluding remarks.

Some have questioned the viability of nuclear power and will continue to turn their heads no matter what the facts say. We think that's unfortunate.

We believe the right thing to do is to maintain a good, stable, safe, and reliable mix of energy in our region. The eggs-in-one-basket scenario doesn't work well. It never has and it never will.

I believe, when you weigh the benefits of nuclear technology, whether it be for use in medicine, research, or production of electricity and striking that balance with fossil fuel, as I mentioned earlier, Calvert Cliffs has demonstrated that it is an environmental steward for our region and a good example for others to follow.

It makes good sense to maintain this environmental equilibrium. It makes good sense to continue what

historically has been a solid, safe plant with tremendous successful oversight by the NRC and others, and it makes good sense to continue to contribute to our way of life in Maryland.

Thank you.

Thank you, Chip.

[Applause.]

MR. CAMERON: Thank you, Bert.

Now we're going to go to Gary Hodge, who is the Executive Director of the Tri-County Council.

MR. HODGE: I am Gary Hodge, the Executive Director of the Tri-County Council for Southern Maryland, the regional planning and development agency for the region that's made up of Calvert, Charles, and St. Mary's counties, 1,000 square miles here between the Chesapeake Bay and the Potomac River, south of Washington.

Our functions include environmental planning, transportation planning, agricultural preservation, economic development.

Personally, I have spent 27 years in regional planning as a field of endeavor, 18 of those as a member of the Patuxent River Commission, appointed by three governors of the State of Maryland.

I speak and represent the 29 elected officials who make up the Tri-County Council for Southern Maryland and

compose its governing body.

I am not a nuclear engineer by profession, and my comments focus on the exemplary community relations that exist between the Baltimore Gas & Electric Company and this Calvert Cliffs nuclear power plant and the southern Maryland region and the fabric of its community life and its economy.

My remarks will be brief, but they are based on keen observation of the functioning of this facility and its relationship and its impact on the southern Maryland community throughout the years that I've been here.

Starting with the economy -- and I'm not going to recite an encyclopedic list of economic impacts here, some of the data has already been presented to you, but this plant employs 1,500 full-time employees and at least 1,000 short-term contract positions during the annual refueling periods.

Those employees earned wages of $79 million last year, and this plant paid taxes to Calvert County in the amount of $19 1/2 million last year.

The economic and social impact of this facility can hardly be described as one of the most important, one of the most important anchors of our southern Maryland regional economy.

I would have to compare its impact to that of the United States Navy in St. Mary's County and in Charles

County to reach a comparison to its importance here in this southern Maryland region.

It has been a good neighbor. Its license should be renewed.

And while there are many issues that relate to the future of nuclear energy in the United States, we also have to contemplate the alternatives and the environmental impacts of those, and having spent almost 20 years concerned with the future of southern Maryland's environment, whether it be the quality of our water quality in the bay or the Patuxent River or our air quality in the greater metropolitan Washington area, one has to contemplate the alternatives in the fossil fuel plants that even the transport of air quality problems from the midwest, for instance, cause us problems here in Maryland that we don't have locally because of the existence of this nuclear power plant.

Obviously, vigilance and care and management are all going to be required in the future, and based on my observations of how this facility has been managed in the 18 years that I've been here, we can expect the absolute highest amount of vigilance and management expertise from Baltimore Gas & Electric as we have in the past.

This is southern Maryland's largest private employer and, as I said, an excellent corporate neighbor

that contributes monetary and human resources to almost every volunteer, charitable, civic, or community organization present in southern Maryland, and that sounds like a very sweeping statement, but I can assure you that there is no aspect of the community life of this region that has not been touched favorably and positively by Baltimore Gas & Electric Company's facility here and its workforce.

I do want to mention two individuals who have had a tremendous impact on our work at the Tri-County Council that are associated with BG&E, one being John Smith and another being Jim Lemmons, who have contributed enormously to the quality of life of this region.

Thank you very much.

[Applause.]

MR. CAMERON: Okay. Thank you, Gary.

We're going to go next to Mary Krug, who is a Calvert County Commissioner.

Mary?

MS. KRUG: Thank you very much. It's a real pleasure and privilege for me to be here today. I won't be doing a lot of data. Our staff are presenting back-up data to the consultants working on the environmental impact statement.

I am here, rather, to express the sentiments of the Board of County Commissioners of Calvert County, who are

the elected representatives of the people who literally live with nuclear power generation every day.

Calvert Cliffs nuclear power plant is of vital importance to our county, and we were delighted when BG&E decided to move forward with re-licensure.

When Calvert Cliffs located here, we went virtually overnight from one of the poorest counties in the state to one of the richest.

We went from a place where families had cash only once a year, when the tobacco crop was sold, to one where people have money in their pockets and our youth, for the first time, have a chance to have a good job without moving away from home.

Increased revenues meant new school buildings, with higher-paid staff in them, new parks, cultural attractions, senior citizen facilities, and state-of-the-art fire and rescue equipment.

It meant new residents who came to work at the plant, well-educated and ready to get involved in the community, and that is the second positive that Calvert Cliffs brought us, because they are not just a source of jobs and revenue but a good corporate citizen.

BGE and its employees are an integral part of our community. They are generous with charitable dollars but also with time and personal involvement.

As mentors in our schools, as coaches in our Little Leagues, as work crews for Christmas in April, as United Way volunteers, in every aspect of county life, the corporate and its workers are leaders for the betterment of the community.

We welcome the continued presence of Calvert Cliffs in our county. We are neither naive nor complacent about nuclear power but neither are we uncomfortable.

Calvert Countians tend to be very caring of our environment. We have two important environmental research institutions in the county, and our government is often cited for its good stewardship of land and water.

And I would say parenthetically that stewardship of the air has not been so much of an issue here. As the former Vice Chair of the Metropolitan Washington Area Air Quality Committee, I know that the air quality issues in this area are mostly the result of transport of emissions from fossil fuel plants elsewhere.

The plant has been operational long enough for us to know if there were negative environmental impacts from normal operations, and as for the potential of an abnormal event, we take seriously our emergency preparedness drills, but we also have confidence both in plant operations and the oversight of your agency.

In sum, we regard Calvert Cliffs as a friend, a

partner, and an asset to our community, and we urge its re-licensure. We welcome a broad scope of environmental impact study, because we are absolutely confident in what the conclusions of that study will be.

Thank you very much.

[Applause.]

MR. CAMERON: Thank you very much, Mary.

We're going to move to the state level now and hear from Fred Hoover, who is the Director of the State of Maryland's Energy Administration.

MR. HOOVER: Good afternoon. I'm Frederick Hoover, Director of the Maryland Energy Administration. On behalf of the Governor and myself, I welcome the opportunity to participate in this process because of the importance of this facility to Maryland's present and future environmental well-being.

Calvert Cliffs nuclear power plant is an important component of this state's electrical generation mix. Our assessments over its 24-year period of operation indicate that it has an excellent environmental record and is considered a strong candidate for license renewal.

We also know that the plant provides significant benefits to Maryland's air quality since it does not produce the types of pollutants emitted by burning fossil fuels.

Since this plant produces just under 50 percent of

the power generated by BG&E and just over 25 percent of the electricity generated in the state, it is an important component of Maryland's emissions strategy and attainment plan.

Yet, we know that there are questions that need to be examined and answered carefully before its license is renewed. We see this process as an appropriate and comprehensive forum for addressing these questions.

For my part, the Maryland Energy Administration will be working with the power plant research program of the Department of Natural Resources to coordinate the State's review of license renewal for Calvert Cliffs and to prepare comments as necessary for submission to the Nuclear Regulatory Commission.

Since the power plant research program has been monitoring the operation of Calvert Cliffs since 1974, we have an excellent baseline of information and experience from which to start our review.

Additionally, we will solicit information and coordinate comments from other state agencies, including other units of the Department of Natural Resources and the departments of the environment, business and economic development, and the Office of State Planning.

These agency comments will be compared with information provided by the applicant and by members of the

public so that each issue identified in this scoping process will be thoroughly evaluated as part of our participation in this renewal process.

With this in mind, I encourage the public to participate in this process so that we will have a full and vigorous review of Calvert Cliffs, and I look forward to hearing the comments and questions offered on re-licensing.

Thank you.

[Applause.]

MR. CAMERON: Thank you very much, Fred.

Nancy Smith, do you want to try to make your comments now, rather than coming back tonight? I think we're still on your schedule. Go ahead.

MR. SMITH: I'm Nancy Smith. I'm a political scientist. My area is environmental policy.

I sit on the Commission on the Environment for St. Mary's County, which advises the County Commissioners, the Lower Potomac Tributary Team, which advises the Governor on tributary strategies, and the Southern Maryland Committee for Tri-County Council.

I have been a professor at St. Mary's College for 17 years, and one of my great loves is the Chesapeake Bay, and this power plant, as you know, is located on one of the tributaries of the Chesapeake Bay.

The Chesapeake Bay is under stress, and we do not

know all of the areas of stress that are affecting the eco-systems within the Chesapeake Bay region.

One area of research that might be of interest in this environmental impact statement scoping process is the effect of microbiological interactions within the plant.

I brought to the attention of the NRC and state officials and Calvert Cliffs power plant a research study done on bacterial contamination in the energy department's Savannah River site in Aiken, South Carolina.

Microbes inhabiting this storage depot for test reactor fuel may prove a headache for nuclear waste managers. So, I am going to enter into the record this study and ask that the NRC and Calvert Cliffs consider it for the environmental impact statement process.

In addition, we know, in microbiology, this new area of research called extremophiles research about organisms that can live in extreme conditions is a new frontier in biology.

We do not know what kinds of organisms can live under extreme heat conditions and be exposed to nuclear radiation within nuclear power plants.

This is a new field, and therefore, I think, without any knowledge about the impact of these microbes and the possibility for mutation within nuclear power plants, we do not know to what extent these microbes can then escape

from the plant environment into the Chesapeake Bay.

We have a phisteria crisis going on in the Chesapeake Bay. It is a new phenomenon of research. These are micro-organisms that have a huge impact on other species in the bay, and there are human health aspects, as well know, to the phisteria crisis that were never understood until recently.

Therefore, I ask that this kind of research be considered as a possible avenue for the environmental impact statement process.

Thank you.

MR. CAMERON: Okay. Thank you, Nancy.

[Applause.]

MR. CAMERON: I think that's exactly the type of information that falls within the category two evaluations.

Next, let's go to -- we're going to go to Paul Gunter, Nuclear Information Resource Service.

MR. GUNTER: Thank you.

My name is Paul Gunter. I'm with the Nuclear Information and Research Service in Washington, D.C. I'm a resident of Maryland.

I think that, first of all, I'd like to -- I come here to speak in opposition to the license extension for Calvert Cliffs, and for a number of reasons, but I'm going to focus on one particular aspect, and my colleague from

Ralph Nader's organization, Critical Mass Energy Project, will elaborate on some of the other issues, but I think that, first of all, we have to address the issue that Calvert Cliffs is located in a very unique location, as has been provided to us in its location on a principle estuary and a tributary to the Chesapeake Bay, and it brings up the issue of nuclear waste and its location to this very vital life source, and I think that the -- under the current process, I think my remarks are directed as criticisms to the Nuclear Regulatory Commission as much to the generator of the radioactive materials at Calvert Cliffs, principally because the whole issue of radioactive waste has been eliminated from the site-specific examination of the Calvert Cliffs re-licensing effort, and I fully believe that the NRC has had in its possession enough new information to reclassify this category one issue to category two issues for consideration of Calvert Cliffs.

For example, let's look at the high-level radioactive waste issue, which is currently categorized as category one.

The NRC is fully aware of the most recent studies with the California Institute of Technology and Harvard University, through their land satellite system, that did extensive photography from orbital satellites of the Yucca Mountain geography in Nevada, which is the site that's

currently being -- it's the sole site being categorized by the Department of Energy and the U.S. Nuclear Regulatory Commission and the industry, and the Cal Tech/Harvard study clearly showed that the geology for the proposed repository for 70,000 to 100,000 metric tons of irradiated fuel is more unstable on an order of a magnitude than previously considered.

Yet, the NRC apparently has not considered this important study as new information that impacts, we believe, the life extension and the continued generation of more high-level radioactive waste at Calvert Cliffs on the Chesapeake Bay with an indefinite future.

Let's look at the low-level radioactive waste issue.

Every low-level radioactive waste dump in the country is leaking. The challenge to states to consider their compact system, their participation in compact system is stalled.

I think one clear example is the most recent decisions out of Ward Valley -- not Ward Valley -- let's look more recently at Sierra Blanca, Texas, where the compact system there for Maine, Vermont, and Texas and basically opening the door for a whole number of other sites, potentially including Maryland, there was a three-panel administrative judge that -- three judges -- I

think it was the day before yesterday -- basically decided that the Sierra Blanca low-level radioactive waste site was unsuitable, and the whole issue of where to locate low-level radioactive waste again is an uncertainty, and there is new information coming in along these areas, as well.

So, certainly, we believe that the whole issue of low-level radioactive waste management and the current situation of the dumps should prompt NRC to reclassify the whole low-level radioactive waste management system as new information that should be included in any kind of extension of radioactive waste generation at Calvert Cliffs.

Let's look at another issue with radioactive waste, and that's the independent fuel storage systems currently employed at Calvert Cliffs.

Certainly, we think that the closure, the resignation of Calvert Cliffs new homes system, Vectra, where they have -- they have now left the scene, principally because of information disclosed in a job-site that they were conducting at Oyster Creek in -- up in New Jersey that revealed that Vectra was in violation of quality control, quality assurance, and that essentially they have now backed out of the business.

Well, they still have facilities here at the Calvert Cliffs plant that it would seem undermines confidence in their emplacement and their future,

particularly with the absence of any kind of long-term management strategy for the high-level radioactive waste enclosed within them.

That system is relicensed every 20 years, but certainly, to project that we would be generating more high-level radioactive waste and with continued reliance on interim storage from not only the Vectra vendor, but NRC is fully aware that Sierra Nuclear Corporation, another vendor -- manufacturer and vendor of the independent storage facilities, also has dropped out of the business, principally because they were involved in the fabrication of at least nine casks that we know of that are breaking up, that after a few short years, the welds on the VSC-24s that are located at Arkansas Nuclear, Point Beach, and the Palisade nuclear power station are experiencing degradation after only a couple of years, and this is certainly new information that we think should be considered in terms of any kind of life extension that would generate more high-level radioactive waste in this sensitive ecology.

A further predicament with this whole independent storage issue that NRC should be considering as new information is the inability to unload any of these casks.

Right now, the casks at Palisades and Point Beach and Arkansas Nuclear, while they are cracked, there is no demonstrated approach to how to remove the fuel from these

degraded facilities.

It's a concern to us that that same kind of phenomenon can begin to crop up at other ISFs, or independent storage facilities, around the country, including Calvert Cliffs, and yet, you know, we see this head-long charge into re-licensing to basically commit us to this -- to mounting uncertainties.

Certainly, these issues should be part of your reconsideration and reclassification of radioactive waste issues at Calvert Cliffs so that it does become part of the EIS, and yet, we're very concerned that this process is, in fact, symptomatic of an overall regulatory agenda to expedite licensing and to basically shield for the industry, and I think that part of the problem, you know, is that what we've come to see is that NRC seemingly stands for never really considered the radioactive waste issue.

We've been generating radioactive waste now for 50 years in the absence of any kind of management technology, and now we're here considering the license extension of a plant, of a high-level radioactive waste generator still in the absence of that -- any kind of sensible approach to dealing with this very lethal material, and the fact that this issue that we believe should be on the table has been subordinated so that it will not be considered under the current regulatory scheme leads us only to believe that NRC

stands for no regulatory criteria that can significantly challenge this re-licensing effort, and this is only one of the issues of those 90-some issues that have been taken off the -- you know, our ability to challenge and dialogue and pose a common sense approach to some very significant environmental issues.

So, again, I would just close by reiterating that the whole issue of on-site nuclear waste needs to be re-evaluated as a category two issue, principally because of the absence of any kind of technology and any kind of progress that NRC, DOE, and the industry have demonstrated.

Thank you very much.

[Applause.]

MR. CAMERON: Okay. Thank you, Paul, and I think that, as you listen to these presentations, you can get a little better feel for how the NRC's rule and process is working.

In other words, this particular issue that Paul was talking about would be an issue on which there may be new and significant information that would cause it to be re-evaluated.

I'm not saying that's what would happen but that that's an example, or it might require rule-making, Chris has added there.

Let's go to Jim Riccio from Public Citizen.

MR. RICCIO: Good afternoon. My name is James Riccio. I'm the staff attorney for Public Citizen's Critical Mass Energy Project.

I'd like to thank you all for coming here today and for the opportunity to give our perspective on BG&E's attempts to re-license Calvert Cliffs.

Before we duck into the generic environmental impact statement, I'm just going to address a few issues here.

This may be a new experience for BG&E, and I don't mean to demean any of the effort they've put into doing the work for pushing this plant toward re-licensing, but this is not the first time the NRC has been through this process.

In fact, back in the early '90s, there was a plant up in Massachusetts that attempted to re-license its reactor.

When the NRC went in to examine the status of that reactor, it found that the reactor pressure vessel for the reactor was too embrittled to continue to operate. Matter of fact, the current license couldn't even be justified. When they went in to look, they determined that not only could the plant not operate beyond 40, it couldn't even be operating now, and the plant was shut down.

Now, NRC has made sure that's never going to happen again. The industry came to them and said we want

certainty in the licensing or re-licensing of a nuclear power plant.

Now, we don't have certainty in the licensing of doctors, we don't have certainty in the licensing of lawyers, we don't have certainty in the licensing of drivers of automobiles. Yet, the nuclear industry wants certainty in the licensing of their ability to split atoms.

There are a couple of premises upon which this whole new rule is being built.

One is that the current licensing basis, the rules and regulations that make up the reactor's license, are sufficient to carry the safety of this reactor forward into the future. That just isn't the case, and actually, the Advisory Committee on Reactor Safeguards makes just that point.

I'd like to read a couple of things.

The Advisory Committee on Reactor Safeguards are the advisors to the NRC. These are the crusty old birds of the nuclear industry who supposedly are -- know everything about nukes, and they basically comment upon where the NRC is heading.

Now, BGE has made the claim that their operation to this point has been good and so it should be good into the future. I'd like to address that with a comment from -- I believe it's Mr. Lewis from the ACRS.

The general argument that the fact that one has operated safely for a finite period of time proves that the safety level is adequate is just not statistically right, because there is not that much history in the industry. It's a trap, because other agencies, for example, people have used the argument that they had 24 successful shuttle flights showed the level of safety was adequate. In retrospect, after one disaster, it turned out not to be. The Soviets, after Chernobyl, suddenly discovered that the level of safety they had before Chernobyl was not adequate, but the day before Chernobyl, they would have said that it was adequate on the basis of operating history. This is the same thing that BG&E has done.

So, basically, it's a general trap, a psychological trap to believe that, because something has not happened, that you're just doing fine.

The other premise that the NRC has set up and that the industry has set up is that the current licensing basis, those rules and regulations, will make it safe in the future.

Again, Mr. Lewis from the ACRS has stated, the Commission certainly does not know that the current licensing process provides adequate protection of the public.

It has declared that it does, and it's the

operating definition, but the Commission has also promulgated safety goals, and the Commission doesn't know that the current licensing basis will meet those safety goals, although it believes it to be the case.

The reality is the NRC knows at this point that no plant meets its current licensing basis. Matter of fact, they sent out a letter called a 50.54(f) letter requesting that the industry respond to them and tell them all the different areas of where they're not in compliance with the rules that they're supposed to be meeting in order to be splitting atoms now.

So, no, we're going to move and push that off to the side and we're going to allow them to go and re-license this facility.

We haven't even touched on the generic environmental impact statement, and that's generally because most of the issues dealing with the generic environmental impact statement have been taken off the table.

Now, the last time we could get NRC to give us a statistic on what the real risk of operating a nuclear power plant was was after the Chernobyl accident. We have since tried. Others in the government have since tried to get the NRC to give them a number and have been unsuccessful.

The number they gave us the last time they would give a number was that there was a 45-percent chance of a

melt-down in the next 20 years with consequences comparable to that of the Chernobyl disaster.

Now, I don't want to demean the efforts you've been working on with the tiger beetle and endangered species.

I'm more concerned about the species of human beings that live on the end of the peninsula that, in the event of an accident, are going to have to drive by this plant.

We're not looking -- as Paul has pointed out already, we're not looking at the environmental problems posed by waste, we're not looking at the environmental problems posed by current and constant release of radiation to the environment.

There has been a recent study done on a facility out in California that found workers that were exposed to -- that were never exposed to levels of radiation in excess of what the government deemed permissible were experiencing cancers six to eight times greater than that premised by the most recent governmental study, and that study was done by UCLA, paid for by DOE.

The findings from that, UCLA's recommendations, were that they undertake a study of all health standards having to deal with radiation, that they should be re-examined in light of this new evidence. That's not going

to be done.

The problems with license renewal are many and complex. We're going to be basically -- if Calvert Cliffs actually gets beyond, say, even 35 years, they'll be operating in a region unknown to any commercial nuclear power plant in the United States.

The oldest plant at this point is only 32 years old. None has ever operated beyond that. Yet, the NRC thinks they can bound the problem of safety.

They're going to be operating with degradation mechanisms emerging on a constant basis, mechanisms that they may not know how to deal with. There are already issues that have emerged, safety issues that have emerged at this facility that will not be addressed in the license renewal process, and that's because the industry wants certainty.

I can understand, there's a lot of money invested in this plant, as you well know. They're going to be coming to your legislature very soon asking for a bail-out. It's called stranded cost recovery.

Be that as it may, we're back again to the environmental problems of nuclear power.

BG&E has also said the air here is clean, and it is, and the water's clean, as long as you don't look at radiation, which you must vent.

Now, global warming and problems with clean air are going to give a boost to the nuclear industry, because they've claimed that they don't pollute the air.

I'm afraid you can't replace one environmental disaster with another. You have global warming. You have problems with CO2. You have problems with dirty air from coal-fired facilities. That's a problem, and it must be addressed.

But you can't solve that by creating wastes that are going to last 250,000 years.

I've seen a lot of people come up here and speak about the -- we're supposed to be talking about the green issues, about the environmental issues. It seems that the only issues that are really relevant here are the green issues that deal with money.

This county is highly dependent upon the tax base that is provided by this facility. That is evident. It's evident by your elected representatives coming up here in support of a plant that puts their public at risk.

If we ever can get to some of the environmental issues -- and actually, you have a copy of the one's and two's that NRC has designated in terms of what is and will not be considered. So, if you need copies, I think Chip may have actually copied them off and they may be out front.

Most of the environmental issues have been taken

off the table.

I don't want to say don't participate in this process, but I can't come up here and say that the process is one where you have a very strong chance of prevailing. This is a charade. This is a farce.

The NRC will -- the industry probably wouldn't have come forward if they didn't have almost a patent guarantee that they could get their plant through license renewal.

There should be a test. There should be a test to see whether or not this plant can operate safely during its license term or into the future, but we're not going to touch that. Those aren't on the table, because the current licensing basis supposedly is sufficient to protect the public health and safety. It's not, the review that you're going to be going through will not, and unfortunately, we're going to continue to produce high-level radioactive waste on the shores of the Chesapeake, creating a high-level radioactive waste dump, without any possibility of it moving in the near future.

I thank you for your opportunity to present my views.

I would like to be able to present more substantive comments to the NRC in regards to the environmental problems, and we'd like to basically pry open

this process so that the real issues can be addressed, both having to do with the safety of the plant, the economics of going forward, as well as the environmental degradation that's caused by the plant or any potential alternative.

Thank you very much for your time and consideration.

[Applause.]

MR. CAMERON: Thank you, Jim, and the first issue that Jim talked about, aging, is the issue that's going to be considered in the process that Chris Grimes presented this morning, and I guess you also touched on another aging issue with that reference to the crusty old birds at the ACRS.

I think you might have meant it in a complimentary sense, but I know they'll read this transcript with more than their usual interest.

Let's go to John Parran.

MR. PARRAN: My name is John Douglas Parran, and I reside in St. Leonard, Maryland, here in Calvert County. I'd like to thank the Nuclear Regulatory Commission for having this public hearing, BG&E officials for coming out today, and citizens and elected officials.

Over the past 10 years I have learned a lot about the local nuclear power plant and the way it operates. Like many people, I've had my reservations about safety and

security at the power plant.

Since I have been a candidate for public office, BG&E has invited me to tour the power plant, and I was impressed with what I saw. I have visited the power plant twice as a guest and once as a candidate at a candidates forum held there.

The last visit was to view the spent fuel storage facility. I wrote at the time that I felt the security level of the spent fuel storage facility looked like it could be improved.

I wrote that the security level was adequate under most situations for the storage facility but that it wouldn't hurt to have it improved to a level that would be as secure as the protected area around the reactor buildings.

What I've said or written in the distant past is not necessarily how I feel today. My views on nuclear power have changed over the years. I will make it perfectly clear what my position is in 1998.

I would like to see the power plant continue to operate safely throughout the current license period. That is at least 15 years from now.

I'm not necessarily opposed to the license renewal of Calvert Cliffs at this time, but I don't know why the license renewal application would be requested so far in

advance.

It seems to me that the decision to renew the license should be made a year or two before the existing license expires. After all, we don't issue a drivers license to an eight-year-old child because he will need it when he's 18 years old.

To renew the license or not renew the license should be based on how Calvert Cliffs performs in the next 10 to 15 years.

Of course you will have other considerations such as the long-term spent fuel storage location, either here or somewhere else, and whether or not the existing equipment used at the power plant can be used safely well into the next century.

In some regards, you're charting unknown territory that has never been explored before.

The safety of Calvert Cliffs workers and the citizens of Calvert County must remain the top priority in any consideration for license renewal. Safety must take a higher priority over electricity production and corporate profits.

I would ask BG&E management to please keep all the dedicated power plant workers employed and on the job to maintain the level of safety and security that everyone in Calvert County expects from you.

Safety and security at Calvert Cliffs nuclear power plant should continue to be the number one priority of BGE and the NRC.

In addition to my prepared remarks, I'd like to bring up an issue that has recently been made that the Navy at Pax River has proposed to expand their flight routes over southern Calvert County, which would include the Calvert Cliffs nuclear power plant.

I feel that we already have enough flights over Calvert County. I think they should be reduced or that should be a restricted area anyway. If you had a jet fly into that reactor building, it wouldn't be good, or the spent fuel facility.

So, I think the Navy needs to reconsider their request to have more flights over the southern Calvert County, and it really should be a restricted area.

So, that's basically all I wanted to say. Thank you for the opportunity to speak to the NRC and to the audience, and thank you.

MR. CAMERON: Thank you very much, Mr. Parran.

Now we're going to go to William Bowen.

MR. BOWEN: Thank you.

I'm William P. Bowen. I'm a native of Calvert County. My people came here in 1674 and settled at the headwaters of St. Leonard Creek. I think Parran and Mary

Krug are probably the only ones left in here who are true Calvert Countians, and I speak as that in Calvert County.

Our good friend Louis Goldstein, who passed away a few years ago -- a few days ago, would have agreed with me there.

I am the Vice President of the local Calvert County Chamber of Commerce, and I am a local businessman. I'm working on my 52nd year in business in Calvert County. So, I think I have some idea of the economic climates in this county.

I have been closely associated with the nuclear power plant at Calvert Cliffs.

In my early years in business, it was appropriate for -- being in the propane gas and the plumbing and heating business, it was a commonplace thing that, the week before Christmas, we'd close down the business, except for a few service people, and not bring them back until the first of March, simply because there was not enough business in this county to support the businesses.

When the nuclear power plant first came aboard, the Maryland Academy of Science -- and incidently, that probably was purchased from our good friend Louis Goldstein -- the Maryland Academy of Science was assigned the task of checking the environmental impact of the fossils and whatnot and the beetles, and I, being in the propane gas business,

had the opportunity of supplying those people with propane gas for their trailers, and over the years, during the construction of the power plant, I was also there supplying the propane gas for the containments, and I remember one incident during the winter, to give you an idea of the quality control that was conducted during the period of construction, during the winter, during a very cold night, the concrete that had been poured was not satisfactorily cured because of the cold weather, and they completely destroyed that concrete and replaced it.

So, I feel confident that the plant is constructed well.

Also, I had the opportunity to serve as a County Commissioner for this county for an eight-year term, five years of which I was president of the board, and on many occasions I had the opportunity visit Calvert Cliffs nuclear power plants and being concerned, being involved with nuclear waste and the operation of the nuclear power plant.

I guess my major concern is that, number one, I feel the plant is safe. I don't know of any real safety problems that have existed over the past year.

When I go by the plant, I don't smell any odors in the air, I don't see any pollution, and certainly, from an economic standpoint, it has helped Calvert County, in more ways than one.

There's about a $6 million influx of money into the county, which supports grocery stores and the plumbers, the electricians, the builders. In addition to that, there's a $20 million tax bill that BG&E presents to the county each year, which is very important to the economy of this county.

Also, the employees of Baltimore Gas & Electric have fitted in real well with the community. In fact, I don't know what would happen to some of the churches and some of the schools and some of the boards -- I serve on the hospital board with Jim Lemmon, serve on the Chamber of Commerce with a couple of the employees of Baltimore Gas & Electric.

I would say today that probably 30 percent of my church group are employees of Baltimore Gas & Electric, and they take a very active part in the programs of the county, as well as the community associations or organizations like the Lions Club, for example.

I belong to the Lions Club, and we have many of those people who are there.

So, there is more than just an economic impact if we should lose this power plant, and I certainly encourage the Nuclear Regulatory Commission to consider the re-licensing of the plant. I believe that it is the very life blood of Calvert County.

Thank you very much.

[Applause.]

MR. CAMERON: Okay. Thank you, Mr. Bowen.

Let's go to George -- is it George Abbe?

MR. ABBE: Yes.

MR. CAMERON: All right.

MR. ABBE: Good afternoon. My name is George Abbe.

I am a senior scientist with the Academy of Natural Sciences Estuarine Research Center located in St. Leonard, Maryland. I've been a research scientist with the academy for 31 years, four in St. Leonard and 27 in Benedict, where we were located before we moved to our present location.

I'm also currently serving as president of the National Shell Fisheries Association, which is an international society of over 800 scientists who work with shellfish -- clams, oysters, scallops, shrimp, crabs, and lobsters.

Most of my research involves blue crabs and oysters.

I would like to address you today in my capacity as a senior scientist for the academy.

Academy scientists began working the Chesapeake Bay off Calvert Cliffs in 1968 under contract with Baltimore

Gas & Electric.

Our goals were to determine whether the generation of electrical power and subsequent discharge of heated water from the Calvert Cliffs nuclear power plant had significant effects on water chemistry, phytoplankton and zooplankton, epifaunal and benthic organisms, shellfish, and fish.

Our pre-operational studies at Calvert Cliffs were conducted for seven years, until Unit 1 began to generate power in 1975. We continued these studies for another seven years, until 1981.

The results of these studies appear as numerous scientific reports, peer-reviewed journal articles, and a book published in 1987 by Springer-Verlag entitled Ecological Studies in the Middle Reach of Chesapeake Bay-Calvert Cliffs, edited by Kenneth L. Heck, Jr.

I'm unable to detail the findings from all these studies because of time, but we saw almost no effect of power generation at the Calvert Cliffs nuclear power plant on the aquatic organisms that live in the bay immediately adjacent to the plant.

Although there was damage to some small organisms drawn through the plant in the cooling water and to some of the fish impinged on traveling screens, the damage was generally minimal, and as long as the numbers are not large, fish injured or killed by the plant are not lost to the

eco-system but provide food for other fish and crabs in the area.

There have been a few instances since 1975 when fish losses were significant, but BG&E usually sought our advice and were responsive in their efforts to minimize these losses.

Oysters that we placed in the discharge grew slightly faster than similar oysters that we held some distance from the plant. Oyster mortalities were unaffected, averaging 6.9 percent before and 6.0 percent after the start of power generation.

Analysis of 16 years of crab population data beginning in 1968 showed that the percentage of the catch made at stations in the vicinity of the Calvert Cliffs plant was nearly identical during both pre-operational and operational periods, and catches at control sites were nearly the same as near the plant.

After these initial studies, during the 1980s and 1990s, BG&E continued to fund additional research projects focusing on oysters and crabs in the vicinity of Calvert Cliffs.

We now have a 30-year data set on blue crabs near Calvert Cliffs that recently provided much of the input to the Stock Assessment of Chesapeake Bay Blue Crabs (Callinectes Sapidus) conducted by NOAA's Chesapeake Bay

Stock Assessment Committee.

In biology of fisheries, a five- or 10-year data set is often considered to be very long. A 30-year data set is not only rare, it is almost unheard of. In this case, this extremely valuable data set is the result of long-term funding by Baltimore Gas & Electric.

It is difficult for me to over-emphasize this point.

In addition, we have cooperated with State of Maryland researchers for 20 years in a program that transplants oysters quarterly into the discharge area at Calvert Cliffs to examine accumulation of radio-nuclides. While we are not directly measuring contamination, these sentinel oysters will serve as a means for detecting unscheduled or excessive releases from the plant.

I believe, early on, that Baltimore Gas & Electric had a commitment to the environment, both in learning what was there and then protecting it.

Their continued funding of environmental research after we had shown that the thermal discharge had little effect on local organisms is, in my opinion, a direct result of their commitment.

Although we are no longer funded by BG&E, I still believe in their commitment. We remain available and interested in advising them on ecological problems that they

might encounter, and I am committed to the environment, as well. That's why our crab studies will continue, although now through another funding source.

For 30 years the academy has served as an advisor to Baltimore Gas & Electric at both a corporate level and the plant level. At the same time, we have provided oversight and scientific expertise to the State of Maryland.

The fact that were able to interact smoothly with all three groups about topics of mutual interest, in my mind, underscores BG&E's interest in and commitment to the environment.

Thank you for this opportunity to speak.

[Applause.]

MR. CAMERON. Okay. Thank you, Dr. Abbe.

Next we're going to go Bonnie Bick.

Can we adjust this mike so that it gets out there better?

I'm not talking to you, Bonnie. I'm talking to the guy behind you. Sorry. I didn't want to put that burden on you.

We'll try to turn it up. Sorry about that.

Okay, Bonnie, why don't you give it a test?

MS. BICK: My name is Bonnie Bick, and I am Conservation Chair for Southern Maryland Group, and I'm very happy to have the opportunity to be here today.

I am familiar with the scoping process of environmental impact statements, but I was a little disappointed to hear that many of the issues that should be addressed by an environmental impact statement have been taken off the table with this preliminary EIS that's generic.

I think that we need to address all the health, safety, and the environmental and economic concerns of the people that have spoken before me, and I really hope that the NRC will have a full environmental impact statement for this particular re-application, because we have something here that's different than every other plant, and that is the Chesapeake Bay, and there's been tremendous investment in protecting the Chesapeake Bay, and it's something that all the citizens of the bay watershed are dedicated to, and we've been having an extensive education process about the importance of the bay to our future, and I think that we need to have this EIS.

NEPA was designed to meet all the issues of concern, not to have a supplementary EIS at the time of something as important as this.

So, I request that the category one issues be put back on the table and be evaluated specifically in regard to the value of the environment here on the Chesapeake Bay and the Patuxent.

There are great concerns about the spent fuel. I feel that, as far as a present citizen, we do not have the right to generate this fuel without having even a plan about what to do with it, and the Yucca Mountain proposal, I think, has been disqualified because of where it was located and how poorly that site was, and I know that none of us would choose to have a spent fuel storage plant on the Chesapeake Bay, but that's what we have, and as I understand it, it's quite a big one, and I was very upset years ago when they took the fuel out of the pond and put it in these casks.

I feel that that has to be very carefully evaluated, and we know that this would be an experiment to extend the permit beyond the period that this plant was designed to perform for, and I feel that, certainly, that's a good reason to do the full EIS. NEPA requires it, I believe.

I have no question whatsoever about BG&E being a good corporate citizen. Everything they have done for the region is clear. I'm familiar with a lot of their programs, and I applaud their involvement with the community.

So, perhaps it would be good for BG&E to consider taking the next step and, instead of comparing themselves to fossil fuel, comparing themselves and moving into renewable and sustaining fuels.

That would be a real corporate citizen, one that could lead in their field, and we certainly, along that spot where the Calvert Cliffs plant is, would be a perfect place for a sustainable energy source, and since the plant hasn't expired yet, it could -- we could have a smooth transition into that, investing in this region and having BG&E receive even higher accolades for their corporate concerns for not only this particular area but for the future of the planet.

So, I would like that -- all of the different renewable sources to be addressed in the alternative analysis. That's very important.

It could be a wonderful partnership with the State and with the Federal agencies and with the region, and the Chesapeake Bay is a wonderful place to step forward with renewable energy. So, that's my hope.

Thank you.

[Applause.]

MR. CAMERON: Okay. Thank you, Bonnie. I believe that's the first we've heard on alternative energy sources today, and I do have a statement of Lea Johnston, who is with the Maryland Public Interest Research Group. She had to leave early, but we are going to put that into the record on the transcript, and if anybody is interested in reading that before we disband today, I'll keep it before I turn it over to the court reporter, but it raises a number of

concerns about the license renewal.

How about Bil Johnston?

MR. JOHNSTON: You know, Calvert County and southern Maryland -- our population is growing as rapidly as any of what they call developing countries, just massive population growth.

I don't see any leadership from our politicians to face the long-term effects of this. All I see is glee from the business community. Where is the serious responsibility from the business community?

How are we going to meet our obligations for global warming with this crazy population growth? I mean are we trying to grow populations so we have more people in the future when we get to the table and start trading off chips? Is that the name of the game?

And I think the NRC is missing a very valuable opportunity to bring out to the public discussion some of these very important issues about our future.

Yes, it doesn't have the air emissions, but we're on the verge of deregulation. We might find all kinds of power becoming available.

I don't understand what the need right now to guarantee to BG&E that they can proceed after the year 2015 with another 20-year period of generating nuclear waste which at this time we have no permanent repository for and

which would have to be guarded for 20,000 years.

Does anybody have any idea of what it costs to guard this stuff for 20,000 years?

DR. BASS: Two thousand dollars a kilogram per year.

MR. CAMERON: Thanks, Dr. Bass. I didn't think that Mr. Johnston really expected an answer, but --

MR. JOHNSTON: Well, that's fine, but that's a long-term cost commitment which I'm sure there's a lot of perspectives on compared to that cost not being present with other sources of power.

MR. CAMERON: And we are going to hear from Dr. Bass later on. Go ahead, Mr. Johnston.

MR. JOHNSTON: Does anyone here -- I'd like a show of hands. How many people here know that, in Europe, all transport of nuclear waste material has been halted? How many people know that? It certainly is true.

Very serious contamination has been found. The regulatory authorities knew about it, the industry knew about it, the transport carriers knew about it, and it took some scientists to pry it loose, and at this point, there is no nuclear waste being transported, nuclear power plant waste being transported in Europe.

That's according to the latest issue of Physics Today, and I don't know that we have any different

relationship between our regulators and the regulated industry in this country than they have in Europe, and I think that the collusion that you begin to suspect that is there arises right here from this historic first re-licensing which is being proposed 15 years before the expiration of the present license.

Why is that necessary? Why can't we wait to see how the facilities hold up during the next 10 years, at least? Five years ought to be enough lead time to build any of these plants.

What is the rush? We don't have a permanent facility to dispose of this nuclear waste we are generating. I don't want it stored in Calvert County forever. I don't want to force it down the throats of the good folks out west who don't want it.

And yet, we're being told today that many of these issues are not open for consideration, and I am very incensed at that.

At this first re-licensing at a local level, we are not allowed to raise any of those broader issues, and I think this is something that will be a challenge to the people of Calvert County who are concerned with this to organize and raise some funds and fight this issue.

This is an example of the collusion between the regulators and the industry, and I don't mean to be so

vehement here. I am sorry to be coming across like that.

But we are locked into this massive population growth energy consumption and the waste, and you know, the whole bay thing, cut down on nitrogen to the bay, there has been no progress on that at all in terms of the levels of nitrogen in the bay.

We have made some of the easy -- taken some of the easy steps and now the hard ones are ahead, and we have all this massive population growth, and nowhere do you find the role of government to explore.

What is the role of government in this massive economic population enterprise that we are a part of on this planet earth, and how do we deal with it? Is the role of government to say nothing on this issue?

The NRC -- again, I would repeat -- you have a very important opportunity to address some of these broad issues and start bringing them to the attention of people.

You know, another example of the manipulation by BG&E of the Nuclear Regulatory Commission of public opinion -- I don't know how many of you all have noticed recently that now on your television, on your cable channels, every week now we have a little test alert, and you scratch your head, now, gee, now why do we have a little blank-out period and a test alert on all the TV channels once a week?

Well, it's because we have Calvert nuclear power

plant here. That's why we have it. But you wouldn't know it from that little notice.

Thank you for this opportunity.

MR. CAMERON: Okay. Thank you, Mr. Johnston.

[Applause.]

MR. CAMERON: And that's the second time we heard remarks about the timeliness of the license renewal application, and I guess I just would add, not just in terms of Mr. Johnston's remarks but other remarks, the NRC license renewal rule on the environmental impact statement process and also the generic environmental impact statement went through a public comment process, and I think, so that you can get an idea of what the implications are of the issues that were closed out, so to speak, at least with no new significant information, to get an idea of what those issues are, you should take a look at the environmental impact statement on those issues to see what your views are on whether new site-specific or other generic information would have an affect on the NRC's conclusions on those generic issues.

Let's go to Jay Lounsbury.

MR. LOUNSBURY: Good afternoon. My name is Jay Lounsbury. It is my honor and privilege to serve as the President of the 500-member Dunkirk Area Concerned Citizens Association, P.O. Box 887, Dunkirk, 20754. Our e-mail

address us dunkirkmd@aol.com.

Thank you for this opportunity to speak today or, as some others have said, thank you for inviting me to your farce.

It's a little vexatious that when we're dealing with some tough issues to categorize this process as a farce, but I'm sure that Moliere Pesculus would be proud, and it's an honor for me to meet live shills of the industry. I've never met shills before.

For more than 14 years, DACCA has actively participated in the affairs of Calvert County and of our community.

This has included learning about monitoring, studying, presenting testimony and analyses, and working for improvements in such areas as zoning, economic development, environment and open space, education, traffic, recreation, utilities, and others.

We often share and work together with other citizen and community organizations, including the Calvert Citizens Coalition.

DACCA strongly supports the re-licensing of Calvert Cliffs nuclear power plant. We recognize the vital role that Calvert Cliffs has played for over 23 years in our county. The plant has a track record of being as good a partner with us as anyone could possibly hope for.

We would all be better off if other enterprises were held to the same high standards of stewardship and community involvement that Calvert Cliffs achieves willingly.

We will leave it to others to discuss the other large issues and impacts of Calvert Cliffs nuclear power plant, likewise to discuss the devastating environmental, community, and fiscal consequences of Calvert Cliffs' removal from the scene.

Instead, as a citizens organization, let us simply point out that the plant and its employees are well-known for their volunteer work and for their substantial contribution to our sense of community.

The people of BG&E serve on local helping organizations, work to beautify the environment, they give blood, they work in their neighborhoods, and do so many other things.

Community involvement is a self-evident good for the environment of any area because the more people know, the more people participate in hands-on activities, the better the stewardship of their community, of their environment, and of their neighborhoods.

Concern for our precious and unique Calvert County environment has been, is, and will be uppermost in our minds. That goes for all entities, not just Calvert Cliffs.

We believe that the plant is a very positive part of Calvert County and that, so far -- and we're keeping our minds open on this -- so far, no alternative would even come close to fulfilling the role of Calvert Cliffs nuclear plant.

Thank you.

[Applause.]

MR. CAMERON: Thank you, Mr. Lounsbury, and speaking of the industry, let's go to the real industry, Angie Howard.

MS. HOWARD: Thank you, and good afternoon. I'm Angie Howard, and I'm Senior Vice President of the Nuclear Energy Institute.

We go by NEI, and the institute is in Washington, and it's based there as a policy organization who represents more than 275 U.S. and international organizations that make up the nuclear energy industry.

The membership includes every U.S. utility that owns and operates a nuclear power plant, their suppliers, their fuel cycle companies, universities, radiopharmaceutical firms, research laboratories, labor unions, and law firms.

Many of our activities involve nuclear energy, the production of electricity, which provides, from nuclear plants, about 20 percent of America's electricity.

Today's meeting is significant for two reasons.

First, it's a milestone in the schedule established by the Nuclear Regulatory Commission for reviewing BG&E's license renewal application, and second, it demonstrates that the license renewal process is moving forward at a good pace, and that's very important.

The Nuclear Regulatory Commission recognizes the importance of license renewal not just to BG&E but to the nation.

At a conference in May, Chairman Shirley Jackson said, and I quote, "The NRC is diligently working to ensure that a predictable license renewal path exists, fair to all parties involved and resting on the technical merits of the applications," end quote, and I repeat that.

I think it's significant that it's fair to all parties involved and resting on the technical merits of the applications.

As Mr. Grimes mentioned earlier, as we started, BG&E is one of two electric utilities that have applied to renew their licenses for nuclear power plants.

Duke Power Company submitted earlier this week the application for its three-unit Oconee nuclear station in South Carolina, and several other utilities have indicated to the NRC that they are considering license renewal. At least one of them plans to complete the application by the

end of next year.

Today's meeting has been to discuss the scope of the environmental review for BG&E's license application, and in that context, let me describe a few aspects from the industry's perspective.

The NRC, the nuclear energy industry, and the public have worked very hard for about 10 years to reach where we are today. I commend the NRC for developing the generic impact statement for license renewal, and it goes a long way to making this review process meaningful and efficient.

As Ms. Craig described, the NRC started by identifying the types of environmental impacts that could occur as a result of license renewal, and then it determined which of these issues are common to all nuclear power plants and addressed those issues generically in the generic environmental impact statement.

Therefore, that allows the proceedings to focus on issues that are germane to individual plants seeking license renewal.

But I also want to emphasize that the NRC did not develop the generic impact statement unilaterally. It was and has been an extremely open process.

First of all, it started with the standpoint of the communities that were involved, the industry, the

nuclear critics, the public, the state public utility commissions, and quite a number of other stakeholders participated in the review process that went into the rule, both the generic environmental impact statement and for the license renewal that will look at the technical merits.

But why is this important to us as we go forward?

First of all, it's important when renewing the licenses of many of the nuclear units in the United States.

One, it will allow the United States to maintain economic electric generating capacity that does not produce greenhouse gases or other pollutants such as sulfur dioxide, nitrogen dioxide, and particulates.

Secondly, license renewal will preserve good jobs for Americans and substantial tax revenue for the communities where the plants are located, and we've heard some of that today.

And third, renewal of a nuclear power plant's license is cheaper, more cost-effective than building new electric generating capacity at that time.

On the national level, the amount of air pollutants avoided each year by using nuclear energy is tremendous. The hidden value of nuclear energy is being recognized by public policy, state agencies, and public and environment leaders throughout the country.

Imagine for a moment, if we didn't have the

100-plus nuclear plants that are generating electricity today producing 20 percent of our nation's electricity, we'd have to replace that capacity, and in today's context, since renewables today, though we are working very hard in bringing renewables on-line, represent less than 1 percent of electricity generated in this country, the result of removing that generation would be like putting another 100 million cars on the road.

Under the Clean Air Act, the United States are under increasing stringent controls on emissions of sulfur oxides, particulates, nitrogen oxide, and ground level ozone, and an emission-free energy source, nuclear power plants already help limit the amount of pollutants emitted through electricity generation.

Most nuclear power plants are in heavily populated areas of the country. That's where the demand for electricity is. And these areas frequently are in non-attainment for the Clean Air Act for ozone or other related pollutants, even though those areas get a large amount of electricity from emission-free nuclear stations.

Non-attainment status requires these areas or states to reduce air pollution. The Environmental Protection Agency has even proposed capping nitric oxide emissions in 22 states that contribute to non-attainment for ozone in other states.

Maryland is one of these 22 states, and so, it's with emission-free Calvert Cliffs on-line, it still is in this non-attainment status.

So, therefore, for example, it would be appropriate to consider the impacts to Maryland's state implementation plan for the Clean Air Act and other anticipated Federal, State, and local regulations, such as the ozone transport region requirements, that would result from the replacement of Calvert Cliffs' capacity with alternative fossil fuel generation, and it would also be appropriate to review, as a part of this process, the other environmental impacts from replacement generation, such as land impact, energy availability, new gas pipelines, transmission, etcetera.

So, it is appropriate to look at that if the emission-free Calvert Cliffs were not available, but it is vitally important to the State of Maryland that Calvert Cliffs continue to generate one-fourth of Maryland's electricity cleanly and safely.

The NRC has laid the groundwork for a fair, efficient, and effective process to evaluate license renewal applications. BG&E and Duke Power Company are only the first applicants for nuclear plant license renewal. There will be many others. The rest of the nuclear energy industry will be watching closely as these first

applications move forward.

Therefore, again, I appreciate the opportunity to participate, I congratulate BG&E and the nuclear professionals at Calvert Cliffs for their leadership in the industry, and I look forward to the discussions as these processes go forward.

Thank you.

[Applause.]

MR. CAMERON: Thank you, Angie.

Let's go to Lucy Oppenheimer. Is Lucy here?

MS. OPPENHEIM: Should I adjust this for my height, or can you hear me all right?

MR. CAMERON: Maybe it just pulls down a little bit.

MS. OPPENHEIM: Can you hear me better now?

MR. CAMERON: Everybody hear Lucy out there?

MS. OPPENHEIM: My name actually is Lucy Oppenheim. This is a context in which the Oppenheimers certainly were more famous.

I live in Annapolis and operate a small business there. One of my other activities is serving on the steering committee of Anne Arundel Peace Action, which is a group that has a membership of close to 200 households now. I think the number is about 180.

Anne Arundel Peace Action has long been on record

as an opponent of nuclear power, considering it unsafe and unhealthy for our state.

You may know Annapolis. You may know how people there adore the bay, love it for swimming and fishing and boating, and as I've heard people from Calvert County speaking today, I hear a lot of shared concerns and shared interests between our two communities, and it's for the sake of all of us on the bay that -- from the point of view of saving the bay from radioactive emissions, accidental -- either the slow leakage or in a large accident.

So, from the perspective of saving the bay, I urge you to consider this re-licensing environmentally unacceptable.

Another way in which you may be familiar with Annapolis either from seeing it on a map or from having visited there yourself is the geography, have a lot of little peninsulas or necks, and I'm sure -- on my drive down here today, I passed a great number of other communities that are built similarly, where you have a lot of people living in an area and a lot of the roads all feed in to a single road which is the only way in and the only way out of that neck or that peninsula, and in thinking about what could you do to evacuate people if there were a catastrophe, I think about the traffic we have in Annapolis, I think about how, on any of these little peninsulas or necks, when

it's a time when a lot of people are trying to leave for work or a lot of people trying to come home from work, traffic backs up and moves very slowly.

When we have something like a football game or a boat show or occasionally they do us the big favor and give us a boat show and a football game at the same time, then traffic comes to a dead halt.

Recently, I had the experience of going out to run a 15-minute errand and, an hour later, having to turn back because I couldn't get near where I was going. I turned on the radio. Was there a nuclear accident? Is everyone evacuating? No. It was something to do with the Naval Academy's commissioning.

Traffic can come to a dead halt, where people can't leave when it's not an emergency. If you add to the geographic layout, the way the roads are built, and the volume of traffic -- if you add emergency conditions, then you have everyone leaving, not just everyone who generally leaves at the same time, you'll have everyone trying to leave.

You would have people who were home and ill or people who were medicated or inebriated and should not be driving and you would have people getting in vehicles that didn't operate very well. You would have -- if you had to evacuate the Annapolis area, you would have every situation

that could possibly contribute to having each one of those little arteries blocked by an accident or by someone panicking.

Considering how crisis could add to the normal problems of traffic in areas that are built along these necks -- on my drive down here, I was thinking, now, what would a workable plan for evacuating these areas look like?

The only thing I could think of that would be a plan that would -- excuse me -- that would effectively evacuate in an emergency -- I thought of that painting -- the classic painting where you see the finger of God reaching out, and I think that's the only thing that an effective evacuation plan could look like. Anything else wouldn't work.

And because you couldn't evacuate the people in the Annapolis area and, I daresay, the people on many of the other peninsulas that make up this bay region, then extreme caution is appropriate.

If you can't deal with an accident, then you're obliged to prevent it, and the extreme caution that you'd be obliged to take to prevent an accident would include, first of all, not re-licensing.

It simply hasn't been proved that this equipment can work even for 40 years, let alone for another 20 years. Let's not try it and find out. That's not a good way -- I

don't feel like seeing this region serve as guinea pigs.

And further, that extreme caution, if we can't dispose of the waste safely -- and we haven't found a safe way to dispose of it -- if we can't transport it safely -- and we haven't found safe ways to transport it -- and if we can't store it safely, then all of those concerns mitigate against considering this re-licensing environmentally accessible, and therefore, I suggest that you consider it environmentally unacceptable.

MR. CAMERON: Okay. Thank you very much, Lucy.

[Applause.]

MR. CAMERON: I would note that, you know, in terms of your interest in the emergency plan, that -- and I would encourage everybody, after the meeting's done -- and we have a few more people -- and I thank them for their patience, but either the NRC staff or the BG&E staff may be able to tell you more about the emergency plan, and I hope it's not based on divine intervention, but I haven't looked at it.

How about Ruth Wolf?

MS. WOLF: Thank you for the opportunity to be here today. My name is Ruth Wolf. I live in St. Leonard, Maryland. I am Vice Chairperson of the Board of the United Way of Calvert County and am speaking today for the United Way Board.

Neither I nor any member of my family has any connection with Baltimore Gas & Electric company.

Of all our energy sources, nuclear power has the most promise, the most potential, and the most potential danger.

As a citizen, my view is that the NRC and BG&E should have a continual constructive engagement to ensure that the -- assure the safety of nuclear power. The regulators should not play gotcha, and the regulated should not play fooled-ya.

As a citizen active in public affairs, I have no specific knowledge about Calvert Cliffs' operations. For sound reasons, it is closed to public access. I can speak about BG&E as a corporate citizen and as an employer.

I am a member and past chair of the Calvert Memorial Hospital Board, Calvert Hospice Board, and the Adult Day Care Board, as well as the United Way Board. In every instance, BG&E has been a helpful and supportive corporation.

Also, in every instance, employees of BG&E have been active, dedicated, and constructive members of each community organization.

It was BG&E which started the United Way in Calvert County in 1980, BG&E employees. From that day to this, the company has been our largest single contributor

and the employees the most generous group of employees in the county.

United Way sponsors a day of caring annually in which companies are asked to excuse employees for the day so they may work with member agencies of the United Way. BG&E has always sponsored the largest number of employees. Last year, they sponsored 50 employees and an additional 25 employees took a day off on their own to help those less fortunate in one of United Ways member agencies.

Many are aware that such active participation is not accidental, that good citizenship is a culture that is encouraged at the corporate level by both word and example. United Way deeply appreciates the role BG&E plays in our county's life, and we know we would be much diminished without them in our county.

Thank you.

[Applause.]

MR. CAMERON: Thank you very much, Ruth.

How about Mr. Hal Maurer?

MR. MAURER: Commission members, ladies and gentlemen, I'm going to read this, because I might forget my name, and it's appropriate that I not do that.

My name is Hal Maurer. I'm a resident of the Twin Cove community in Calvert County. The statement I am about to read is presented in behalf of the Federation of South ern

Calvert Communities.

The community is comprised of 11 communities in southern Calvert County, all of which are within a few miles of BG&E's Calvert Cliffs nuclear power plant. There are in excess of 16,000 families in these communities.

We do not feel that our members are qualified to comment on technical or operational aspects of the facility. We feel that we must rely upon the technical capabilities and responsibilities of the Nuclear Regulatory Commission, BG&E, and their experts to make the essential operational and safety evaluations related to the re-licensing of this great facility.

We do want to go on record in support of the re-licensing if the essential operational and safety evaluations warrant such action.

BG&E's operation of this facility since 1975 has been a very important economic benefit to all of the citizens of Calvert County. You've heard that before.

The current 20-plus million in contributions to our tax base constitutes a major part of the total taxes collected in our county. If anything should happen to stop these taxes, individual property taxes in our county would have to be dramatically increased.

Our current tax rate of $2.23 per $100 of assessed value is the lowest rate in southern Maryland.

Other economic benefits to our county have been realized through the employment of approximately 1,400 people, most of whom reside in Calvert County.

You've heard this before. BG&E is a good corporate neighbor. Their management has involved the corporation in the cultural and social development of our county.

The fact that they're here doesn't place us in a position of being without concern.

Our major concern is not with their operation or re-licensing, it's with the Federal Government's failure to carry out the legal mandates, to develop and put into operation a depository for a national site for the safe and permanent storage of spent nuclear fuel. You've heard that referred to earlier, also.

Our other major concern -- and this is rather local, but I have to go through it -- our other major concern is that the evacuation route out of the Drum Point peninsula is limited to one road, Maryland Highway 760.

Fortunately, the Chesapeake Ranch Estates has recently been granted approval for the opening and operation of a third gate.

Now, a substantial part of their residents will be able to exit the community directly onto Maryland Highway 765. This will be a significant factor in the lessening of

the traffic load on Highway 760, but in the event of an emergency, 760 will still be overloaded and inadequate.

BG&E officials have assured us that their evacuation plans are constantly being updated and that there is adequate evacuation capability. Yet, we remain concerned that 760 will be inadequate in an emergency.

We have urged the county to move ahead with an alternate route through the Patuxent High School property onto Highway 765 near the location of the two near schools soon to be constructed on the east side of Highway 765.

I must add parenthetically that there is only one method of ingress and egress from this part of the county once you get off of 765, and that's Highway 24.

In conclusion, the Federation respectively recommends that the NRC grant licensing renewal for the operation of Calvert Cliffs nuclear power plant by BG&E.

That concludes my formal remarks. I'd like to add a couple words.

I'm 80 years old. I'm a retired military officer. I've been in harm's way through everything from World War II through Vietnam. My son is an ex-nuke submariner under the Rickover regime.

We have moved to Calvert County, he long before I, with our eyes wide open. I'm used to being in harm's way. We didn't move here because we thought it was harmful. BG&E

should be given this license.

Thank you.

[Applause.]

MR. CAMERON: Thank you, Mr. Maurer.

We have three presenters left, and I'd like to go next to Darren and Debra Adair.

MR. ADAIR: Well, actually, you said my name first, so I'll go before Deb.

MR. CAMERON: Okay.

MR. ADAIR: My name is Darren Adair. I'm a Calvert County resident. I'm an ordinary working stiff. I have no affiliation with BG&E or any organized detractors. I thank you for this opportunity to specifically address the re-licensure of Calvert Cliffs.

I'm not here to debate the relative merits or drawbacks of nuclear power production or the established practices of the NRC.

Before the word "liberal" was considered profanity, I was a liberal. I agonized about voting for Jimmy Carter twice because I felt he was too conservative and didn't reflect my politics.

When being a liberal came to be viewed as somewhere below having leprosy and above, but barely, pond scum, I was a liberal. I railed against Reaganomics, drove a diesel VW Rabbit, and boycotted Exxon.

Now that liberalism is generally seen as passe and barely worth the intellectual energy to consider, I'm still a liberal. I'm proud of it, proud of its legacy, tenets, and ideals. I wield it as sword and shield and an uncompromising champion to many of the left's greatest loves.

I say this because I want you to know exactly what my predispositions are and where my political and social paradigm comes from.

Nevertheless, I unabashedly speak to you today in total and complete support of BG&E's re-licensure of Calvert Cliffs nuclear power plant. I say this was resolve, conviction, and without reservation.

Calvert Cliffs is not an obsolete and unwanted relic of the past or an unsafe product of the Soviet collective. It is not some tumbled-down fort from the Indian wars whose sole remaining function is to support the nearby town's economy.

Calvert Cliffs is a viable, much needed facility with a flawless track record of environmental consciousness, safety, and efficiency. It is a tribute to BG&E's considerable efforts and is a technology feat no less marvelous to me than the Egyptian pyramids.

Calvert Cliffs nuclear power plant has been and continues to be an excellent neighbor, a faithful benefactor

to the surrounding environment, flora and fauna, and a trusted guardian to our children's safety, well-being, and continued quality of life.

Calvert Cliffs nuclear power plant's time has not come and gone. It is here, poised for the future.

Please do the right thing. The only conceivable conclusion is to re-license BG&E's Calvert Cliffs nuclear power plant, allow Calvert Cliffs to continue to provide clean, safe, efficient, and economical power to a thankful and appreciative populous.

Thank you very much.

[Applause.]

MR. CAMERON: Thank you, Darren. And I take it we're going to hear from Debra Adair.

MS. ADAIR: Yes. I'm Debra Adair, and I live in Dunkirk, Maryland. I am the mother of three. I'm a professor of management at American University, and I'm also a member of numerous citizen and business groups in Calvert and St. Mary's County.

I'm not here to represent any of them. I'm here only to speak for myself and my family.

I am a critical person, and by that, I mean I look closely at the issues in the county that have the potential to affect my family, friends, and neighbors in the county. I look, I ask questions, and I expect answers, and if I find

fault, I am quick and quite vocal in expressing my thoughts, and a number of the county commissioners that were just here would tell you that.

I have looked closely at this Calvert Cliffs facility because it certainly has the potential to adversely affect me and mine in and around the county. I have observed this business' relationships and dealings in the county. I have brought my children to visit this facility. I have toured the facility and its operations, and I have spoken with several corporate representatives about this plant at some length.

I'm here today to affirm to you that, in spite of scrutinizing it to the best of my ability, I can find no fatal flaw with this facility. To the contrary, what I see is a corporate citizen that contributes far more than it takes from the community.

I see a group of professionals committed to the safe operation of this plant. I see well-maintained plants and equipment, informed and conscientious employees, and ethical and forthcoming executives. Their management philosophy towards safety and the safeguards they have put in place is laudable.

In spite of my critical examination, all my skeptical questions have been answered. I feel very secure with the operation of this nuclear facility in my

community's back yard.

But BG&E goes beyond apparent safe operations in what it contributes for our county. We are all well aware of the importance of this company to our tax base, but I also notice that innumerable county associations, programs, and events are consistently supported by this company. Many or most of our other businesses in the county are too small to offer significant assistance, but BG&E is there to pick up the slack.

I can't imagine how difficult it would be to put on our fairs, run fund-raising events for worthy causes, and operate many of our local charities without the contributions of BG&E. If it is important to the citizens of Calvert County, BG&E will help.

Much of my time in my professional life is spent analyzing companies, not just their internal operations but their interactions with their environment. My belief is that, if there ever was a model corporate citizen, BG&E in Calvert County is it.

This organization is one that takes the high road. Please allow them to continue traveling this path and performing their many important roles in our community. I hope you'll consider these community issues when you consider whether to renew their license and allow them to continue to provide a clean, safe, and important service to

their consumers and to our community.

Thank you.

[Applause.]

MR. CAMERON: Thank you very much, Debra.

We're going to go Dr. Robert Bass now, and Dr. Bass, we are going to put your letter in the record, also.

DR. BASS: My name is Robert Bass. I'm a retired professor of physics and astronomy at BYU, where I worked on controlled thermo-nuclear fusion during the decade from 1971 to 1981.

I was first introduced to controlled fusion at the Princeton plasma physics laboratory when I was doing a tour of active duty as an officer in the Air Force, 1957 to '59. It was then called Project Matterhorn, and so, I've been exposed to futuristic views of atomic energy since 1957, and actually, I have issued patents in the field of hot fusion power.

Now, I am here to speak from a viewpoint that has not been heard before. I'm sympathetic to people on opposite sides of the polarity we've heard. This issue stirs strong feelings, and rightly so. I am here to speak on behalf of the technologically relevant unexpected emergent.

Now, there are two technologically relevant unexpected emergents which I'm going to wave briefly in

front of you. and you can look them up at your leisure. Anybody who wants to send me a letter, you can get my name from out -- my address from out there in their book. I will send them all the documentation.

So, I will try to just be very brief about my main point.

First off, I agree with the gentleman from Ralph Nader. Is he here? Would he raise -- yes, yes.

I lived in Nevada from 1996 through 1997, and in those two years, they had hearings about the Yucca Mountain thing, and I agree with you, it's a charade and a farce, and I don't disagree at all in being disillusioned about this type of thing, but I think this one, hopefully, more is going to come of it.

Now, the public fears nuclear energy for two reasons.

First of all, if you ever will see the movie "The Children of Chernobyl," that will make strong men weep, I guarantee you. Just please go and see the movie "The Children of Chernobyl."

But secondly, I personally think that, in a disciplined military environment, as on -- in a nuclear submarine, I could sleep perfectly safely and think that nothing will ever happen.

But it's logically possible that we could have a

melt-down, and so, people are worried about it.

I was applying to be a professor of nuclear engineering at Texas A&M in April of 1986, I think it was, and the day before my lecture, Chernobyl happened, and there was such gloom and doom that nobody even came to my talk, they thought their department would be shut down.

So, I can see this thing from both sides.

However, what I want to tell you about is that the only villains here are not the companies that have gone into nuclear energy on behest of national defense and on behest of the public interest at the request of their government. The only villains from having safe, cheap, non-radiative, anuetronic nuclear power are certain highly-placed vested interests in the high-energy physics academic community and entrenched interests in the Department of Energy.

Right now, you can demonstrate for yourself with a machine that you can buy for $1,500 -- it's about the size of a can -- you can put into that machine one-tenth of a gram of thorium, run electricity through it for 30 minutes, changing the voltage and current once a minute for 30 minutes according to a protocol that's set out, and it's hot in high pressure inside, 300 degrees Fahrenheit, several hundred atmospheres pressure.

When you open it and take out the liquid that was there, you will find that your tenth of a gram of thorium is

not there, but some harmless metals are there.

I'll show you a color photograph.

If you will go on the internet and look up the Cincinnati Group, cold fusion and the Cincinnati Group, you will see -- this is a micro-photograph of a flake of copper a quarter of an inch in diameter that used to be thorium.

In 30 minutes, for three cents' worth of electricity, it was transmuted from thorium, which will take, in nature, 80 billion years to transmute into lead -- it was transmuted into copper.

Now, when they run their reactor, they don't get the same results every time. It depends on how you adjust the voltage and the current and whatever.

One person in Salt Lake City has run their low-energy nuclear transmutation cell 20 times in a row and transmuted 99 percent of the thorium 20 times in a row. Other people have tried it, and it's leaked, and there have been problems.

MR. JOHNSTON: Hasn't the University of Utah just canceled that whole program?

DR. BASS: No, no. You're thinking of --

MR. JOHNSTON: The whole fusion program -- they just canceled it.

MR. CAMERON: Mr. Johnston, could you get together with Dr. Bass after we're done?

MR. JOHNSTON: Who does he represent?

MR. CAMERON: I think he just represents himself. I guess I would just ask you to just get on with it, too, Dr. Bass.

DR. BASS: You're thinking about something else, but I will show you several journals to which you should subscribe, and the environmental people ought to be very active on this.

I'll show you three journals that you don't know about -- a popular journal, Infinite Energy -- it has on it about the Cincinnati Group cell. You can buy one for $1,500.

This has been verified by the government of Italy. The top nuclear physics laboratory, Via Enrico Fermi, at Frascatti in Rome, has verified the transmutation.

Now, they didn't get 90-percent transmutation, they only got 20-percent transmutation, because their electricity is 50 cycles, and the protocol that we gave them has to be readjusted for 60 cycles. But even 10-percent transmutation contradicts the most sacrosanct laws of physics.

The second thing you should get is Cold Fusion Times, $40 an issue, comes out four times a year. The man who edits it has a doctorate in medicine from Harvard Medical School and a Ph.D. in engineering physics from MIT.

It costs $40 an issue, and it's very well worth it.

It's not flamboyantly written, it's very sober, and no one can read this and doubt that 200 scientists throughout the world for the last nine years, including the people that started at Utah that you mentioned, Fleishmann and Pons, have been successfully transmuting heavy hydrogen or deuterium to helium and getting energy in the course of it. Now, this is cold fusion as opposed to hot fusion.

Finally, I want to show an archival journal, which is abstracted -- this is called the Journal of New Energy. It's abstracted in the American Chemical Abstracts, the American Chemical Engineering Abstracts.

And I want to say, my concluding remark, what I'm saying is good news to the nuclear industry, is good news to the people who are afraid of radioactive waste, the problems with transportation, the problems of storage, but if you extrapolate the Cincinnati Group's process -- now, I have to disclose that I'm not only a retired professor of physics, I'm licensed to practice patent law, and the Cincinnati Group asked me to draft patent applications on their low-energy nuclear transmutation process.

Well, when I extrapolate the cost of what I have seen with my own eyes, which has been verified by the government of Italy, it comes out that, for $2,000 a kilogram, you could transmute the long-lived highly-toxic --

what do they call it? -- heavy -- the most dangerous kinds of radioactive waste, high-level radioactive waste.

There's supposed to 88,000 tons of it stored in Yucca Mountain, Nevada, and it's going to cost $1,500 a kilogram per year for 100,000 years, but if you processed it by the Cincinnati Group's process, it costs $2,000 a kilogram once.

It can be done on-site. It could be done right here at the Calvert Cliffs plants. Then you wouldn't have to worry about the stuff being transported to Nevada.

I lived in Nevada for two years, and I guarantee you, if you transport it there, there will be a new civil war.

The governor, both senators, both congressmen, and the attorney general have all vowed to sue the Department of Energy, and they are going to go and lie down in front of the trucks and be martyred before they will let that stuff be brought into the State of Nevada.

So, this, I'm telling you, is not proven beyond shadow of a doubt, but it's sufficiently proven that it merits exploration in depth, and the people who are preventing it are the people who have much to lose because of their having stated in the ERAB report, Energy Research Advisory Board -- they stated that cold fusion is pathological science, is physically impossible.

Now, the best proof that I have ever seen with my own eyes that cold fusion is physically impossible is in the last six pages of the first chapter, a book on quantum mechanics by Princeton University Professor Philip James Edwin Peebles.

He's a great scientist. I'm not denying that he deserves a Nobel Prize in astrophysics. Unfortunately, in those six pages, he made a monumental mathematical blunder. I'm a well-trained mathematician. I immediately spotted his blunder. He doesn't know about the Flow K theory of differential equations with periodic coefficients, which is the basis of the main theorem in solid state physics. He evidently doesn't know any solid state physics.

And so, when the Energy Research Advisory Board, which is the ex-officio chief scientific advisor to the Department of Energy says that cold fusion is physically impossible, they are not talking about experimental proof. They're talking about mis-interpretation of mathematically incompetent, misguided, blunder calculations.

Now, I have published in an archival journal --

MR. CAMERON: Dr. Bass, will you remain around afterwards if people want to explore this in detail?

DR. BASS: Yes.

MR. CAMERON: I think that your major point is that some of the issues with radioactive waste could be

solved this way. We have one last speaker left. Do you want to say one final short thing in summary?

DR. BASS: Yes, I will make one short statement.

Go and ask Peebles to show you a mistake in my four-page paper. If he can't, then he has to admit that the section of his book that says cold fusion is impossible is wrong. Once he does that, the flood gates to the new era of energy are open.

MR. CAMERON: All right. Thank you, Dr. Bass.

[Applause.]

MR. CAMERON: And Dr. Bass will be here if anybody wants to talk to him about this new process.

We have one final person, and I believe it's Mr. Tom Rosetti.

Thank you, Dr. Bass.

MR. ROSETTI: Good evening. My name is Tom Rosetti. I live in Port Republic, Maryland, and I am here representing myself, a single resident of Calvert County.

I come here tonight -- I will tell you that I am an senior engineer down at Baltimore Gas & Electric. I'll tell you this for two reasons.

The first reason is that those of you who wish to dismiss me as being biased may do so now, close your minds, and stop listening.

The second reason is to tell you that I am aware,

I am trained, I understand how nuclear power works. I have been in nuclear power for 18 years. I have held the Navy's equivalent of a reactor operator's license. I understand reactor theory; I understand reactor operation.

As a senior engineer, I understand specifically the operation of Calvert Cliffs nuclear power plant. I understand the maintenance at Calvert Cliffs nuclear power plant. I understand testing, and I understand regulation. I am informed; I understand how they operate.

I am here, secondly and probably most importantly, as a father and a husband and a resident of Calvert County.

As I said, I understand the ISFSI, I understand the plant. I have chosen to house who are to me the most precious people in the entire galaxy, my wife and children, within eight miles of this plant, fully understanding how it works, how it operates.

My children have swum in the bay. My children play in the areas local to here. And I tell you that the most important testimony I can give you now is that I choose to house them within eight miles of the plant.

Do I feel it's safe? Absolutely.

Thank you.

[Applause.]

MR. CAMERON: Thank you, Tom.

I want to, in a minute, ask if there's anybody

else who has a comment here. We are over our time, but if anybody -- if there are any last comments -- I just would thank all of you for your efforts to be concise and also for your attentiveness and for your courtesy, also, and the NRC staff appreciates what they've heard today, and are there any others who would like to make any -- who haven't spoken, that would like to make any other quick comments?

[No response.]

MR. CAMERON: Okay. Thank you very much, and we invite you back at seven if you'd like to do it again.

[Whereupon, at 5:15 p.m., the meeting was recessed, to reconvene at 7:00 p.m., this same day.]

REPORTER'S CERTIFICATE

This is to certify that the attached proceedings before the United States Nuclear Regulatory Commission in the matter of:

NAME OF PROCEEDING: PUBLIC MEETING --
ENVIRONMENTAL SCOPING MEETING
FOR CALVERT CLIFFS LICENSE
RENEWAL APPLICATION
(AFTERNOON SESSION)

CASE NUMBER:

PLACE OF PROCEEDING: Solomons, MD

were held as herein appears, and that this is the original transcript thereof for the file of the United States Nuclear Regulatory Commission taken by me and thereafter reduced to typewriting by me or under the direction of the court reporting company, and that the transcript is a true and accurate record of the foregoing proceedings.

Mark Mahoney
Official Reporter
Ann Riley & Associates, Ltd.

# Does smoking avert some breast cancers?

First things first. Smoking remains a bad idea.

That's the message from researchers who have found that cigarette smoking may limit the incidence of breast cancer in women who carry a genetic mutation that predisposes them to the malignancy.

Having a mutation in either the *BRCA-1* or *BRCA-2* gene has been shown to increase sharply a woman's risk of breast cancer. In the new study, Canadian and U.S. researchers found that of 186 breast cancer patients with a *BRCA* mutation, 39 percent had smoked cigarettes at some point in their lives. Of 186 women with a *BRCA* mutation but no breast cancer, 52 percent had smoked, the researchers report in the May 20 JOURNAL OF THE NATIONAL CANCER INSTITUTE.

The women averaged 50 years old. Researchers obtained blood or tissue from all of them to ascertain their *BRCA* status and gathered data on their lifestyles from a questionnaire.

This potential benefit of smoking does not come as a total surprise, says study coauthor Timothy R. Rebbeck, a genetic epidemiologist at the University of Pennsylvania School of Medicine in Philadelphia. Although past research has shown no clear indication that cigarettes either suppress or exacerbate breast cancer, scientists suspect that smoking depresses concentrations of estrogen, the hormone linked to breast cancer, he says. Smoking appears to contribute to early menopause and osteoporosis, which are associated with low estrogen concentrations, and to a reduced rate of cancer of the uterine lining.

Perhaps women who carry a mutation in one of the *BRCA* genes are more sensitive to estrogen and thus at greater risk of breast cancer than women who don't, Rebbeck suggests. Research has shown that the incidence of breast cancer in women with a *BRCA* mutation rises sharply until 45, then less abruptly afterward. In women without the mutation, breast cancer risk tends to rise more consistently with age. Because estrogen is present in greater quantities before menopause, it may play an enhanced role in the *BRCA*-related cancers.

If so, lowering the concentrations of estrogen circulating in the body might give women with the mutation an advantage they wouldn't otherwise have, he says.

"This is fairly impressive," says Barbara S. Hulka, an epidemiologist at the University of North Carolina at Chapel Hill. "This issue of anti-estrogenicity is a real one." Researchers need to look more closely at the constituents of cigarette smoke to determine how they affect estrogen and its metabolites, she says.

"We need to understand the [molecular] pathways involved in the associations we've identified," Rebbeck says. If a compound in smoke does act as an anticancer agent in some women, then synthesizing it or finding another agent that mimics it could help women with one of the mutations, he says.

The new study is potentially flawed, however. It's not a random sample of women with a *BRCA* mutation, says John A. Baron, a physician and epidemiologist at Dartmouth Medical School in Hanover, N.H. The healthy women were selected from people who attended a genetic counseling center that was offering tests for the mutations. Smokers may have been particularly motivated to get the test, thus increasing the prevalence of smokers among the participants without cancer. Such factors could have biased the sample and skewed the results, he says.

Rebbeck also treats the findings with caution. "Smoking is not something we would ever recommend to anybody," he stresses.

Women with a mutated *BRCA* gene face an 8 in 10 risk of getting breast cancer by the age of 80, with more than half of the cases appearing before age 50. —*N. Seppa*

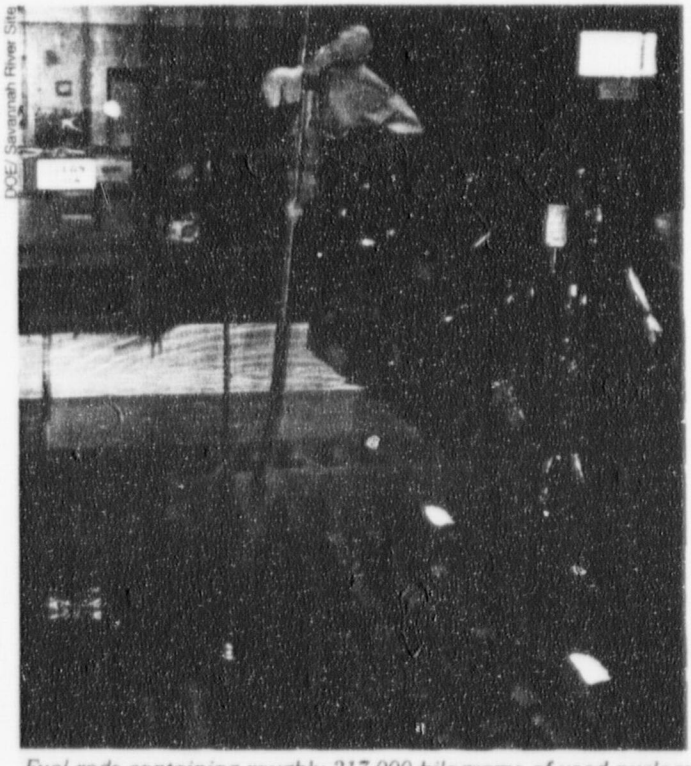
# Something's bugging nuclear fuel

Bacteria can thrive in extreme environments, including the highly irradiated pools of water holding used nuclear fuel rods at the Energy Department's Savannah River Site in Aiken, S.C. Microbes inhabiting this storage depot for test reactor fuel may prove a headache for nuclear waste managers, a new study finds, because the bacteria can corrode and crack the fuel's metal housings.

Though microbiologists have indicted acid-producing biofilms—goo-covered communities of bacteria—in the pitting and perforation of surfaces ranging from water mains to offshore oil platforms (SN: 7/20/85, p. 42), Savannah River's waste managers had expected their system to be immune. Not only do they keep the pools virtually free of nutrients, but the fuel rods in them were supposed to be removed in just a few months.

However, with no program in place for disposing of high-level waste and the site's fuel-recycling program on hold, some fuel rods have remained in storage at Savannah River for 30 years. So Carl B. Fliermans' team at Westinghouse Savannah River Co., which manages the site, decided to probe the pools for bacteria. At the American Society for Microbiology meeting in Atlanta this week, the group reported finding up to 10 million bacteria per milliliter of water.

The team also took clean samples of the fuel rods' metal alloys and submerged them in the pools. Colonies of biofilm-producing microbes formed on the pieces within 3 weeks; after a year, they had induced microscopic pits and fissures. Though even the oldest fuel rods show no overt corrosion, all will be closely monitored. The intent, Fliermans told SCIENCE NEWS, "is to nip this thing in the bud"—perhaps using ultraviolet treatments or water filtering. —*J. Raloff*




*Fuel rods containing roughly 217,000 kilograms of used nuclear fuel—including some from U.S. universities and foreign research programs—reside in Savannah River storage basins like this one. No one knows when corrosion-inducing bacteria first seeded these pools. If they piggybacked on incoming fuel, some might have come from overseas.*

Submitted by
Nancy Paige Smith

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Chesapeake Ranch Estates POA
Drum Point Property Owners Assn.
Harbor at Solomons
Harbor Light Beach
Mill Creek Condominium Assn.
Patuxent Point

Solomons Civic Assn.
Solomons Landing
Spring Cove
Twin Cove
White Sands Civic Assn.

July 9, 1998

This statement is presented on behalf of the Federation of Southern Calvert Communities.

My name is Hal Maurer, a resident of Twin Cove Community, Dowell, Maryland 20629.

The Federation is comprised of eleven (11) communities in Southern Calvert County, all of which are within a few miles of the BG & E's Calvert Cliffs Nuclear Power Plant.

We do not feel that our members are qualified to comment on the technical operational aspects of the facility. We feel that we must rely upon the technical capabilities and responsibilities of the Nuclear Regulatory Commission and its experts to make the essential operational and safety evaluations related to the relicensing of this great facility.

We do want to go on record in support of the relicensing if the essential operational and safety evaluations warrant such action.

BG&E's operation of this facility since 1975 has been a very important economic benefit to all the citizens of Calvert County. The current $20 plus million in contributions to our tax base constitutes a major part of the total taxes collected in our county. If anything should happen to stop these taxes, the individual property taxes in our county would have to be dramatically increased. Our current tax rate of $2.23 per $100 of assessed value is the lowest rate in Southern Maryland.

Other economic benefits to our county have been realized through employment of 1,400 people, most of whom reside in Calvert County. BG&E has been a good corporate neighbor. Their management has involved the corporation in the cultural and social development of our county.

Our major concern is not with BG&E's operation or relicensing, it is with the Federal government's failure to carry out the legal mandates to develop and put into operation a depository or national site for the safe, permanent storage of spent nuclear fuel.

Our other major concern is that the evacuation route out of the Drum Point peninsula is limited to one road, Maryland highway 760. Fortunately, the Chesapeake Ranch Estates has recently been granted approval for the opening and operation of a third gate so that a substantial part of their

residents can exit that community directly onto Maryland highway 765. This will be a significant factor in lessening the traffic load on highway 760 but in the event of an emergency evacuation, 760 will still be overloaded and inadequate. BG&E officials have assured us that their evacuation plans are constantly being updated and that there is adequate evacuation capability, yet we remain concerned that 760 will be inadequate in an emergency. We have urged the County to move ahead with an alternate route through the Patuxent High School property onto highway 765 near the location of the two new schools soon to be constructed on the East side of 765.

In conclusion, the Federation respectfully recommends that the NRC grant licensing renewal for the Calvert Cliffs Nuclear Power Plant by BG&E.

MaryPIRG
Maryland Public Interest Research Group

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**FOR IMMEDIATE RELEASE:**
July 9, 1998

**FOR MORE INFORMATION:**
Lea Johnston (410) 467-0439

## STATEMENT OF LEA JOHNSTON, MARYPIRG ENVIRONMENTAL ADVOCATE

**At the Public Meeting on BGE Request for License Extension for the Calvert Cliffs Nuclear Power Plant**

**Solomons, Maryland**
**July 9, 1998**

Good afternoon. My name is Lea Johnston and I am the environmental advocate with the Maryland Public Interest Research Group (MaryPIRG). MaryPIRG is an environmental and consumer watchdog group supported by over 5,000 citizen members across the state. MaryPIRG and the other state PIRGs have been concerned with the safety and environmental and economic problems with nuclear power for over twenty years. We are here today to urge the Nuclear Regulatory Commission to reject BGE's request for relicensing for its Calvert Cliffs nuclear power reactors.

At the outset, I must say we are very concerned that the NRC's revised criteria for relicensing risk public safety for utility profit. At a time when more reactors are being shut down because of dangerous age-related problems, the NRC should be questioning the wisdom of continuing to operate nuclear power plants rather than encouraging license extension with revised, more lax regulations.

The PIRGs support phasing out nuclear power because it's unsafe, uneconomical, unreliable and there is currently no safe way to deal with nuclear waste. For these same reasons, we oppose extending the license of the Calvert Cliffs reactors.

Public Citizen's recent Nuclear Lemons report raises safety concerns regarding the Calvert Cliffs 2 reactor. Measuring the frequency of manual emergency shutdowns, or "scrams," the Calvert Cliffs 2 reactor ranks second worst in the nation from 1993-95.

As a consumer organization we are outraged that while BGE seeks to continue operating these reactors beyond their original lifetimes it is also begging ratepayers to shell out nearly $1 billion in so-called "stranded costs" which it claims will result from having to compete in an open electricity market. If these reactors are so uneconomical, they should be shut down, not subsidized. These two outrageous BGE demands mean they are trying to threaten our safety while simultaneously robbing consumers of potential financial rewards of competition.

Finally, the continued operation of the Calvert Cliffs plant means a continued build-up of high-level nuclear waste. This waste will likely either be stored at BGE's current dry cask storage on the shores of the Chesapeake Bay or transported by rail through central Maryland to a site which has not yet been scientifically studied. Neither of these options is acceptable for nuclear waste which will be lethally radioactive for hundreds of thousands of years.

When considering BGE's request, we urge the NRC to consider various concerns: What would be the effect of a nuclear accident on the surrounding community? Is the evacuation plan still adequate for a fast-growing region of Maryland? How safe is the containment structure after years of exposure to radiation? How will the nuclear waste be stored safely for its hazardous life? How will electricity from Calvert Cliffs be economical given that BGE has requested a $911 million ratepayer bailout?

If Calvert Cliffs were the power source of the future, BGE would not be asking ratepayers to bail them out for nearly $1 billion. With an extended license for the Calvert Cliffs plant we face higher electric bills, more high-level nuclear waste, and more safety and reliability concerns. This is not the way to build an economical, safe, and sustainable energy future here in Maryland.

MARYLAND ENERGY ADMINISTRATION

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Parris N. Glendening
*Governor*
Frederick H. Hoover, Jr.
*Director*

**Statement of Frederick H. Hoover, Jr.**
**Director, Maryland Energy Administration**
**at the**
**Public Meeting on the Calvert Cliffs License Renewal**
**Solomons Island, Maryland**
**July 9, 1998**

Good Afternoon. I am Fred Hoover, Director of the Maryland Energy Administration. On behalf of the Governor and for myself, we welcome the opportunity to participate in this process because of the importance of this facility to Maryland's present and future environmental well-being.

Calvert Cliffs Nuclear Power Plant is an important component in the State's electrical generation mix. Our assessments over its 24 year period of operation indicate that it has an excellent environmental record, and it is considered a strong candidate for license renewal. We also know that the plant provides significant benefits to Maryland's air quality since it does not produce the types of pollutants emitted by burning fossil fuels. Since the plant produces just under 50 percent of the power generated by BGE and just over 25 percent of the electricity generated in the State, it is an important component in Maryland's emissions strategy and attainment plan. Yet, we also know that there are questions that need to be examined and answered carefully before its license is renewed. We see this process as providing an appropriate forum for addressing these questions.

For my part, the Maryland Energy Administration will be working with the Power Plant Research Program of the Department of Natural Resources to coordinate the State's review of the license renewal for Calvert Cliffs and to prepare comments as necessary for submission to the Nuclear Regulatory Commission. Since the Power Plant Research Program has been monitoring the operation of Calvert Cliffs since 1974, we have an excellent baseline of information and experience from which to start our review. Additionally, we will solicit information

and coordinate comments from other State agencies, including other units within the Department of Natural Resources and from the Departments of the Environment, Business and Economic Development, and the Office of State Planning. The data and agency comments will be compared with information provided by the Applicant and by members of the public so that each issue identified in the scoping process will be thoroughly evaluated as part of our participation in this renewal process.

With this in mind, I encourage the public to participate in this process so that we have a full and vigorous review of Calvert Cliffs, and I look forward to hearing the comments and questions on this relicensing. Thank you.

**REMARKS BY MARY M. KRUG ON BEHALF OF THE CALVERT COUNTY BOARD OF COMMISSIONERS, JULY 9, 1998**

Thank you for the opportunity to be here today on behalf of the Board of Commissioners of Calvert County. Calvert Cliffs Nuclear Power Plant is of vital importance to our county, and we were delighted when BGE decided to move forward with relicensure.

When Calvert Cliffs located here, we went virtually overnight from one of the poorest counties in the State to one of the richest. We went from a place where families had cash only once a year, when the tobacco crop was sold, to one where people had money in their pockets, and our youth for the first time had a chance to have a good job without moving away from home.

Increased revenues meant new school buildings, with higher paid staff in them, new parks, cultural attractions, senior citizen facilities and state of the art fire and rescue equipment. It meant new residents who came to work at the plant, well educated and ready to get involved in the community. And that is the second positive that Calvert Cliffs brought us, because they are not just a source of jobs and revenue, but a good corporate citizen.

BGE and its employees are an integral part of our community. They are generous with charitable dollars, but also with time and personal involvement. As mentors in our schools, as coaches in our little leagues, as work crews for Christmas in April, as United Way volunteers – in every aspect of county life the corporation and its workers are leaders for the betterment of the community.

We welcome the continued presence of Calvert are not Cliffs in our county. We are neither naïve nor complacent about nuclear power, but neither are we uncomfortable. Calvert Countians tend to be very caring of our environment. We have two important environmental research institutions in the county, and our government is often cited for its good stewardship of land and water. The plant has been operational long enough for us to know if there were negative environmental impacts from normal operations. And as for the potential of an abnormal event, we take seriously our emergency preparedness drills and have confidence both in plant operations and the oversight of your agency.

In sum, we regard Calvert Cliffs as a friend, a partner, and an asset to our community, and we urge its relicensure.

STATEMENT TO THE NUCLEAR REGULATORY COMMISSION

REGARDING THE

CALVERT CLIFFS NUCLEAR POWER PLANT

JULY 9, 1998

George R. Abbe
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Good afternoon. My name is George Abbe. I am a senior scientist with the Academy of Natural Sciences' Estuarine Research Center located in St. Leonard, Maryland. I have been a research scientist with the Academy for 31 years; 4 in St. Leonard and 27 in Benedict where we were located before we moved to our present location. I am also currently serving as President of the National Shellfisheries Association which is an international society of over 800 scientists who work with shellfish (clams, oysters, scallops, shrimps, crabs and lobsters). Most of my research involves blue crabs and oysters. I would like to address you today in my capacity as a senior scientist with the Academy.

Academy scientists began working in the Chesapeake Bay off Calvert Cliffs in 1968 under contract with Baltimore Gas and Electric. Our goals were to determine whether the generation of electrical power and subsequent discharge of heated water from the Calvert Cliffs Nuclear Power Plant had significant effects on water chemistry, phytoplankton and zooplankton, epifaunal and benthic organisms, shellfish and fish. Our preoperational studies at Calvert Cliffs were conducted for 7 years until Unit 1 began to generate power in 1975. We continued these studies for another 7 years until 1981. Results of these studies appear as numerous scientific reports, peer reviewed journal articles and a book published in 1987 by Springer-Verlag entitled "Ecological Studies in the Middle Reach of Chesapeake Bay - Calvert Cliffs" edited by Kenneth L. Heck, Jr.

I'm unable to detail our findings from all of these studies because of time, but we saw almost no effect of power generation at the Calvert Cliffs Nuclear Power Plant on the aquatic organisms that live in the Bay immediately adjacent to the plant. Although there was damage to some small organisms drawn through the plant in the cooling water and to some of the fish impinged on the traveling screens, the damage was generally minimal. And as long as the numbers are not large, fish injured or killed by the plant are not lost to the ecosystem, but provide food for other fish or crabs in the area. There have been a few instances since 1975 when fish losses were significant, but BG&E usually sought our advice and were responsive in their efforts to minimize these losses.

Oysters that we placed in the discharge grew slightly faster than similar oysters that we held some distance from the plant. Oyster mortalities were unaffected, averaging 6.9% before and 6.0% after the start of power generation. Analysis of 16 years of crab population data,

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beginning in 1968, showed that the percentage of the catch made at stations in the vicinity of the Calvert Cliffs Plant was nearly identical during both preoperational and operational periods. And catches at control sites were nearly the same as near the plant. After these initial studies, during the 1980s and 1990s, BG&E continued to fund additional research projects focusing on oysters and crabs in the vicinity of Calvert Cliffs. We now have a 30-year data set on blue crabs near Calvert Cliffs, that recently provided much of the input to the "Stock Assessment of Chesapeake Bay Blue Crab (*Callinectes sapidus*)" conducted by NOAA's Chesapeake Bay Stock Assessment Committee. In biology or fisheries a 5- or 10-year data set is often considered to be very long. A 30-year data set is not only rare, it is almost unheard of. In this case, this extremely valuable data set is the result of long-term funding by Baltimore Gas and Electric. It is difficult for me to overemphasize this point.

In addition, we have cooperated with State of Maryland researchers for 20 years in a program that transplants oysters quarterly into the discharge area at Calvert Cliffs to examine accumulation of radionuclides. While we are not directly measuring contamination, these "sentinel" oysters will serve as a means for detecting unscheduled or excessive releases from the plant.

I believed early on that Baltimore Gas and Electric had a commitment to the environment, both in learning what was there and then protecting it. Their continued funding of environmental research after we had shown that the thermal discharge had little effect on local organisms is, in my opinion, a direct result of their commitment. Although we are no longer funded by BG&E I still believe in their commitment. We remain available and interested in advising them on ecological problems they might encounter. And I am committed to the environment as well. That's why our crab studies will continue although now through other funding sources.

For 30 years the Academy has served as an adviser to Baltimore Gas and Electric, at both the corporate level and the plant level. At the same time, we have provided oversight and scientific expertise to the State of Maryland. The fact that we are able to interact smoothly with all three groups about topics of mutual interest, in my mind, underscores BG&E's interest in and commitment to the environment. Thank you for this opportunity to speak.