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UNITED STATES OF AMERICA

NUCLEAR REGULATORY COMMISSION

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ENVIRONMENTAL IMPACT STATEMENT ON

PROPOSED MIXED OXIDE FUEL FABRICATION FACILITY

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PUBLIC MEETING

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TUESDAY, MAY 8, 2001

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CHARLOTTE, NORTH CAROLINA

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The public meeting convened at the Charlotte-Mecklenburg Government Center, 600 east Fourth Street, at 7:00 p.m., Chip Cameron, presiding.

I-N-D-E-X

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

(7:00 p.m.)

MR. CAMERON: Good evening, everybody, and welcome to the NRC's public meeting on the request to construct a mixed oxide fuel fabrication facility, and my name is Chip Cameron. I'm with the Office of General Counsel at the Nuclear Regulatory Commission, and it's my pleasure to serve as your facilitator tonight.

I'd like to just talk about three things briefly about the meeting tonight before we get to the substance of the discussion. I'd like to talk about the objectives of the meeting, then go over the format and ground rules for the meeting, and lastly give you an overview of the agenda so that you know what to expect tonight.

In terms of objectives, the first one we have is the NRC wants to provide all of you with information about the NRC's responsibilities in regard to this request to construct, and specifically we want to tell you about what the NRC's responsibilities are in regard to the development of the environmental impact statement that is going to be prepared on the NRC's decision.

The second objective and the more important one is we want to hear from all of you tonight in terms of your advice, recommendation, views on the potential environmental impacts from this type of facility, and ultimately the goal is to use your comments to assist the NRC in determining what the scope of the environmental impact statement should be. That's why this is called a scoping meeting.

The environmental impact statement is a critical document that the NRC uses to help it make a decision on whether to grant the construction request or whether to deny the construction request or whether to put mitigating conditions on the granting of it, and scoping helps the NRC determine what should be looked at in that environmental impact statement, what types of information should be looked at in terms of environmental impact, what types of alternatives should be looked at. So we thank you for being here with us tonight.

In terms of format and ground rules, the format that we're going to use is we're going to have a few NRC presentations and they will be brief, but the idea is to give you some background so that you understand what the NRC's responsibilities are going to be, and then we're going to have a question and

answer session. We'll take questions as time permits from all of you to make sure that you understand what the NRC's responsibilities are in regard to this facility and the preparation of the environmental impact statement.

The second part of the evening and the bulk of the time tonight is going to be devoted to hearing what you have to say about potential environmental impacts. If you want to ask a question during the question and answer or if you want to make a statement, and I have a sign-up list that I'll talk about in a minute, either signal me and I'll bring this talking stick over to you, okay, or when you make -- especially when you make your comments if you'd like to come up to the podium, please feel free to do that. We're taking a transcript of tonight's meeting and that will be available for all to look at to see what was said here tonight.

I would ask that only one person speak at a time, whoever has the floor. That will not only allow us to get a clear transcript of the meeting, but it'll also allow us to give our undivided attention to whoever has the floor this evening. I want to make sure that everybody who came out tonight that wanted to talk gets a chance to talk to us tonight. The

unfortunate part of these meetings is that we never have time enough to hear from everybody in terms of all that they want to say, and we do need to put some time limits on speakers tonight because we have approximately two hours of time for comment and we have about 30 speakers already.

So it comes down to approximately four minutes per speaker, and I would just ask you to respect that so that we can hear from everybody else in the room. And I would note that you can submit written comments on the scoping issues in which you can go into depth on your remarks, but we wanted to be here with you tonight in person to talk to you, to hear what you had to say, and, importantly, so that others in the community hear what each of you has to say about this particular request to construct a fuel fabrication facility.

You also may hear things tonight that will give you information that you might want to use in preparing your written comments. But rest assured what you say tonight will be considered by the NRC in evaluating the comments even if you do not submit any written comments, but I would urge you to give us your detailed comments in writing, but we are going to hear from all of you tonight. This is on the scoping for

the environmental impact statement, and it's already a pretty broad topic so we're going to hear a wide range of views I'm sure.

In terms of agenda, we're going to start off with three NRC staff presentations and the first person that we're going to hear from is Charlotte Abrams who is right over here and Charlotte is the section leader in the Environmental and Performance Assessment Branch. Charlotte's section in this branch at the NRC, they are responsible for preparing the environmental impact statement on this particular facility. As you will hear, that environmental impact statement will be considered with an NRC safety assessment so that the NRC can decide whether this request should be granted.

Now, I wanted to tell you a little bit about Charlotte. She has a master's degree in geology. She's been with the NRC for 15 years and she was with the United States Geological Survey and the State of Georgia Geological Survey.

Because we know there's a lot of interest in the reactor aspect of this we have added a short presentation tonight by Bob Martin who is with our Office of Nuclear Reactor Regulation at the NRC. He's the senior project manager in the NRC's Division of

Licensing and Project Management. Bob, could you just make sure everybody knows who you are. He's been with the NRC for 25 years and his educational background is in the area of nuclear and mechanical engineering.

Last speaker, before we go to all of you for at least a short round of questions, is Jennifer Davis, and Jennifer is right here. Jennifer is the environmental project manager for the NRC on this request, and she has a bachelor's degree in materials engineering from Virginia Tech, master's degree from the University of Maryland also in materials engineering. She's worked for the NRC for ten years and she's the lead environmental reviewer on this construction authorization request.

Again, thanks for being here. We have other NRC staff here from various offices in case questions come up that need to be answered and as the facilitator for the meeting I'll try to make sure that everybody gets a chance to speak and that we remain organized and on time and try to make sure that what the NRC is saying to you tonight is clear and understandable. I'm also going to keep track of what I call action items. These are requests for information, questions about the process so that when the NRC walks out of here tonight besides your scoping

-- comments on scoping there'll be a list that they will respond to and I believe it's going to be -- that will be responded to before the scoping report, and with that what I'd like to do is ask Charlotte to come up and make her presentation.

MS. ABRAMS: All right. As Chip mentioned, I'm Charlotte Abrams. I'm the section leader of the Environmental and Low Waste section which is within the Environmental and Performance Assessment Branch of the NRC, and my phone number and E-mail address also are there, too, for you to use that. Before I get started I want to thank everybody for coming to the open house that we're here tonight. We really appreciate you coming and we would like for any of you and all of you to --

MR. CAMERON: I think we're going to have to speak up a little bit.

MS. ABRAMS: All right. I'll talk very loud. You got feedback forms when you came in at the table from the folks at the table, and we would appreciate if you would fill out those feedback forms and get them back to us, so we would appreciate any information we can get about our meeting and about the open house.

Tonight we're going to talk about scoping for the environmental impact statement for the MOX, mixed oxide fuel fabrication facility. Scoping is a major part of the EIS process, and it's a first step in the preparation of an environmental impact statement after we issue the notice of intent to undertake the EIS process. Tonight I'm going to -- I'll kind of tell you what I'm going to do. I'm going to describe NRC's role in this process and describe the EIS process, that'll be done by Jennifer who will follow me, and then we also want to listen to your comments, and that's the most important part of this meeting as Chip mentioned.

Your comments are significant to helping us in identifying alternatives and also issues that we need to address that will be associated with the mixed oxide fuel fabrication facility in the construction review and then later the operations like it should be.

I want to point out NRC's role, and NRC is an independent government agency. We report directly to Congress. This is unlike DOE. It's different from the DOE, the Department of Energy. They're an executive branch or agency and they report to the President. Our mission, which is stated up there, is

to protect public health and safety and the environment, and we accomplish this in several ways.

One of the ways we accomplish it is we develop regulations and anyone who is licensed by the NRC has to adhere to those regulations, but also a license can be conditioned and spell out certain conditions that the licensee would also have to meet. If the regulations or the license conditions are not being met by a licensee then we can take enforcement action, and also one of the ways we can make sure that this is happening is we conduct frequent and periodic inspection of our licensees.

I'm going to go into -- just briefly touch on a little bit of history related to the MOX project. The proposed MOX project started with a nuclear non-proliferation agreement between the United States and Russia, and a national policy was set to reduce the spread of nuclear weapons and reduce the surplus of plutonium, the plutonium stockpile.

Some of the key organizations involved in the MOX project are DOE, which is an executive branch agency that's responsible for implementing the nuclear non-proliferation policy. DOE conducted an environmental impact statement on disposition of the surplus plutonium. They looked at several approaches

to doing this and they also looked at several sites, and they decided to construct facilities at the Savannah River Site.

DOE contracted with Duke COGEMA, Stone & Webster and you'll hear them referred to tonight as DCS. They contracted with DCS to construct and operate a mixed oxide fuel fabrication facility. In 1998 Congress gave NRC the licensing authority for the MOX fuel fabrication facility and NRC is responsible for determining whether or not to license the proposed MOX facility.

This is just a schematic to give you an idea of what's involved. The shaded area is actually the NRC activity. The weapons material would be disassembled and converted to plutonium oxide powder, and you can see there DOE weapons plutonium powder. The proposed mixed oxide fuel fabrication would mix the plutonium powder with depleted uranium to make mixed oxide reactor fuel, and NRC is responsible for the licensing of the fuel fabrication facility and the activities associated with the use of any of the MOX fuel.

Now I'd like to discuss the licensing process for the proposed MOX fuel fabrication facility. Bob Martin who is going to follow me is

going to discuss the reactor licensing process. DCS has chosen to submit its license application in two parts; request for construction and then a request for operation. DCS has submitted an environmental report and they submitted that in December of 2000, and a construction authorization request which was submitted in February of this year. DCS plans to follow this with a submission of the operation authorization request in July of 2002.

NRC will prepare an environmental impact statement for this action and Jennifer will go into a little more detail of our environmental impact statement process when she speaks. The MOX environmental impact statement will cover both the construction and the operation aspects and the impact of those two activities. NRC will also prepare a safety evaluation report for the construction and operation request and another safety evaluation will be done for the operation request. So you're going to have three documents, three reviews. These documents will form the basis for whether or not we license the proposed MOX fuel fabrication facility. I will discuss the timing of the different things in just a moment.

Other possible licensing actions that could occur associated with the MOX fuel fabrication project would be a fresh fuel cask certification and this we believe will -- you'll get in the fall of 2002. This would be a certification package. There would also be, if submitted, NRC licensing action for the use of MOX fuel in a reactor so we would have to also review that action before we could approve it.

As far as our schedule, I want to stress again that scoping is an opportunity for you to get involved and make your comments known, provide us with comments and provide us with input for the environmental impact statement. Another more formal opportunity is the hearing process. It's another opportunity for you, again, to influence the project. The opportunity for hearing was noticed on April 18th and petitions should be filed by May 18th.

The draft environmental impact statement, and you can see that's anticipated in February 2002. That's another important opportunity for you to get involved in the process. We will be asking for public comments on any draft environmental impact statement we issue, so we would want the public to comment. There will be an opportunity to meet with us, comment, and also an opportunity for you to comment in writing.

Those comments would be addressed and considered for the final environmental impact statement.

The draft EIS and the draft safety evaluation for the construction authorization are planned to be issued in the spring 2002. DCS, again, DCS plans to submit its operation authorization in July of 2002 and our final EIS and safety evaluation will be -- for construction will be issued in 2002. We'll make a decision on construction of the proposed MOX fuel fabrication facility in October of 2002, and a final decision on whether or not to license the facility is planned for early 2004. Now I'm going to turn it over to Bob.

MR. CAMERON: Okay. Thank you, Charlotte. Bob Martin from Nuclear Reactor Regulation.

MR. MARTIN: Good evening. Am I heard well? I'm Bob Martin. I'm the senior project manager with the Office of Nuclear Reactor Regulation in our headquarters office in Rockville, Maryland. I am responsible for the coordination of the review of any application that may be submitted to us for the use of mixed oxide fuel in the Catawba and McGuire reactors.

Two of the major components of the overall MOX program are the proposed fuel fabrication facility to manufacture the fuel assemblies, which has just

been discussed, and then the second major component is the irradiation of those manufactured fuel assemblies in a reactor. So it's to achieve the appropriate non-proliferation standards for protection of materials.

The purpose of our meeting tonight is to receive your input for NRC's environmental review of the fuel fabrication facility at the Savannah River Site. However, I attended several recent scoping meetings and based on the comments of several stake holders in those meetings I would like to offer you some general thoughts on the review process that will take place when the NRC receives an application to use MOX at the McGuire and the Catawba nuclear power plants. Excuse me, I'm fighting allergies this week so that's the reason for the incessant clearing of my throat.

In preparation for this application during the past few years we've held several meetings with the prospective licensee and the licensee has submitted a fuel design report for informational purposes. A summary of these meetings, as is common practice, can be found in the public document room. A copy of that fuel qualification report is also available from the NRC's public document room. As described in those documents, the licensee has

outlined a program with several major phases and schedules that would be needed to meet the program objectives. Next slide, please.

The program is projected to include two major phases. This is a program for irradiation of the fuel assemblies in the reactor. First, the lead test assembly program has been described which would be subject to an NRC review. The use of mixed oxide fuel at these plants would represent a design change in the fuel that they use. It is common in U.S. commercial nuclear power industry to confirm the available knowledge about a new fuel design with a lead test assembly program.

This slide shows August 2001 as the prospective start date for the LTA review. That is based on the most recent documented information from the licensee. However, it was recently indicated through communications with them that they are still working, both DCS and DOE are working on alternative plans for the fabrication of the LTAs and as a result we understand that the August 2001 date may be delayed somewhat.

Provided that we then receive an application, review it and approve it, the LTAs would be irradiated for several fuel cycles in a reactor and

then examined to confirm that their performance met expectations. This is scheduled to be completed prior to the completion of the staff's review of the second major phase of a reactor program which would be the production irradiation program. That's scheduled for completion in about March 2006. These dates have been established by the licensee to support meeting the program objective of beginning production irradiation by October 2007. Next slide.

This is an overview of the license amendment process for a nuclear power plant application. Review of the application will follow the same documented process as we use for the review of license amendment applications in general for nuclear power plants. On receipt of the application we would issue a notice in the Federal Register. This notice will announce the opportunity for interested parties to request a hearing on the license application.

The staff will then conduct a safety evaluation of what the licensee has proposed. The evaluation will take place over a number of months and may involve requests for additional information that the staff would make to the licensee, and may involve technical communications to facilitate our

communications with the licensee. The requests for additional information will be available to the public, and the meetings that take place will be open for observation by the public. The only exceptions to that being where proprietary information is involved or security and safeguards information is involved pursuant to our regulations. If we find that what the licensee proposes is acceptable, the safety evaluation will set forth the basis for the staff's conclusions that the licensee's application satisfies applicable regulatory requirements.

The safety evaluation will also reflect that the appropriate communications have been made with the states and will reflect the appropriate considerations for any environmental impacts. The environmental impacts will also be reported in either the environmental impact assessment or environmental impact statement pursuant to our regulations in Part 51. The license amendment process also includes resolution of hearing issues. Next slide.

I would now like to offer a few comments on the staff technical approach to reviewing the use of MOX fuel. We believe that the existing NRC safety requirements are appropriate for evaluation of MOX fuel safety. That is, the acceptability of the design

of MOX fuel will be measured by whether it meets the same safety criteria for performance of the fuel as are now contained in our regulatory requirements. The NRC staff will review the licensee's proposals. However, I would like to emphasize that in meeting the requirements of that review by the staff the burden is on the licensee to provide sufficient information to demonstrate compliance with safety requirements.

The NRC staff plans to perform a certain level of independent confirmatory evaluation in parallel with the review of the licensee's submittal. For that purpose we are going to need to modify some of our currently existing analytical tools to enable us to do that confirmatory evaluation. We have initiated some research and development activities to assist us in that confirmatory review. These activities include modification of our analytical tools in the areas of reactor physics, fuel behavior and the radiological source terms to be used in the transient and accident analyses. I would like to summarize by saying that NRC will approve the use of MOX at these plants only if the results of our review show that the plants will continue to meet NRC regulatory requirements for public health and safety and protection of the environment.

MR. CAMERON: Okay. Thanks a lot, Bob. We're going to ask Jennifer Davis to talk about the environmental impact statement process now and we'll go out to start questions. Jennifer.

M S . D A V I S :

Should I move this? I think I need to walk around.

UNIDENTIFIED SPEAKER: Is that bjd1 or bjdl?

MS. DAVIS: Bjd1. Apparently there's another bjd at the NRC so I've got a number after my E-mail address. So my name is Jennifer Davis. I am the environmental review lead for licensing of the proposed MOX fuel fabrication facility. I would also like to recognize Tim Harris who is the lead for the scoping process. I think a lot of you have met him at previous meetings or have talked with him before in arranging for this meeting.

Today I'm going to talk about why we are doing environmental impact statements and briefly describe the process. As many of you probably know, the National Environmental Policy Act, NEPA, requires that we do an environmental impact statement for major federal actions and we consider the licensing review for the MOX fuel fabrication facility to be a major

federal action. So the environmental impact statement will look at the range of impacts from construction through decommissioning. It's used as a decision-making tool and will provide input to the licensing decision that's going to be made later next year.

One of the primary areas that's looked at with respect to environmental impact statements is, of course, the impact. Impact can be either positive or negative. We look at both radiological and non-radiological impacts. There are basically three different categories of impacts.

The first of these is direct impact. An example of a direct impact from a facility would be air emissions from the facility. A second category of impact is indirect impact and an example of an indirect impact is, for example, economic growth in the area from the proposed facility. Finally, there is a category called cumulative impacts, and what cumulative impacts looks at is the impact of the proposed facility in conjunction with the impacts from past activities at the site, present activities at a site and reasonably planned future activities at the site. So it's an accumulation of all of the potential impacts so it doesn't look at the fuel -- proposed fuel fabrication facility in isolation.

Another aspect of the environmental impact statement is the alternatives, and we will be looking at -- the first alternative is the proposed action which would be licensing the facility. The second alternative would be the no action alternative and that would be not to license the facility. This process is a little different than the normal environmental impact statement process because Department of Energy has already made a decision and determined the need and location for this facility so we are limited -- so far we've only identified these two alternatives, and one of the things we'd like to get from you all during scoping is potential other alternatives that we should be looking at as we go through the environmental impact statement process.

The next slide is a schematic of the process, and if you'll note, the two areas in blue highlight the opportunities for public involvement. As Charlotte said, we did receive the environmental report in December of 2000. We received the construction authorization request in February of this year. We issued our notice of our intent to prepare an environmental impact statement on March 7th and there are copies of that outside on the sign-up table if anyone is interested.

Of course, we are right now in the scoping process. This is the last of the three scoping meetings and we will be receiving written comments until May 21st. Now, our address to submit the written comments is on some of the materials outside. You can also submit them on the feedback form, we can take written comments by the feedback form. If you don't get your comments in by May 21st we will consider comments that come in afterwards if we can, but they may not make it into our scoping summary report, there may not be time.

We plan to issue the scoping summary report in July of this year. That will be followed by our intensive environmental review resulting in a draft environmental impact statement which we plan to have available in February of next year, February of '02, and that will be followed, of course, by a public comment period. We would anticipate having some public meetings as part of that public comment period and then also accepting written comments, and those written comments would be addressed as part of the final environmental impact statement and we expect to be publishing that in September of 2002.

To give you a little bit of background on the proposed fuel fabrication facility, this is a map

showing the Savannah River Site. It's about 310 acres. It's in South Carolina on the border with Georgia.

UNIDENTIFIED SPEAKER: 310 square miles.

MS. DAVIS: I'm sorry?

UNIDENTIFIED SPEAKER: You said 310 acres. 310 square miles.

MS. DAVIS: Oh, I'm sorry. Forgive me. And the proposed MOX fuel fabrication facility will be located in the F area which is at the north end of the Savannah River Site. The next map shows a blow-up of the F area, and the F area, by the way -- I'm sorry. The Savannah River Site is a restricted area, it restricts public access, and there is a boundary. The proposed MOX fuel fabrication facility in the F area will be about six miles inside of the restricted boundary.

So this shows a blowup of the F area and, if you'll note, the proposed facility will go at the north end of the F area. It's going to be on about 41 acres and there are some other activities currently ongoing in the F area. There are -- excuse me, there is the F canyon which is used for chemical separations and there are some high level waste storage tanks on F area as well. So those are the types of things we

would consider with the discussion of cumulative impacts, other activities that are ongoing in the F area.

The next slide shows an artist's rendition of the proposed facility and the facility would be -- would consist of several buildings, paved areas, and the inputs to the facility would be plutonium powder from weapons plutonium and depleted uranium from a Department of Energy stockpile, and the location of that stockpile has not yet been identified.

Then the output of the facility would, of course, be MOX fuel assemblies for use in commercial reactors. Those would go to commercial reactors to be irradiated to generate electricity. Potentially, they could be stored at the reactor sites until they were ready to be shipped for disposal at the proposed geologic repository.

The next two slides are a list of potential topics that we would consider in an environmental impact statement process. This list is not all inclusive. It's really just meant to stir some discussion later on, although from the indications I think we're going to have quite a bit of input already, but just to give an example, some of them are pretty self explanatory. Air quality and

noise, air quality could be affected by air emissions from the proposed facility. Noise could occur during construction and also during operations.

Cultural resources is not as apparent. That involves protection of archaeologic resources and historic resources. Those are protected by the National Historic Preservation Act and we'll be consulting with the state historic preservation officer to examine the impacts -- to help examine the impacts to those resources. Terrestrial and aquatic ecology include plants and animals in the vicinity. This would also include impact of loss of local habitats and potentially bio-diversity.

The next category is land use. That talks about planned present or future land use of the site if it were not used to site the proposed facility, and it's linked to socioeconomic impact. Socioeconomic impact includes a number of things like population growth in the area, increased employment, tax changes, changes in services such as fire protection, police protection and education, and the final topic on this slide is aesthetics. Would the site of the proposed MOX fuel fabrication facility in F area visually degrade F area or the Savannah River Site.

This list continues on the next slide starting off with surface and ground water. Surface and ground water impacts are important and will be evaluated in the context of local streams and the aquifers underlying the F area. These also go to human health impacts. Human health impacts are related to water quality, air quality and ecological impacts. They're all tied in together. Related to this is the environmental justice discussion. What environmental justice looks at is are there dis-proportionately high impacts to low income or minority populations in the area.

The next topic, waste management, is an area that's typically considered in an environmental impact statement and we know that the MOX fuel fabrication facility would generate low level waste, mixed waste and also a high alpha waste stream. So that's something we would look at within the environmental impact statement.

Another area that's typically considered in the environmental impact statement is decommissioning. Now, what we've seen so far is that DCS, Duke COGEMA, Stone & Webster will be responsible for deactivating the facility and then it would be decommissioned at some future time. That's another

thing we'd like to get input on from you all is how do we address deactivation versus decommissioning in an environmental impact statement.

Finally, and I think the reason a lot of you all are here are reactor use impacts. These would be an indirect effect in the context of the environmental impact statement for construction and operation of the proposed facility, and what we would look at if we looked at those is the impacts from irradiation of the reactor fuel, potential impacts from storage of the spent fuel at the site, and the eventual disposal. And that's one of the areas we would like to get input on from you all is how should we consider the reactor impact within the MOX fuel fabrication facility environmental impact statement and if we should consider those.

To summarize, we've got a series of next steps. As I said, we'll be publishing the scoping summary in July of this year. We plan to -- I'm sorry. We will be accepting written scoping comments until May 21st and will take -- try to take into consideration anything that comes in after that, although it probably won't make it into the scoping report. The scoping summary report, July of '01, will be followed by the draft environmental impact

statement which is planned February of 2002, and that will be followed by the final environmental impact statement in September of 2002. So that completes my presentation. I'd like to thank you all for your time and attention and I look forward to hearing your comments.

MR. CAMERON: Okay. Thank you, Jennifer. We have about 15 minutes for questions before we get into the comments from tonight, and let me see if -- there's questions here, and please tell us your name for the transcript.

MR. JOCOY: I'm Greg Jocoy. Is there an E-mail address we can use to send our written comments to and, if so, what is it, please?

MR. CAMERON: Tim?

MR. HARRIS: Actually it's my E-mail address. It's teh@nrc.gov.

MR. CAMERON: Okay. That's teh@nrc.gov.

MR. HARRIS: Yeah. All the ways to submit comments are included on the fact sheet which Betty had out at the table so there's other means as well.

MR. CAMERON: Thank you. Sir, did you have a question?

MR. MAHOOD: I wondered about when did this whole idea begin? When did we first start thinking of using MOX fuel?

MR. CAMERON: Could you just tell us your name?

MR. MAHOOD: Robert Mahood.

MR. CAMERON: Robert Mahood. Anybody want to handle that question? Jennifer?

MS. DAVIS: I'm not sure if it started any earlier than this, but I know I was involved in discussions with the Department of Energy as early as 1995. They were looking at whole series of possible plutonium disposition options including deep bore hole disposal, immobilization, MOX. I think there were a number of others. I don't recall off hand what they were. So it's been going on for some time now.

MR. CAMERON: Thank you very much. Let's go over here and then we'll go back over that way.

MR. COLEY: Thank you. Joe Coley. When Jennifer is talking about potential impacts in an environmental impact statement she was focusing, I thought, on impacts on normal operation and the reactor use is one category, but again, under normal

operation. Would the environmental impact assessment also consider a non-normal operation like an accident?

MR. CAMERON: Okay. Jennifer, I think you got the gist of that question, right, from Mr. Coley?

MS. DAVIS: Yeah, I'm sorry. I meant to point out we would look at normal and off normal or accident conditions, particularly in the area of transportation and for the fuel fabrication facility operation itself.

MR. CAMERON: Thank you.

MS. OLSON: Mary Olson. I have three quick yes or no answer kind of questions. The first is, is there more plutonium in the irradiated fuel, than high level waste? The second is, will weapons grade plutonium be used for the lead test assembly to sample, and the third is will there be another environmental impact statement if and when Duke decides to apply for a license amendment?

MR. CAMERON: To the extent that we can give yes or nos, I think that first one maybe is yours?

MS. DAVIS: I'm not sure about the first one. I can answer the last one. If there is any need, we will do a supplemental MOX facility environmental impact statement and that will depend on

the content of the license amendment. There will be an environmental review for reactor use, and that could be either an environmental assessment or an EIS.

MR. CAMERON: Let me go to Bob Martin to try to answer your other questions, Mary. Bob, do you remember the question?

M R . M A R T I N :

I believe one of the questions was will weapons grade plutonium be used in the lead test assemblies. As we understand the plans at this time that is the plan. That would obviously be the closest parallel to what is going to be seen in the reactor production cycle. Does that answer your question?

MS. OLSON: Yeah, it does. (indiscernible)

M R . M A R T I N :

Is there more plutonium than uranium?

MS. OLSON: In the irradiated fuel, MOX irradiated fuel --

MR. MARTIN: Right.

M S . O L S O N :

-- does it have more plutonium than irradiated fuel from low waste -- in other words --

UNIDENTIFIED SPEAKER: Is it 50/50?

M R . M A R T I N :

I believe the numbers at the end of the cycle if

you start out with a low enriched uranium, you know, of course, as you're aware, low enriched uranium fuel assembly as it's irradiated, a certain amount of plutonium is generated and is burned leaving a certain amount at the end of the cycle. When you start out with a MOX fuel assembly and irradiate it for a cycle you will consume a lot of it in the cycle leaving some in spent fuel form when you take it out of the reactor. I don't remember the exact numbers. I think they are very comparable down into the one to two percent range.

MR. CAMERON: Not exactly a yes or no, but -- let's go over here and then we'll come back over. Yes, sir, if you could just identify yourself.

MR. PIERCE: My name is Brian Pierce. My question deals with the composition of the MOX fuel. Jennifer mentioned depleted uranium and we know from (indiscernible) between them, but say right now what is the composition of fresh MOX fuel?

MR. CAMERON: Bob, can you answer that one for us? Great.

M R . M A R T I N :

I think the question was what is the composition of a fresh, MOX fuel assembly?

MR. PIERCE: Yes.

MR. MARTIN: The most precise information we have on that right now is in the fuel qualification report. You remember that report that I mentioned that the licensee has submitted to us for information? There are technical details in that report regarding the design characteristics of the fuel including that information. It's available through the NRC's web site.

MR. CAMERON: Thank you.

MR. PIERCE: Is it just a simple statement?

MR. CAMERON: Simple statement?

MR. PIERCE: Yes. There is mention of depleted uranium going into it, is there a -- 20 percent rich uranium?

MR. MARTIN: Not that I can recall from memory right now.

MR. PIERCE: The depleted uranium and weapons grade plutonium?

MR. MARTIN: Yes. Yes.

MR. CAMERON: Before we maybe put up an action item here I'll just do a shorthand since we've had a couple of questions on composition of MOX fuel and see if we can provide some more information on that.

MR. JOHNSON: It's right here.

MR. CAMERON: Oh, Tim, are you -- good. All right. This is Tim Johnson from NRC staff.

MR. JOHNSON: The fresh fuel will have four to six percent plutonium oxide in it. The remainder will be depleted uranium oxide. Does that answer your question?

MR. PIERCE: It certainly does.

MR. CAMERON: Okay. Great. We're going to come back over to you. We'll go right here and then we'll go to these two ladies and then back over.

MR. SIFF: Thank you, Chip. I have a question. My name is Pete Siff. I have a question for Bob Martin. Bob, what is -- can you -- I'd be interested to know what the placement of the MOX fuel is going to be in the reactor. Would you be able to tell us about that a little bit?

MR. MARTIN: The licensee has not submitted an application yet so we don't have that level of information. The information they have offered us, it came to us in this fuel qualification report, is that the core will go up to about 40 percent. Once it's been through several cycles and reached an equilibrium fuel cycle, the MOX loading

will be about 40 percent of the number of fuel assemblies in the core with the MOX fuel assembly.

MR. CAMERON: And Bob, can you stand up for one second? I just wanted to emphasize so that everybody understands that the point that you're making is that until we receive a license application for use of this fuel at the reactor there's a lot of data that we don't have, but can you also tell us who will be -- when you refer to the licensee and the license applicant, who would that be in terms of the use of the fuel at the reactor?

MR. MARTIN: Well, DCS is the licensee for the overall project. DCS has contracted for certain services to be performed by Duke, for instance, in connection with the reactors, and it's also contracted for fuel manufacturing services to be provided by Framatome, those are two of the organizations involved. But I would also add that the reason we're saying we can't answer that yet, is -- the core designer has certain choices regarding where they wish to put the fuel assemblies in the reactor, and that is a body of work that they have not completed and have not presented to us yet.

MR. CAMERON: Okay. Let's go right here.

MS. MALAHOF: I wondered if the -- Grace Malahof -- the energy -- the EIS might --

MR. CAMERON: Grace? Is it Grace?

MS. MALAHOF: Yes.

MR. CAMERON: Grace Malahof.

MS. MALAHOF: If the EIS might include some material that is not included in the EIS from other kinds of projects. For example, the ultimate result of this effort would be to produce energy, at least that was my assumption when I came here. Apparently it's also to get rid of weapons grade plutonium. Now, these are two very large, important objectives, but the EIS would have -- really would have to evaluate in certain ways the possibility of doing either one. For example, to produce energy you might want to do one thing that would cost less than what is being proposed here. You might be able to do this same amount of energy with far less economic investment, dislocation, you know, using up resources. You would still be left with the question of whether immobilization was another option, but I didn't see the actual cost evaluations included in the EIS as part of the material. Thank you.

MR. CAMERON: Comments on Grace's suggestion and question?

MS. DAVIS: I think you've raised a very good point. Part of that determination of how we're going to address those things is one of the things that we hope to come out of scoping, and part of that is going to arise from our definition of the purpose and need of the proposed action, and so right now that is focused on disposition of surplus weapons plutonium, but, of course, there will be energy generation aspects. We will be doing some sort, some level of cost benefit analysis as part of the environmental impact statement.

MR. CAMERON: Can we flag that as a scoping comment, too? I think that falls into that category.

MS. DAVIS: All right.

MS. MYERS: I have the same question. I was wondering --

MR. CAMERON: State who you are.

MS. MYERS: Mary Myers. I was wondering if they had a study that includes the cost -- the most dangerous plus the cheapest way to go.

MS. DAVIS: We are at the very beginning of our process. So that's something we will be looking at as we go. I'm not sure that it is going to come out as the cheapest way to go, but that's just

one of the factors we will look at as part of the environmental impact statement.

MR. CAMERON: Okay. Thank you, Jennifer. Yes, ma'am.

MS. KELLY: My name is Mary Kelly. I'm curious about the plutonium oxide. It's my understanding that you are taking the weapons SRS and taking the heads off of the weapons, but in that form, that is not plutonium oxide powder. Is that done in a separate facility or where is the transformation of the plutonium into powder and plutonium oxide taking place?

MR. CAMERON: Thank you, Mary. Is this a question for Jennifer or Tim? All right. This is Tim Johnson from NRC staff.

MR. JOHNSON: The plutonium in weapons is a plutonium metal and it will be brought to the Savannah River Site, and under DOE auspices they will convert that from metal -- a metal form into an oxide form. This will be done prior to sending it to the mixed oxide fuel fabrication facility, but it will be a separate facility and it will be operated by the Department of Energy.

MS. KELLY: And you'll have to have a separate EIS and all for that?

MR. JOHNSON: I really don't know what DOE's plans are as far as the rest of those facilities.

MR. CAMERON: Okay. Thank you. Did you want to ask a question? Okay.

MR. MONIAK: My name is Don Moniak. The answer to Mary Olson's question was yes on number one, there is more plutonium in spent MOX fuel than in LEV fuel. That's just, you know, a yes, an easy yes. I have a question about transportation, and I hope somebody can answer this because it's basic physics. It is documented that says that the transport index for the MOX fresh fuel assemblies will be 100 and the KEFF value will be 0.95. So could somebody explain to me the definition of transport index, number one; two, what is the range of values for transport index; and three, how many times -- how often are assemblies with a transport index of 100 shipped to this country?

MR. CAMERON: Do we have anybody from the NRC who can answer either all or part of that question?

MR. MONIAK: I'd hope so.

MR. CAMERON: Tim Harris.

M R . H A R R I S :

I can answer some of those, Don. Transportation index has to do with the dose rate at one meter, I believe is how you cope with the transportation index. That's completely different from the KEFF of .95. KEFF of .95 is a pretty common safety and that value is a common value used to maintain safety.

MR. MONIAK: What's the KEFF of a fairly new facility?

MR. HARRIS: Fairly new?

MR. MONIAK: Yes.

MR. HARRIS: I don't know. The other question was I'm not sure how many packages with the TI-100 are shipped. I don't have that information. Was there something else that --

M R . M O N I A K :

Is a transport index of 100 high? Is that a high value, and is a KEFF value of .95 high relative to other types of fuel?

MR. HARRIS: The KEFF is not high, and I don't believe that the transport index of 100 is particularly high.

MR. CAMERON: Okay. Let's go to Natalia. We have time for maybe just a couple of questions

here, and Natalia, if you could just give us your name for the record.

MS. MIRONVA: I am Natalia Mironva. I am from Russia, the (indiscernible) region. We have the same kind of proceeding and the same kind of proposal, and my question to Americans, to NRC, MOX proposal is under the clause that American Russian agreement about (indiscernible) weapons grade plutonium, and I would like to understand did you very clear to make the scope after the decision about putting plutonium in MOX with DOE, yet, and this is my question. I am very worried about the (indiscernible) -- general Russia and also I have some small question, how much are built, how long this plutonium will -- (indiscernible) on this project?

MR. CAMERON: First question? Do we need a clarification? On the second question, did anybody from the NRC pick up on that? Okay. Jennifer, do you want to --

MS. DAVIS: I think I can answer the first question was that has the Department of Energy already made this decision and if they've made this decision then why are we doing this. And basically they have made the decision for the need to put some of the surplus weapons plutonium into mixed oxide fuel, but

if we do not license the facility then that's something we're going to have to consider as part of our no action alternative, but if we don't license the facility then they're not going to be able to produce the MOX fuel that way.

MR. CAMERON: Okay. And Natalia, I'll talk to you and make sure what your question was and then we'll get an answer. We really need to close up here pretty soon, and I would ask if anybody who's standing in the back, if you'd like to come into the room, we don't have a chair, but there are seats right up here so come on in and, you know, sit down. There are seats available and while you're doing that let's go to this gentleman.

MR. JONES: Thank you. My name is Michael Jones. I just want to clarify something. If -- is the scope of this meeting and the ultimate environmental impact statement covering just the Savannah River project, or can I assume that it's also including the irradiation that will take place at McGuire and Catawba?

MR. CAMERON: Good question, and Jennifer, do you want to address that for us?

MS. DAVIS: This environmental impact statement is for construction and operation of the MOX

fuel fabrication facility. If we address reactor use impacts it's going to be as an indirect effect during the lifetime of the MOX fuel. We may not address it in this environmental impact statement. That's one of the things we're going to determine in scoping. Later on when we receive a license application or a license amendment application for use of MOX fuel in reactors some environmental assessment will be done for that action. I don't know at this point in time if that will be EA, an environmental assessment, or a full blown environmental impact statement.

MR. CAMERON: Okay. Thanks, Jennifer. Let me ask the NRC staff if people have questions that they need to get answered before the scoping comments are due, if they E-mail those questions to Tim we would try to answer them? Okay. Because I apologize for the fact that we have to move on, but if you do have a question, if you could E-mail it to teh@nrc.gov, we'll get back to you with that information. We're going to move to the second part of this evening's meeting which is to hear comments from all of you on information on environmental impacts, recommendations, whatever, and as I mentioned, we're going to be doing approximately four minutes here and we're going to be moving through

this, and we look forward to your comments, and what I'd like to do is start with Catherine Mitchell, and Catherine, you can -- yeah, go ahead.

MS. MITCHELL: My name is Catherine Mitchell and I'm with the Charlotte Office of the Blue Ridge Environmental Defense League, and I do want to say thank you to the Nuclear Regulatory Commission for being here tonight. We've been asking for a while for this meeting and we -- as much as we might complain and ask questions and get a little upset sometimes, we are grateful that you're here tonight. I would also like to ask for your assurance that the concerns that are voiced here tonight will be heard and adequately addressed in the environmental impact statement in the development of that statement, and I'll begin by asking this because I'm puzzled by your agency's response to a reporter's question appearing in a May 6 Charlotte Observer article. In this story your spokesperson stated that the agency had not analyzed the MOX plan in detail. Yet this person was willing to make a statement about the probable safety of this program based on the use of this fuel in Europe. The plutonium fuel use in Europe I'd like to point out is substantially different than the program being proposed in this country. Plutonium fuel in Europe is

made from high level nuclear waste from nuclear reactors. This particular program proposed by the Department of Energy is planning on using plutonium from dismounted weapons and it contains a completely different mix of isotopes and it should not be used at all in safety and performance analysis. That's a major concern I have.

In addition, COGEMA of France, a member of a consortium involved in this project, has provided no data on their safety record in France, they don't have to in that country, and there's been no detailed analysis -- there has been no detailed analysis of this program, proposed program here in the United States. So how is it possible to accurately portray this program as safe at this point in time to the American public when that hasn't been done? The purpose of the environmental impact evaluation is to determine what is safe and what is not, and I would submit that it really is impossible at this point to say that it's safe and I -- we have heard that over and over in the course of the development of this program and I would like for everyone tonight to be very clear on that fact. And I would like to say that while the people of Charlotte are here listening and

while you're on the record because I think it's a very important point.

With that in mind I'd like to point out just a few of the concerns I have regarding the implementation of this program. One thing in particular I'm having to do, I'm having to cut this because I had a six-page statement that I've cut down to four minutes. The dual track approach to the disposal of this program recommended by the National Academy of Science has shown in favor of one approach and that is MOX. Immobilization as an option has been cut from the DOE's budget for this year, as well as $150 million in cleanup for the Savannah River site despite massive contamination both on and off site at Savannah River Site. The MOX program received additional funding and the weapons research end of that program received a whopping $231 million while cleanup at SRS was cut. My question is do these actions now void the recommendations of the National Academy of Science in the framework of the program, and in addition, does the withdrawal of Virginia Power from the consortium at the last minute void the contract awarded to the consortium when that contract was based on participation initially of both Duke Energy and Virginia Power.

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I would also like to point out that the proposal using a generic environmental impact statement is unacceptable. The environmental impact evaluation of plutonium fuel use must be specific to these four reactors, safe to use as fuel. Any generic evaluation of nuclear power reactors simply wouldn't provide enough data to allow assessment of the risks associated with plutonium fuels and that's a very important distinction.

I would like to say that the other concerns I have -- I don't know how much time I have, but I'm going to keep going until they stop me -- reactor safety. The four Duke reactors chosen for this program are quite simply the weakest design in the industry. In a study conducted by (indiscernible) National Laboratories and commissioned by your own agency, this was pointed out. These reactors were found to pose greater likelihood for accident than other types of reactors currently in use in this country, and my question is why were these reactors chosen if that is the case. Was it because Duke Energy was the only utility left willing to assume the risk? Should the people of Charlotte and the Savannah

River Site area be willing to assume the risk based on that reason?

Also, evacuation of the Lake Norman area in particular would be practically impossible in the event of an accident. I speak from experience. I have family in that area. I've been on and off those exits many times and I can tell you for a fact that it doesn't require a major accident to cause gridlock in that area. It's gridlocked now. At just about -- certainly at any amount of rush hour time, but very definitely throughout the day there is always traffic trying to get on and off the 77 exits all along the corridor around the Lake Norman area. As late as last week an emergency management official from Iredell County pointed out that one area in particular around the Lake Norman reactor was -- is already at risk in that area for safe evaluation and services, but he stated that it would take approximately eight to 24 hours now to evacuate that area around the Lake Norman area because they simply couldn't get in and out of the area fast enough. And I ask you is it fair to ask the people of that region to assume the greater risk involved in plutonium use.

MR. CAMERON: Thank you, Catherine.

MS. MITCHELL: Thank you.

MR. CAMERON: Those of you who brought a prepared text with you, we would add that on to the transcript if you could get us a copy, okay, and next we're going to go to Lou Zeller.

UNIDENTIFIED SPEAKER: Are you working off the list that we signed when we came in?

MR. CAMERON: Yes.

MR. ZELLER: Thank you. My name is Lou Zeller. I'm on the staff of Blue Ridge Environmental Defense League and I appreciate the opportunity to speak before the people of Charlotte tonight and the Nuclear Regulatory Commission.

The planned use of mixed oxide plutonium fuel is unsafe, uneconomical and unnecessary. We oppose the use of such fuel in commercial power reactors for the following reasons: Plutonium fuel derived from dismantled weapons is an experimental program which cannot be compared to a European experience with plutonium fuel made from nuclear waste. The mix of isotopes includes 64 percent higher concentration of plutonium 239, the heart of a nuclear weapon. The same hazards in nuclear plants are combination of human and technical errors, both types of error are noted in Nuclear Regulatory Commission's own plant performance reviews of the McGuire and

Catawba reactors. Some of this information is included in my written remarks. Because of the inherent hazards in these plants the Nuclear Regulatory Commission should not allow use of plutonium in these plants.

Catawba and McGuire operated by Duke have radiation containment building which depends on blocks of ice to reduce the heat and pressure in case of a reactor accident. It's a Westinghouse designed plant, a small containment building. It would indeed save money and that's they have told me three utilities that's using one, Michigan, TVA, and Duke Power. They have formed an ice condenser mini group to help to deal with some of the problems which have been identified in these particular reactors.

Duke's system has inherent weaknesses which have resulted in safety problems and lengthy closures of other utility reactors using the same system, for example, D.C. Cook in Michigan. Part of the energy selection of Duke COGEMA, Stone & Webster in the planned utilization of Duke Power reactors has not been open to full scrutiny. The experimental nature of the weapons-derived fuel project requires a thorough and independent assessment by the Nuclear Regulatory Commission. Additional information from

DOE and DCS is required to fully assess the safety of this program.

And finally, the use of -- or furthermore, the use of plutonium fuel in commercial reactors is a break in the two decades of American Non-proliferation Policy. It opens the door for other nations to exploit for the purpose of plutonium weapons production. We may here in the southeast be opening a Pandora's box for a 21st century nuclear arms race.

I want to include in my remaining time some information, further information for the people of Charlotte and for the Nuclear Regulatory Commission about these reactors, Catawba and McGuire. I have mentioned some of the problems which have been happening. There has been violations involving the company's failure, Duke Power's failure to ensure that ice condenser inlet doors on the McGuire reactor would be able to open if needed and a failure to perform adequate corrective action based on industry experience and operational events at McGuire. This is a Nuclear Regulatory Commission Office of Public Affairs document from 1997. A Catawba plant performance review in March of 1999 noted that Unit 1 experienced a forced outage approximately three weeks

in duration due to blocked flow channel in portions of the ice condenser.

Have these problems been cleared up? There have been meetings with the Nuclear Regulatory Commission and Duke Power over the years. Have things changed? Let's see. December of 2000 in this NRC performance summary it lists technical specifications and regulatory guide, it's for failing to have adequate procedures to control release of radioactive material during pressurizer gas vent venting evolution. That's in Catawba 2. At McGuire, McGuire 1, inadequate corrective actions for recurring problems with shutdown operations involving loss of letdown or inadvertent reactor cooling system to cool down transients.

The problems with ice condensers, the problems with these reactors have gone on for years. They are the last place in the world we should try a risky project such as this. The Nuclear Regulatory Commission should open the doors to full public scrutiny, ask the people of Charlotte is this what you want for the Queen City.

MR. CAMERON: Thank you. Thank you, Lou. We're next going to go to Carolyn McDaniel and then

we're going to go to Mike Tuckman. Carolyn. Do you want to come up to the podium? All right.

MS. McDANIEL: My name is Carolyn McDaniel. I have lived in the Charlotte area since 1963. Then I moved to York County in 1978 and I have lived within a ten-mile radius of Catawba Nuclear Station for that time. I feel like of this area I remember when Duke Power came in it was just a neighborhood utility. Now it is a global energy provider that all of us know did not get to be where they are today without extraordinary safety and environmental concerns.

As I say, I live near the Catawba Nuclear Station. I am very confident that Duke Power Company's involvement -- Duke Energy's involvement in this experimental or this development of this fuel will be carefully and very astutely considered before they would even consider doing this. I am fully confident that they will do that.

I think all of us in this area are fortunate to live in this area and to have a company such as Duke with their integrity and we all know, everyone here knows that Duke Power Company is a company of great integrity and have opened their doors to other nations. They have shared their technology.

They have been leaders in the nuclear safety and we know that right now we do need nuclear power to produce energy. I am confident, as I say, that Duke Power Company will continue to be the leader in safety and environmental issues of this new project. Thank you.

MR. CAMERON: Thank you, Carolyn. Could we have Mike Tuckman come up, please.

MR. TUCKMAN: Good evening. My name is Mike Tuckman. I'm executive vice-president for Duke Power. I'm the senior executive responsible for the operation of Duke's nuclear reactors. As many of you know, 50 percent of all electricity consumed by Duke Power customers is produced by nuclear power. We have demonstrated that nuclear can be very safe, very environmentally clean, it can be very reliable and it's very cost competitive.

The use of MOX fuel is not new in the world. It is being used in Europe, for the last several decades many French and other European clients, clients that are very similar to ours. It's not new, it's not experimental. I've personally been to France and looked at the MOX fuel fabrication facilities, as well as talked to the reactor operators, and fully believe that we can operate our

plants using their technology. The French are part of the team who are working -- who are sharing very openly their technology, their knowledge and their history.

Some here have voiced and many others think there's a difference between weapons-grade plutonium and reactor-grade plutonium. We've looked at it. We've studied it. There are slight differences, but the way the plant actually operates is no different. It is the same sort of operation. We believe that this is not a research and experimental program. It's a program that can be done and done very safely.

I'm also aware that many in this room might think that the use of MOX fuel at our facility will decrease safety or shorten the life of our reactors. I can tell you that is absolutely not the case. We will not allow that to occur. I want to personally assure this community that our goal and our aims at Duke Power is to try to operate these plants safely. I have absolutely no motivation to not operate these plants safely. We have obligations to our neighbors of which we are them. My only child, my daughter-in-law and my grandchildren live close to Catawba. I have every reason to want to keep that

plant operating and operating safely. The 4400 employees of nuclear generation understand that having a safe plant is an absolute condition, it is a requirement if you and your neighbors allow us to operate our plant. You have given us your trust and we will not abuse that.

We're not going to use a product, MOX fuel, that would cause us to have worries about investment in our nuclear power plants. Some would believe that the only reason we're doing this is corporate greed. Let me assure you, nothing is further from the case. What we're trying to do is do something that's useful, that will help non-proliferation of the world. That's our aim. Nuclear generation in our company is the lowest cost generation. Fuel cost is a very small fraction of what that total cost is. This will not have an economic impact one way or the other relative to the use of nuclear generation.

More importantly, we have families, like I say, that live and work here too. We have a strong need for nuclear safety. The proceedings tonight are related to the licensing and manufacturing plant that will be built 150 miles from here on a Department of Energy site between South Carolina and Georgia. The

earliest we will receive any fuel here will be 2007. Well before that, before we do anything at all, a separate branch of the NRC, as Bob Martin has described, will thoroughly examine and look at our license applications and our technical work for the opportunity for the public to examine that technical work that we do, with an opportunity for the public to have comment relative to the environmental impacts of the use of MOX fuel in this area. If we do not feel comfortable with Duke Power submitting that application we will not submit it. We have to feel very comfortable that what we're doing is safe for our plant, for our neighbors, for our reputation. Only then will the Nuclear Regulatory Commission get it and then they will have the opportunity to review it. Absolutely nothing will take place until we're all very satisfied.

We urge that this licensing action that you're presently considering, that is, the MOX fuel fabrication facility stay focused on that particular aspect. The other, as I mentioned, will have an opportunity later on, and you should note the impacts of the MOX fuel on the level of the community in and around the Savannah River area. We also make a request that as part of your review you use the

considerable work done by the Department of Energy in the environmental impact statement. Theirs is a very thorough document.

Once all the testing is complete and we receive the confidence to submit a license and the NRC has confidence to approve that license, only then will we use MOX fuel in our plants. Years ago when we first became involved in this we thought we had the capability to perform this work for the Department of Energy, for the government. We still believe that --

MR. CAMERON: Can I ask you to just sum up?

MR. TUCKMAN: Yes, sir. It's important to remember one point. The purpose of this project is to reduce the inventory of the world's weapons-grade plutonium, and that's what we're trying to do and do it effectively, produce electricity in combination and help make the world a safer, better place to live. Thank you very much.

MR. CAMERON: Okay. Thank you, Mike. Janet. Janet Zeller.

MS. ZELLER: My name is Janet Zeller. I'm executive director of the Blue Ridge Environmental Defense League. We were organized in the mountains 17 years ago and now have chapters across North Carolina

into South Carolina, Tennessee and Virginia and we have two chapters here in Mecklenburg County, and I'm speaking on behalf of both our members here and all those people who live along the transport routes and who would be affected also in the adjacent area.

First, I want to state that the Department of Energy did not do an adequate job of evaluating whether this program is needed or not, and since DOE abrogated its responsibility I call on the U.S. Nuclear Regulatory Commission to evaluate whether or not this project has implications far beyond the 34 tons of surplus plutonium that is supposed to be addressed by the creation of a multi-billion dollar fuel fabrication plant at Savannah River Site. It's simply absurd to assume that taxpayers are supposed to pay a multi-billion dollar price tag for a fuel factory and have only 34 tons of plutonium converted into fuel for reactor use. So the entire impact on creating this fuel factory, especially on the southeast, needs to be addressed in the scoping documents.

In addition, I want to point out that last year in their application for expansion of their fuel pool then Carolina Power & Light, now Progress, added a big addenda to their fuel pool application which was

for plutonium fuel -- irradiated plutonium fuel waste, and so that little study done by a consultant is certainly not an adequate evaluation and the NRC needs to eliminate -- as we asked then and got no reply, eliminate that from the application as their decision-making at Sharon Harris.

What's going to happen is that this monster that has to be fed is going to put weapons-grade plutonium on our roads. It's going to put the fuel that actually is a terrorist target on the routes throughout the southeast and NRC must evaluate those impacts. Even the Department of Energy has admitted that operation of nuclear power plants with plutonium fuel rather than uranium oxide increases the deaths in certain accident scenarios. One accident scenario had eight percent more deaths from use of plutonium fuels rather than uranium. Another has 14 percent, and so what kind of risk is acceptable to the people of McGuire and Catawba when even the Department of Energy which routinely underestimates the risk of ionizing radiation has admitted that it's more dangerous.

And exactly what kind of risks are we talking about? Cancer is routinely looked at by federal agencies when ionizing radiation impacts are evaluated for health results, and yet ionizing

radiation not only causes cancer, which it does in several organs in the body, but it also causes immune deficiencies. It also causes genetic damage, and so the Nuclear Regulatory Commission needs to look at the non-cancer risk for this dangerous proposal.

This last week Congressman Lindsey Graham introduced a bill in the U.S. House of Representatives, the number is HR-1679, and one of the things that this bill will do is re-authorize the Price-Anderson Act, and the Price-Anderson Act limits the liability and limits the maximum assessments for nuclear accidents or, as they call it here, nuclear incidents, and the limits are just -- you know, the limits are spelled out right here in the existing law and then also in this new bill that would also limit the liability and limit the damage that could be recovered by people who are hurt or environmentally damaged from the use of plutonium fuels. The whole statute in this bill on plutonium fuel, and what they've done is say that the maximum assessment for an incident for the licensee is going to be $20 million. Well, a few years back (indiscernible) did a study of a high level nuclear accident involving high level nuclear waste and his assessment was that cleanup cost could be for that one accident $4 billion. So who's

going to actually pay the price? Well, it's spelled out right here. It's going to be the United States taxpayers. There's indemnification. In this indemnification everything above $20 million is going to be paid by the U.S. taxpayers up to a total cost of -- amount of $10 billion, and so we're not protected certainly from this dangerous proposal. And so what I'm doing tonight is asking the Nuclear Regulatory Commission to put a license condition on this plutonium fuel project that plutonium fuel cannot be covered by the Price-Anderson Act. If Duke is going to do something that is more dangerous admitted by the Department of Energy then it should not have the right to be covered by taxpayer indemnification and liability limit. Thank you very much.

MR. CAMERON: Thank you, Janet. How about Dennis Cameron.

MR. D. CAMERON: And we've never met before.

MR. CAMERON: That's true.

MR. D. CAMERON: I'm Dennis Cameron. I'm with the North Carolina Municipal Power Agency which is a co-owner of the Catawba Nuclear Station. I'm manager of the North Carolina Municipal Power Agency.

We own 75 percent of Catawba Unit 2. I'm here as an individual tonight.

I have lived in Clover, South Carolina, approximately 13 miles from the Catawba Nuclear Station for the past 20 years. Prior to that I was born and raised approximately 30 miles from Savannah River Site, and the economic impact of the Savannah River Site on my area had tremendous economic benefits to my family, my friends and neighbors from the work done there, and I can say from that that if it was not for the economic impact I would not have had the opportunity to attend college and to further my education. Also, my friends and family and neighbors would not have enjoyed the standard of living that they have enjoyed over the years as a result of the Savannah River Site projects conducted there. As well as nuclear power throughout South Carolina we know the importance of nuclear power throughout the world and the importance it plays in the supply of electrical energy to us each and every day.

The MOX fabrication project is one that will take plutonium and use it in a peaceful practice rendering the plutonium no longer useful for weapons and mass destruction. The fabrication and use of MOX fuel is not a new technology. It's one that is proven

and has been successfully used in Europe over the past years. I encourage you, NRC, to consider the success of the program in Europe, also the MOX program is a positive step forward in material that was meant for destruction and using it for peaceful means and no longer allow that plutonium to be used in weapons, and also it will provide economic benefits to the Carolinas and the people of the Carolinas.

I have -- I believe that although there are other methods of rendering plutonium unusable that the MOX fuel technology is proven, and it's the best option available to us to use in the rendering of plutonium unusable state of weapons and mass destruction. I have full confidence in DCS's ability to carry out the operation and management of the MOX fabrication facility in an appropriate and safe and efficient manner without any danger to the environment. I know personally from the employees at the Catawba and McGuire Station and my neighbors who many of them who are employed by Duke, their one concern and number one priority is the safety and health of the public and the neighbors and to operate those plants in the most safe and efficient manner that they can. Safety is the number one priority and that is put ahead of everything else in the operations

of these -- of the Catawba and McGuire units and I have full confidence in their ability to continue to operate these units even using MOX fuel in the reactors at the unit. Thank you.

MR. CAMERON: Thank you, Dennis. We're next going to go to Denise Lee and then to Joe Troutman. Denise.

MS. LEE: Good evening. I appreciate the opportunity to be here tonight. My name is Denise Lee. I'm on staff of the Blue Ridge Environmental Defense League. I live in Anson County, North Carolina, and I am afraid I will be on one of the transport routes. I'm here because I'm concerned that the NRC did not include the detailed analysis and an evaluation in the EIS of emergency preparedness along the plutonium transport routes. The DOE simply checks off whether a transport corridor community has an emergency response program without really looking at an assessment of minimum and maximum capability.

The NRC EIS should make recommendations for needed training, equipment, and added personnel for first responders. The cost of necessary upgrades must be included. 80 percent of first responders in rural areas are volunteers. The NRC must outline in the EIS the procedures for notifying state governors

about plutonium shipments and states' responsibilities for added security and other measures. In the mid 1990s Governor Jim Hunt called for a helicopter accompaniment at the cost of over $70,000. Medical facilities along transport routes seldom have adequate radiation wards for accident victims. The EIS must include the complete assessment of medical preparedness on the transport routes.

I want to bring this a little bit closer to home. I want to bring it to my home. I want to tell you that in my community, in my county our emergency people are all volunteers. These are people that work full-time jobs. When there is an emergency, when there is a fire these people are called off their jobs. When they have to go and work their jobs they're already tired, but they have to go and respond to emergencies. Where does the equipment come for these facilities? They come from people getting together and holding barbecues, going door to door and begging for money. How in the world does the NRC expect the community fire departments and rescue squads to be able to have the equipment to be able to respond to an accident of this magnitude? They can't. How many of these people, how many of the NRC people would want to have to respond to a radioactive

accident in a HAZMAT uniform? How many of the NRC people have gone along the transport routes, sat down with these volunteers and asked them what they needed? How many of the NRC people have actually informed them of the dangers of such an accident? I am inviting them to come to my community, come to my county, sit down and see what kind of response you get. Let them tell you what it's going to take to make us prepared.

If there's an accident, where are you going to take them? Are you going to take them to our hospital, contaminate our hospital? And then what are we going to do with the people that get sick in our county and we can't take anybody to our hospital because it's contaminated? You need to go back to the board and look at what you're proposing. Duke Power is doing this for greed and don't let them fool anybody. This is all about money. Thank you.

MR. CAMERON: We're going to go to Joe Troutman and then to Don Moniak. Joe.

MR. TROUTMAN: Good evening. My name is Joe Cornelius Troutman, Junior, and the good folks that are from around here may figure out that I am a local boy and my family is from around here and has been for a few years. I have every confidence in Duke and that they can operate the Catawba and McGuire

stations safely and efficiently, and I know that Duke would not be considering using MOX in their facilities if they had any doubt that any possibility of jeopardizing the public and their investment in their reactors. They feel comfortable they can do this or they won't do it. There's too much money involved in those Duke facilities. They're not going to jeopardize their facilities.

The surplus plutonium is real. It's there. We've got to deal with it. This option is the best option available. It's the only option that destroys the plutonium. It burns it up in the reactor. I have not heard any claims or any problems with using MOX fuel that to me are legitimate to say that this fuel is not for use, and I have every confidence that the NRC is going to review everyone's concerns here and that they're going to take these into consideration, but I believe that the MOX fuel ultimately will be approved and it will be used safely and efficiently in these reactors. Thank you.

MR. CAMERON: Thank you, Joe. We're going to hear from Don Moniak next and then Connie Kolpitcke. Don.

MR. MONIAK: Hello. My name is Don Moniak. I work with the Blue Ridge Environmental Defense

League, and I'd like to say this process is already unsafe even though they have it fabricated into fuel because safety is not a -- you don't base your safety around how many accidents you have. I'm driving down the road and I'm violating the speed limit. Am I safe because I didn't get caught? NRC would like you to think so because that's their way they present their politics. I run a red light and I get caught and then I get caught speeding. I go to my insurance agent and say, hey, you know, I didn't have a collision, nobody died, I haven't been convicted of manslaughter yet, I'm safe, it's just me speeding. I just violated a few rules, please don't raise my insurance rates. Yet we routinely hear from the nuclear industry and other industries as well, but I find the nuclear industry to be more guilty of this habit, they define safety by what they didn't do, not by what they did. They didn't have an accident, they didn't kill anybody, they didn't contaminate the environment.

Yes, Duke Power does not want to damage their facility and investment, that's a given, but Union Carbide didn't want to damage their facility in Bopal. They didn't want to kill, three, 4,000 in an accident. It wasn't an accident, it was murder. It's that simple. Corporations are largely driven not by

safety concerns but by equipment concerns, investment concerns. They only keep radiation down because radiation doesn't only harm people, it harms equipment. One of the big issues in the nuclear weapons stockpile this day is the irradiation of small parts, and nuclear weapons are full of small parts. Plutonium is just a trace.

This is an actuator, electro-explosive device that was taken apart at the (indiscernible) nuclear weapons plant. It's from W44 or W45 weapon that was used to set off a chain of events. It's just as important to that weapon working reliably as the weapons designers state as a pit. A pit is a trigger. I give you a trigger to a gun, it doesn't mean you can shoot somebody.

Duke Power has shown that they do not understand plutonium if they claim to be stating the truth today. Weapons grade plutonium is vastly different. That's why they use weapons-grade plutonium instead of reactor plutonium in weapons in stockpiles. However, all plutonium can be used in weapons. That is a fact. If you want to argue with that I suggest you argue with Edward Teller, father of the hydrogen bomb, who six years ago said the greater proliferation threat in this country is the tens of

tons of plutonium and irradiated fuel that no longer meets the spent fuel standard. Now, I'd like to see you go toe to toe with Edward and tell him that, oh, you can't make a bomb out of reactor grade plutonium. I'd like to see that. That would be very comical.

There's a parallel process going on here. It's also not safe because how could it be that the agency that's responsible for ensuring safety cannot answer basic yes and no questions? How much plutonium is in MOX fuel? It took two tries. That shows that there's a disconnect. This is a system. This is not a fuel plant that gets licensed and then a reactor gets evaluated later. This is a system because this is a contract, and the fact is is Virginia Power is still on the name of that contract. There's been no amendment. If I am wrong about that let me be corrected now, but they sent me all of the amendments and Virginia Power is still on that contract. The NRC has to evaluate Virginia Power at this point in time. Virginia Power may have stated they're not interested, but they're named in the contract.

I'd like to touch on some transportation issues.

MR. CAMERON: And Don, could you just sum up for us?

MR. MONIAK: Yes. Yes. I know you gave Duke Power five minutes, 20 seconds so --

MR. CAMERON: You're going over five minutes and 20 seconds, though, that's why I --

MR. MONIAK: Please. Because the Nuclear Regulatory Commission -- we would have more time tonight if you were capable of answering the yes or no questions with a yes or no.

MR. CAMERON: Don, Don --

MR. MONIAK: They're simply, basic physics that you are supposed to know off the top of your head because you're the experts. Well, because you're the experts, we can't ask questions at NRC meetings yet the NRC at meetings do not answer questions.

MR. CAMERON: Don, you've got 50 seconds, okay?

MR. MONIAK: Okay.

MR. CAMERON: Thank you.

MR. MONIAK: Thank you. The NRC at their public meetings can't answer technical questions that are simple in their nature. There's going to be more plutonium burned in Catawba than what they said a year ago, three times almost even though Department of Energy is

going to irradiate less plutonium in the whole program because Virginia Power allegedly dropped out. There's going to be more shipments because the Department of Energy in their evaluation falsely claims in their final EIS -- that EIS is a fraudulent document, it's a work of art. They falsely claim that there will be four fuel assemblies in containment at the same time the Duke COGEMA Stone were already negotiating to build one of three fuel assemblies in containment.

MR. CAMERON: Don, thank you. I have to ask you to step down.

MR. MONIAK: Please, I'm -- let me just conclude. This is not the process it's supposed to be. The NRC is behaving just like the Department of Energy, and frankly, if they can't answer how much plutonium is in MOX fuel which is right in their own documents every day then they should not be trusted with this environmental impact statement. Thank you.

MR. CAMERON: All right. Is Connie Kolpitcke still here? And I apologize for mispronouncing your name.

MS. KOLPITCKE: The last name you pronounced right. It's my first name, it's Constance.

MR. CAMERON: Okay.

MS. KOLPITCKE: Thank you. Thanks to the NRC for giving us this opportunity. I don't have a formal speech. I just have a few quick notes and points to make that I'm a Cornelius resident who lives just a few blocks from malfunction junction, otherwise known as Exit 28, and I would hate to think that an accident would cause an evacuation. It would be a nightmare on the exits to Interstate 77 around Lake Norman. It would just be horrendous.

Although I am sure that the employees at nuclear power plants around the country feel confident in their own safety and that everything is being done that can be done to protect them, I imagine that similar employees at power plants that have had accidents such as Three Mile Island felt that way. I think that if the NRC is going to proceed with looking at the licensing of the Savannah River Site and having the fuel go to McGuire and Catawba that every possible test should be run to make sure that the highest standards that would prevent any possible accident that might be too expensive, perhaps the other alternative would be to use immobilization of the weapons grade plutonium.

Finally, I would like the Department of Energy to consider as part of its mission emphasizing

to the public, to the American citizens that we should control our use of energy, we should change our lifestyle. We should adopt zero population growth and we should cut back on our use of power. Why build a three-story home when you can get by with six rooms.

MR. CAMERON: Thank you, Constance. We're going to go next to Bonnie Ward and Claude Ward and then I'm going to ask -- we're going to do a little change of pace. We have some guests, some visitors from Russia with us tonight and there are six different groups, but I am going to ask Natalia Mironva as their spokesman to come up and give us a presentation, and first, Natalia, let's see what Bonnie -- Bonnie Ward --

MR. WARD: We were originally pulled so that they would have more time so eliminate our names.

MR. CAMERON: Okay. Well, Natalia, thank you very much. Natalia, are you ready now? Okay. And we're going to give Natalia, since she does represent six groups and the Wards graciously decided not to talk, Natalia, we'll give you twice the allotment, okay, so go ahead.

MS. MIRONVA: Thank you very much. I (indiscernible) and I appreciate this ability to talk to this American group and American officials, this

very important information MOX production. First I would like to say I am energy engineer. I am working -- I am from a representative working with nuclear operations more than ten years and we talk of this action with government, we discussed this action involving the same questions. In our Russian team, we are here because we understand political base of MOX fuel proposal, and we talk with American government this question. Our Russian team, we have representative of (indiscernible) and we discussed with Americans our questions. We have nuclear physicists from Krasnoyarsk. Krasnoyarsk is the main nuclear site in Russia, and also we have on our team representative of young generation. She's a student and she will talk about -- she will like to talk and tell you about Russian society position, Russian society.

At first, of course, I believe the scope -- the scope pages that are -- this -- part of our agreement with United States and Russia for authorization of weapons and mass destruction, but how you listen from our American colleagues. Most Russian didn't never -- didn't never go on the site plutonium problems. Plutonium will growing -- the mass of plutonium will growing and growing, and we're -- this

cost of this plutonium -- of plutonium, how do you say, began -- this plutonium project through the Russian state structure. We've discussed this -- our nuclear regulatory committee would name worse (indiscernible), and the Russian say that to put plutonium into MOX is similar to like make golden toilets. Of course I understand that he say this -- this official I must fear because he discussed this (indiscernible), but his strong position that plutonium is not solution -- MOX is not solution of plutonium problems.

Of course, disarmament, which is political coercion, and from my point of view and how I saw all this meeting, MOX is much more plutonium (indiscernible) than technical decision. MOX program from my point of view like engineer is a MOX project is very questionable. Russian nuclear scientists make a lot of investigation in MOX -- in plutonium oxide and the plutonium oxide is very much aggressive in the environment when there is plutonium oxide. This tribune, they have very high level of mitigation for civility, so this is why Russian nuclear scientists tried to look other kind of plutonium construction, for example, (audible) plutonium for something other. It means that plutonium oxide is not in our decision

so from my point of view we need to wait, we need to wait because our scientists don't find their decision.

On the same page you can't write, you can't read, the MOX fuel introduced for use in domestic commercial nuclear power plants, and my question was about how many plants will they construct, how many (indiscernible) because I know from Russian experience that (indiscernible) MOX costs $2 billion for 800 megawatt. From Russian investigation, we can only call a reason if we want to have MOX -- if we want to have plutonium based industry profitable we need to construct more of it between 50 and 70 (indiscernible) breeders. Breeders is very close to meeting the problems, so the most -- (indiscernible) how we -- both our nations believe that we can do a MOX nuclear design.

So I would like -- I understand, this is very clear, I understand that two parts of society discuss this problem. One part or one group has jobs, and one has money and second part who are afraid about safety, afraid about future. So this is very similar like we have this same kind of discussion in Russia, and I would like to ask Nuclear Regulatory Commission to understand its own role in this difficult (indiscernible) so when discuss about MOX, MOX fuel

fabrication from MOX nuclear reactors. We need to look further and we need to be sure that the public will have technical protection measurement if the incident would happen or something other or all (indiscernible) MOX production will be operated. From Russian experience, from Russian processing plant, we had a huge combination from plutonium process and plutonium (indiscernible). So I think that the problem is much more higher than Duke promised us in this paper. He reports it is cheapest, it is safe -- has much safety, it is better. I think it is not a (indiscernible) or Duke is not a (indiscernible) a reality. So I ask you with very clear that we are connect by our plutonium (indiscernible).

MR. CAMERON: Thank you. Thank you very much. Natalia, can I just ask you -- thank you for being here. Could you just tell us who your colleagues are there?

MS. MIRONVA: First of all I would like to introduce Vitaly Khizhnyak. He is a doctor -- he is a Ph.D, a nuclear physicist. He is a former official on the Nuclear Regulatory Commission in Krasnoyarsk region and now he's a -- vice-president over Non-Proliferation Center in Krasnoyarsk. And Andrei Talevlin. He's fellow (indiscernible). He is also

vice-president of non-government (indiscernible) organization and he initiate and support our group environment against nuclear site MYAK to stop dumping nuclear waste into the environment. So he's hero. And Ekaterine Akhmadeeva. She is a student. She is a vice-president of student environmental and ecological organization. She's -- she participates in public action and she participated in public moratorium over the (indiscernible) contamination of our region.

MR. CAMERON: Okay. Thank you. Thank you, Natalia. We're going to go to -- at this point over to Pete Cauley and then we're going to go to Greg -- is it Jocoy?

MR. JOCOY: That's close enough.

MR. CAMERON: Joe Cauley?

M R . J O C O Y : Jocoy actually.

MR. CAMERON: You were not going to come up here unless you heard your right name. I don't blame you. Okay. Joe Cauley.

MR. CAULEY: My name is Joe Cauley. I'm just an ordinary citizen so I have a view from kind of the outside, and I can see that there's an obvious strategic advantage to taking weapons and turning it

into MOX for peaceable consumption and production of oil energy. When I looked at this proposal I asked myself are the people who are running it reasonable and prudent people. As an outsider it's real hard for me to measure how prudently have they evaluated the transportation questions, how prudently have they measured the risks of running a hotter fuel in these reactors that might not have been designed for, how carefully have they evaluated the potential for accidents. So I don't know that, but here is one thing I can look at to measure how reasonable these are. I note that for 60 years we've had sustained nuclear reactors. I think it was the outside of Chicago that was the first critical -- 60 years we've had nuclear fires and we know that nuclear fires produce nuclear ashes. So I've asked the question of what are we going to do with the ashes? For 60 years we've known this and what has the industry done? They've talked and did their studies and do we have a long-term facility to store nuclear waste in this country? No. We're studying it. Part of the environmental protection statement says there is a geological repository as part of this program. Well, I haven't seen it for a long time, years and years and years. When the nuclear industry showed us that they

have a functioning and long-term facility then I might be willing to believe that these are reasonable, prudent people who knew that they were going to produce waste product and made some provisions for it. Until there is such a facility I'm a skeptic. I say they do have waste products, they haven't made reasonable provisions for it, so until we have such a functioning facility I think the Nuclear Regulatory Commission owes its ordinary citizens to say let's not approve a potentially dangerous new program until they've established some credibility by attacking a known problem that's been there for years and years and which they're still studying, and which I suspect the industry may want to study for another 60 years rather than putting up the money and solve what they know about.

MR. CAMERON: We're going to have Mary Kelly come up. Mary.

MS. KELLY: Thank you. My name is Mary Kelly and I'm with the League of Women Voters for South Carolina. I appreciate the opportunity to speak at this meeting, and I thank Mr. Cameron for putting me on because I do have to go home to Columbia.

My concern is the situation at the Savannah River Site. I've been following nuclear

issues in South Carolina since the late '70s and we have -- and I've been at very many of this kind of meeting usually conducted by DOE. We in the league have really taken a big part in trying to educate the public about nuclear power, nuclear waste and all the issues that are attendant upon that.

South Carolina is often referred to as the nuclear state because we have such dependence on nuclear power. We've got seven reactors. We've got the Savannah River Site so it's heavily contaminated. We've got to burn low level waste product which has become so contentious. We are greatly concerned that the Savannah River Site has become the collecting point for all the plutonium in the United States. Other sites in the country are being cleaned up at the expense of South Carolina.

We are all well enough informed that plutonium is very, very dangerous. If it gets into the environment it's got health effects. If there are critical accidents we could have a major explosion. We're also aware of the dangers posed by the (indiscernible) high level waste tanks that are still being dealt with. Only two have been closed down and they've been the subject of concern for many, many

years. Manufacturing MOX at the site will add to the amount of waste that will be there at least in tanks.

We're greatly concerned that the money for the cleanup of this site has been cut off supposedly only for this year. However, it's really indefensible that that has happened because this is a site with major, major contaminations and it needs to be cleaned up. The government needs to keep its promise to people in South Carolina.

In the scoping -- in the EIS for which we are holding this scoping meeting, we would like to see a number of things addressed. We want a review of the status of the Savannah River Site included a full and candid review of existing environmental and nuclear waste problems. We want a full and candid review of the status of all the nuclear materials held on site. That should include a summary of all the plutonium and an evaluation of its condition and the dangers inherent and the condition of the plutonium.

I am a chemist by education, and it concerns me greatly when I look at some of the things that we are trying to do and that they fail to do at the Savannah River Site. I think they just underestimate some of the problems that are inherently chemical problems. We're always hearing from

engineers, we're hearing from businesses, but if you read more about plutonium you will find out that the chemistry of plutonium is not fully understood. They need to concentrate a lot more on that I would say.

We need a discussion of the criticality issues. We should have a series of risk assessment analyses including worst case scenarios. Risk assessment is a good thing. However, you have to select the right scenarios to put into your risk assessment and you can't say we're going to not compare an explosion, say, because this is never going to happen. To have credibility with the risk assessments they've got to be as comprehensive as possible and include worst case analyses.

We need to evaluate the danger and condition of the various radioactive wastes being held on site. We need to be told about the impact of the MOX fabricating plant operations, how much waste will be added. The other problem is we all know that there are spent fuel rods at current nuclear reactors with no place to go because we pulled them out and a final waste site has not been fully authorized and, yet we are going to be producing more and different nuclear waste, and there's a big problem with how much heat is given off by any of this.

Those are all factors that have to go into evaluating if that's a use of MOX. There needs to be a full review of transportation and storage issues. Will the tests that we have devised be suitable for the new MOX --

MR. CAMERON: Can I ask you to sum up, Mary?

MS. KELLY: Well, that pretty much says -- that pretty much takes care of what I wanted to say except for the fact that the NRC should hold some meetings in Columbia. The people of South Carolina should be addressed by these -- by people speaking at these kinds of concerns. We have meetings in North Augusta which draws in the cheering section from the people who have jobs, run businesses and so forth, but -- and they have a vested interest because the money is livelihood, is a very good living. We need to have these meetings in Columbia so that the state officials can learn about these things and the media, which is largely based on Columbia, will also give exposure to what we're talking about, and thank you.

MR. CAMERON: We're going to go next to Greg Jocoy and then we're going to go to Kitty Boriske and then to Mary Olson. Greg.

MR. JOCOY: Yes. Thank you. I want to thank -- let me see here. Okay. I go to a meeting every Thursday and we kind of try to put a limit on ourselves in terms of time, so hopefully I can keep a good close eye on the clock and do that myself with a little bit of self control.

Thank you to the Nuclear Regulatory Commission for being here tonight, most especially those of you who are on their staff. I know that you're, you know, getting compensated for being here, but it's also, you know, well past beer thirty, so I appreciate you all being here.

You all face a really particularly difficult challenge. Nuclear power currently supplies about 20 percent of our nation's electricity needs. Through rigorous adherence to NRC safety regulations the agency is confident that the production of nuclear fuel is a safe and valuable contribution to the continuing supply of nuclear power in the United States. Right out of your document that I got today, it makes it sound like a cheering section for the nuclear industry, not their regulators. That's a problem for some of us.

The Department of Energy is the department of nuclear bombs. That's their primary

responsibility, okay? Let's separate the Department of Energy from the Nuclear Regulatory Commission and keep our focus on the Nuclear Regulatory Commission regulating the health and safety as your documentation up here on the wall indicated is your primary focus. I believe that for you folks as individual people that is your primary focus. However, the people at higher levels, the government officials and so on like that who kind of oversee the entire program may not have the same level of concern as you do for those types of issues.

I swore I wasn't going to be nervous, but I am anyway. I can't remember his name to save my life right now, but -- with Duke said that the -- addressed the issue that someone else brought up earlier, this gentleman over here. What we learned in kindergarten, we're not supposed to make one mess unless we've cleaned up the one that we've already made, and that's not what we're doing. We're proceeding to make a new mess before we've cleaned up the one that we've already made. And let's not fool ourselves, we made it for our own benefit, for all of our benefits so we all have a responsibility, and I hope that each of us who are here tonight, no matter what side of the issue you stand on, will go beyond

this meeting tonight. Write those comments to the NRC so that they can review these, and take the next step, contact your city council person, contact your county council person, make them aware of your feelings so that they can then pass those feelings on to other people.

And the gentleman from Duke Power, I've got to tell you, if I'm a stockholder in your company and I hear you up here saying that, you know, profits are not your primary motivation I'm going to be real unhappy with you because, dog-gone-it I thought that's what I invested in your company for, you know, for you to make as much money for me as possible.

The equating of handling nuclear weapons grade plutonium is a question for the federal government to be dealing with, not a private corporation. You all make energy to make money. That's cool, we're okay with that. We don't want you to handle nuclear waste, okay, we didn't ask you to be a new company responsible for getting rid of nuclear proliferation. That's something the government's supposed to do, so you all can stay out of that, okay, that's cool by all of us.

I agree with the Price-Anderson Act. You guys want to do away with the Price-Anderson Act, you

can do whatever you want to because then they're going to go right into the pockets of every person who owns stock in these companies, and people who held their stock because they're going to know that if they own stock in those companies and there is a nuclear accident everyone who owns stock in those companies is going to be decimated -- and I'm about to run out of time here.

Jennifer said the decision has been addressed at least that she's aware of since 1995. Today is the 8th. We've got until the 21st to get in our written comments. Come on, please. That's not enough time. That's not fair. I mean, I've only been aware of this issue myself for, what, six, seven months, but you guys have known about it since 1995? Give us a break. I mean, I have kids. I've got a business to run. I can't necessarily sit right down and write out comments lickety split like that, I've got other things I've got to deal with. You need to extend that time, and I agree we need a meeting in Columbia because I live in Fort Mill, okay, and I appreciate the people saying, you know, hey, the Catawba plant's a neighbor of mine, I understand all that, okay? Get on 160. Try to get off that highway when the schools let out. If there's a problem with

that plant, I mean, you can't even get up there when the weather -- you know, when there's rain much less snow or ice or anything like that, and last of all -- oh, yes, the primary -- you know, the question of, you know, we wouldn't be doing this if, you know, we thought that it's -- we're not doing it to make money and so on like that, you know, this is being done by Duke Power and the other power industries to regenerate, to restart the nuclear power industry. We haven't built a new plant in 20 years or longer than that. That's why they're doing this because they want to regenerate the nuclear power industry because you get one bite of the apple and, damn it, that apple was Chernobyl. Thanks.

MR. CAMERON: Okay. Thank you, Greg. Thanks for being punctual on that. Kitty?

MS. BORISKE: Hi. My name is Kitty Boriske and I'm from Asheville, North Carolina, and I have the distinct honor tonight of reading a statement by the mayor of Asheville, Leni Sitnick, who could not be here to speak for herself. I've also been told by Chip that I have to edit it down as I go and I'll do the best I can with that because it's a little bit longer than he thought it should be. So I'll start with the third paragraph.

This says, "The Nuclear Regulatory Commission has the authority and responsibility for protection of public health, safety and our environment. I would like to underscore some reasons that the no-NRC action denial of any license for the use of plutonium as a fuel would best serve your mandate for such protection. First I'd like to remind the NRC that the question of a license to change the type of fuel used in these commercial nuclear power reactors is not strictly a business decision by Duke Power. To the contrary, the customer paying the bill for this program is all of us, the taxpayers. Global non-proliferation and national security needs has been given as justification for taking on the additional risks and expense associated with plutonium fuel. These dimensions also clearly extend this decision far beyond the Duke board room. The increased risks and real questions about whether plutonium fuel would actually serve the goal of reducing global nuclear weapons dangers are worthy of our attention. Since there is an approved alternative for disposal of plutonium, namely immobilization, these comments are not to be taken to imply that we should do nothing with the surplus plutonium. Rather, they are offered in the context of NRC's decision which is limited to

the licensing step for plutonium fuel production and use. Making weapons grade plutonium is a commodity for commercial trade, it's just not a very credible way to safeguard it from falling into the wrong hands. In the age of the Internet and a free flow of information, nuclear non-proliferation depends in large part on the control of weapons usable materials. Until the plutonium has been used in the reactor it can still easily be reused for a bomb. It has already been reported that Russian plutonium fuel produced in the twin fuel program under US/Russian accords may be exported to nuclear client nations including countries like Iraq and North Korea. How will the U.S. plutonium fuel program limit this delivery of weapons usable material?" I don't see how it can either.

"Indeed, the transportation of new, unused weapons grade fuel in the southeast is a real vulnerability of the U.S. program." I'll learn to read someday. "Asheville is not on the route between the Savannah River Site where the fuel would be made and the Duke reactors, but many other Carolina towns and cities are. On the other hand, Asheville could be directly impacted if there were to be even an unsuccessful attempt at a diversion of one of these shipments" -- let me skip down a little bit of this.

But she says, "The possibility of adverse consequences on tourism and seasonal residence, so vital to the economy of western North Carolina are very real," and I think that added perception is something that we all have to think about. It doesn't matter whether something actually happens because a lot of people think it might. We have to take that into consideration. "Members of the NRC's own advisory committee on reactive safeguards, composed of acknowledged experts has stated that there will be criticality headaches in every step of the way since the characteristics of plutonium are very different from uranium. Further, a member of that same committee, Dr. Dana Powers, has raised specific concerns about the vulnerable containment of Duke's four reactors. They are of a rare ice condenser design," -- and we've heard all that before. "What possible justification would the NRC have under the mandate of protection of public health, safety and our environment to license reactors which are already known to have a higher level of risk in the event of an accident. This is particularly startling since plutonium fuel is more deadly than uranium. What possible justification can there be for further jeopardizing this beautiful region and the lives of so

many?" And at the end she says, "As a public official who takes my role and responsibility very seriously I urge you to take all of these factors into consideration and refrain from licensing this very risky ill-advised program. Ms. Leni Sitnick, Mayor of Asheville."

I'm going to take one more minute for a personal statement. Other speakers have given you some of the technical reasons why the production of mixed oxide fuel in the Duke reactors is a bad idea, and many of them have more expertise in these areas than I do, so I'm asking for your indulgence when I speak on a bit more personal level. I've lived in western North Carolina all my life. My roots go deep here. On my mother's side of the family there were pioneers who settled here in the mid 18th century. I bring this up because it helps to explain why I am so angry to think that this land that I care so deeply about would be put at risk for as I see it no other reason than a combination of greed and short-sightedness.

As a child during the Depression era I lived in a household with my grandfather who had done legal work for Duke Power Company when they acquired land for their hydroelectric plant at Lake James, and

I grew up in Morganton. I was brought up with a view of Duke Power as a paragon of integrity and good judgment like some of you workers here spoke tonight. It has, therefore, been doubly distressing to me that Duke has allowed themselves to be brought into this scheme which all my research has convinced me makes no sense either from a financial or a health and safety perspective.

You who represent the Nuclear Regulatory Commission have both the power and the responsibility to stop this plan from going forward and for coming up with a better way of dealing with our excess weapons-grade plutonium. I urge you to take your job seriously and to do what you must in your hearts realize is the right thing to do. Thank you.

MR. CAMERON: Thank you very much. Going to Mary Olson and then Peter Siff, Robin Mills and Steve Nesbitt. Mary Olson.

M S . O L S O N :

Thank you. My name is Mary Olson. I am the director of the southeast office of Nuclear Information and Resource Service. We are a national organization with over 1000 grass roots organizations as members, folks who are concerned about commercial

nuclear power and its radioactive waste, and I'll set my three-minute timer.

Okay. The first thing I want to do is underscore that I agree with much of what was said tonight and I'll endeavor not to repeat most of it, but there's a few things I do want to repeat. One of which is the request for the comment extension because this entire program is a moving target. If you read the paper, the conditions and parameters are changing daily. President Bush has just threatened to cancel any funding for the Russian half of the program. In that light, we need more time.

The second thing I want to reiterate is that we are the clients here tonight, we who pay taxes to the United States. DCS and Duke are contractors to the Department of Energy, and so ultimately NRC needs to think of us as their client. Nuclear Information and Resource Service calls on Nuclear Regulatory Commission to deny the use of MOX in any reactor anywhere. However, we believe that the ice condenser should be categorically removed from the table immediately because of concerns that have been raised not only by the non-government community, but also your very own experts on the advisory committee for reactor safety and safeguards. As Dr. Ed Lyman says,

the containment at the ice condensers is tissue paper. There is no physical, structural containment at these four reactors. That's what we said about Chernobyl, and that's also what the nuclear industry in the United States and the Nuclear Regulatory Commission said about why there could never be a Chernobyl in the United States because supposedly we have structural containment at all our reactors. It's not true. The four Duke reactors do not have it, and they should be categorically excluded from any further consideration.

So what if Chernobyl had 25 percent greater health impacts in terms of fatal cancers? That's what we're looking at in terms of the amount of damage that MOX fuel would incur in the event of one of those large accidents. And what could cause it? Well, the most well characterized cause of such an major accident would be loss of power at the site and loss of backup power during a station blackout. I spent the year of 1999 educating policy makers on station blackout because of the concern about Y2K and what the energy delivery risks were through that rollover. Well, thankfully they did it, the homework was done, the fixes were put in and we did not have blackouts, but all you have to do is look at California and you understand why the NRC itself has

said that energy deregulation could be de-stabilized with more nuclear power because of the possibility of irregular delivery of electricity. And then you start putting experimental fuel into these same reactors that cannot tolerate station blackout? There's 25 percent more deaths. NRC, you have absolutely no reason to continue considering the Duke reactors. Take them off the table.

Okay. I've got three minutes. I have one minute to make all the other points, boy, oh boy. When it comes to your analysis, because I know you'll do one, please include the population dose. Just because they (indiscernible) doesn't mean you shouldn't look at it, and when you look at it please don't look at only the impacts at Savannah River Site or the impact at the Duke reactors. We have to look at the whole footprint. Yes, there is more plutonium in high level waste. I looked at the ACRS transcript and Mr. Johnson himself acknowledged that it's about the same and the DCS says it's 2.5 percent which is two and a half times more than what's in uranium fuel. So we're talking about more plutonium throughout this whole system. We're talking about increased worker doses at reactors and not just reactors. What about the nuclear laundries, what about the transport of so-

called low level waste? What about those accidents? What about the low level waste dump that's going to close before this fuel ever comes out? What's North Carolina going to do with the McGuire MOX irradiated so-called low level waste, uh? And what about the workers at those sites and what about the communities that are affected by the runoff and the air emissions and all that?

Okay. So you get the idea. It's the laundries, it's the low level waste, it's the air emissions, it's the water emissions, and then it's the high level waste, and I just want to mention that in the last week Department of Energy has decided they can't do a hot dump at Yucca Mountain. There will be a significant reduction in the high level waste that can go there. A previous director has estimated that only about a third to a quarter of this generation of reactors' waste will go to Yucca Mountain with what's called the cool model, less waste, not as hot. Well, MOX is hotter, so is North Carolina prepared to hold on to the MOX waste for the second or third repository or possibly the fourth? And this should be looked at by the NRC if there's any analysis of reactor impacts. Thank you.

MR. CAMERON: Thank you, Mary. We're going to go to Peter Siff and Robin Mills, Steve Nesbitt and Jack Gibb.

MR. SIFF: My name is Peter Siff and I appreciate the NRC coming to Charlotte today. I appreciate the country we live in because, for example, in France they're not allowed to give the information to companies like COGEMA that's not what's called public information, it's not allowed. And so I lived over in Georgia, I worked at SRS, I worked there six months because they polluted the water so severely over there the city put a 250,000 gallon water tank up in the air. We run pipes and pumps and filters so they could have clean water, but in the newspaper in the area, they don't talk bad about -- they just don't do that, and that's happened here in this town. This newspaper here, you don't really talk bad about people, and this business about the neighborhoods being clean, well, yeah, they don't give -- it's not the same thing as coal, that's true, however, comma, when the nuclear regulatory (sound system fails) from radiation come out that's routine. That's accepted. (Indiscernible) the operations that went on there, and only 20 percent of electricity is generated by nuclear in this country and over in

Georgia, there, that place was only four hours from a knock down because of a truck backed into a substation, and there's no guarantee that these people -- they talk good talk, but there's no guarantee, they cannot for sure say that one of those places won't melt down. It's no guarantee. That's why public they won't come close to insuring it because there's no guarantee, not one, and Duke is in it for the money because they get the federal tax money and then they get money for the electrical bill. They're in it for the money. How many letters of opposition in the Charlotte newspaper has anybody seen about the MOX program? Okay. Okay. What about the waste from nuclear -- what about all the waste, the gallons of waste that's sold to (indiscernible)? If's in the drinking water so they drill the wells. What about that? That's okay. So there'll be more. Now, with the current administration in Russia, we don't need (indiscernible)? Sure. What good is it? It's really sad to see the vice-president on the TV -- what are we going to do without clean water, what are we going to do. That's what we need to think about.

MR. CAMERON: Thank you, Peter. I've got Robin Mills, Steve Nesbitt. Robin Mills first.

MS. MILLS: I pass.

MR. CAMERON: Okay, Robin. We'll go to Steve and then we'll go to Jack Gibb -- John, John Gibb. Okay. This is Steve Nesbitt.

MR. NESBITT: I'm Steve Nesbitt and I'm a member of a local community here. I grew up in eastern North Carolina, moved to Charlotte in 1982 and I lived here in Charlotte city limits close to McGuire nuclear station however. I'm also the Mixed Oxide Fuel Project Manager for Duke Power so I come up here with a point of view. I'm not expecting to change anybody's mind that's in this room right now, but I do want to give you a few pieces of information concerning things that were raised earlier in this meeting, some questions that were asked, and also make a comment on the scope of the environmental impact statement.

First of all, a question was asked in the first part of this session about the use of mixed oxide fuel in the past and why it's being proposed for use in this project. I'd like to get a little more information about that. Mixed oxide fuel was first used in a pressurized water reactor in 1963 in the (indiscernible) reactor. There's been extensive demonstration programs for mixed oxide fuel in the United States and over in Europe. A fact that's not

known by too many people is the fact that many of the United States demonstration programs employed plutonium that was very close to weapons grade, much closer to weapons grade than reactor grade. The Europeans have been using mixed oxide fuel on a production scale since the late 1970s. Currently 35 nuclear reactors in Europe, Germany, France, Belgium and Switzerland are using mixed oxide fuel. They have documented evidence that the fuels perform safely and commensurately with the low waste draining fuel.

I'd like to address the question of the weapons grade versus reactor grade which has been raised a couple of times. In the report that the NRC referred to the fuel qualification plan, it provided an extensive amount of information that demonstrates that weapons grade MOX fuel acts very similarly to reactor grade fuel. In fact, if you look at how our conventional fuel acts in a reactor and how reactor grade fuel acts in a reactor, the weapons grade MOX fuel is even closer to conventional fuel than reactor grade fuel. So that issue is a red herring.

We got involved in this program -- we started looking at in 1995 shortly after the National Academy of Sciences issued its report which called the presence of surplus weapons plutonium in the United

States and in Russia as a clear and present danger to national and international security. It still is and nothing that's said tonight will make that danger go away. However, if we dispose of this fuel that will help make that danger go away. I would add that Duke Energy was chosen in a competitive process in 1999 by the Department of Energy and there were two other teams excluding other utilities who were offering their services to the Department of Energy to use mixed oxide fuel.

Finally, concerning the scope of the environmental impact statement. I recognize that the NRC is considering indirect impacts including reactor impacts in its proposed environmental impact statement for the MOX fuel fabrication facility. I find that rather interesting because to my knowledge there is absolutely no precedent for including those kind of impacts in an application to the Nuclear Regulatory Commission for a fuel fabrication facility. So if you do choose to go that route I think you need to address the point of the precedent in light of a departure from that precedent in your treatment of this issue. At Duke we're going to submit a comprehensive report to the Nuclear Regulatory Commission to address the impacts of using mixed oxide fuel in our reactors. We

anticipate a thorough review by the Nuclear Regulatory Commission, and we anticipate that after extensive review that we will get a favorable response from the Nuclear Regulatory Commission to let us move forward with this program.

However, we're concerned about the double jeopardy issue. We don't think it's appropriate for us to deal with reactor issues first in a MOX fuel fabrication facility license application for a facility that's hundreds of miles from our reactors and then again later on. So that point would need to be addressed in your environmental impact statement scope document as well. Thank you.

MR. CAMERON: Thank you, Steve. Next we go to John Gibb and then we'll go to Robert Mahood and then --

M R . M O N I A K :

I do have to point out that there are three other Russian guests here who --

MR. CAMERON: Don, Don, Don, please, let's not waste --

M R . M O N I A K :

I want to say this.

MR. CAMERON: Okay. Don, we're not going to waste any more time. I'm going to try to get our

Russian visitors up there for a short period of time so let's not waste any more time. John.

MR. GIBB: Thank you, first of all, to the Nuclear Regulatory Commission for allowing us to speak. I also want to thank both the Blue Ridge Environmental Defense League and Duke Energy; I went to both open houses last week. I see everybody I spoke with and I learned a lot.

I've lived in Charlotte about five years. Most of my life I lived in Chicago, both the city and the suburbs. The last 15 years there and the first two years here I worked for (indiscernible). They were and I guess still are the largest distributor of steel, aluminum, copper, plastic mill products in the country. In my time with (indiscernible) in Charlotte I did not work with Duke, however, I worked extensively with (indiscernible) both directly and more so with their subcontractors.

I've learned several things, one is the high importance of quality. In the metals industry there's something called a critical requirement to ensure quality control or for short CRM. This is put in place because of the demand which is -- there's no higher demand than material placed in the nuclear energy industry. Unfortunately, and this is why I

made my decision, I also learned that significant violations of this occurred by several contractors including people who would approach me to try to violate the regulations and by several of our competitors. One of them, and I can name these people because they're out of business. U.S. Steel supplied falsified documentation. They did supply correct material. The next, Keystone Tool, they took it one step further, found that they falsified material, but they deliberately substituted a very inferior grade of piping, piping that had no qualities to resist pressure which is required in the application. U.S. Steel supplied a severe civil penalties -- that's a little different at Keystone, they were jailed, neither one of these institutions is still in business. Now, you might think that somebody would -- to risk that would profits. Absolutely not. The initial gains they made were quite few. This calls for me to question the intelligence of a lot of people involved in this and that would be another point.

A few months before I moved to Charlotte I toured the (indiscernible) Nuclear Station. That's one of the plants in commonwealth Edison -- (indiscernible) in Charlotte. The reason I did this, I was taking a class at the time and a number of

people had expressed reservations about nuclear energy and the teacher who was very much for nuclear energy thought it would be a good idea to allay any fears. Although his intentions were quite good, regrettably the tour completely backfired. One of the reasons for fear were reports documented in the Chicago Tribune of people from the Nuclear Regulatory Commission checking on different plants and finding operators doing things they shouldn't, for example, being asleep while they were supposed to be monitoring critical activity. Not only did we find somebody who was not alert, but the entire appearance of the place, the reactor looking like a junkyard, employees were very rude and very dismissive of safety concerns. Now, and I think that the best summation was by our spokesman regarding safety -- everybody's got to die from something.

Now, I'm not equating that plant with Duke Energy, believe me. When I think of that plant I think more of the plant on the cartoon series The Simpsons, but still the point is is that it's under the jurisdiction of the National Regulatory Commission and I have the greatest respect for it. The point is that employees with less than ideal attitudes and behaviors can be a part, hopefully not long in a facility, but they can be there, and the problem is

that when difficulties arise at a nuclear facility they happen quickly, not over a period of months and months.

A quick example is remember Three Mile Island? Now, we sometimes think that was the error of very sophisticated data processing or reactions themselves. Remember that? No, the problem was a stuck valve, a stuck valve made worse by wrong, although well-intentioned, actions of some of the operators.

MR. CAMERON: John, I see you're ready to finish, right?

MR. GIBB: Yes. I have a lot of respect for the people I've met at Duke and I think they are highly qualified, but I have to tell you I am opposed to the whole program, not because of engineering, but with all of the things you can do with engineering, regrettably we cannot engineer out human failings and I feel that the difference that's going to help them with this is the consequence of human failings would be much worse if something happens.

MR. CAMERON: Is Robert Mahood still here?

MR. MAHOOD: Yes, I am.

MR. CAMERON: And next we'll go to Betty. All right. We'll go to Lou Patrie.

MR. MAHOOD: My name is Robert Mahood and I'm an environmentalist. I'm a retired psychologist. I've been interested in environmental problems around here for several years. I've been mainly concerned with water quality, but in looking at the paper every day to look at whatever is being said about the environment I have noticed over the years that nuclear dangers are remarkable by their absence, and this almost seems to be a national media blackout.

I'll give you one example. About 19 -- August 1998 I was on a train in Germany and someone left a copy of The Davelt on the seat next to me. That's one of their big newspapers, and I could read it so I read it, and the story on the front page there was a Green Peace that bought a an atomic bomb from a Russian lieutenant. They paid him $350,000, -- I bet there are about 150 in this room that could buy an atomic bomb -- there was an attempt and two soldiers had managed to steal it and deliver it to Green Peace, I forget, either Finland or Sweden, I am uncertain about it at this time, but anyway, bought and paid for and gotten out of the country. When I got back to the States I said, you know, I said to my friends, I said, hey, what did you think of that, and everybody said, never heard of it, never heard a thing about it. I

called up the Observer, nobody ever heard of it. I called up AP, they didn't have anything to say about it, and yet here it was on the front page of Davelt. It kind of reminded me of when I lived over in Europe during the Vietnam war and I would come home and tell my parents about the atrocities of the Americans and the south Vietnamese were committing and they said, oh, what's the matter with you, are you a Communist, never heard of anything like that. Kind of a news blackout.

Another story, this one from France. I was going down to (indiscernible) on a canoe with some friends, we went on the water for five days, went through many beautiful cities and villages and at one point we came to a place where there was nothing, where we were traveling pretty much fields of grass on both sides for several miles. And then we saw something big literally up ahead and it was one of the state of the art French nuclear reactors, and at first we thought we were going to have to portage around it because we couldn't find any way through it seeing nothing but the intake, but finally we found they provided a channel for us and we went around it, and then we went several more miles before we saw a house

or any other kind of human activity. It was isolated. It was out there by itself.

Now, we hear from a very distinguished gentleman from Duke Power how much Duke is concerned about our safety. Well, I think that may be so, they may be, and you shouldn't live encapsulated in such a little world that you only think about producing that power and you don't think about what the left hand of the company is doing because the left hand of the company is a wholly-owned subsidiary of Crescent Resources, and Crescent Resources, from which Duke makes plenty of money has been easily grabbing houses and strip malls and mall malls and cinemas and whatever it could possibly squeeze into every available patch of land that hasn't been bulldozed yet around the McGuire plant and you've heard people say what's already resulted. You can't get on to I-77 at three times of the day, morning rush hour, evening rush hour and noon. You can't get on I-77 from anywhere around Lake Norman. What would happen if there was some kind of panic.

Another thing, and I'm jumping around because I'm skipping all the things that -- or most of the things that other people have already talked about.

MR. CAMERON: Robert, could I get you to summarize?

MR. MAHOOD: I only have one more thing to bring up --

MR. CAMERON: Thank you.

M R . M A H O O D :

-- and I don't think I'll need to summarize anything. There is an issue of what we call thermal pollution. This is something that people who study ecological problems, problems -- of the things that live in and around the water, and we already have thermal pollution at Lake Norman. Lake Norman is abnormally hot because of the cooling activity that is taking place. I understand from what Duke has published itself and what NRC has provided me and so on, that the MOX fuel will burn somewhat hotter and therefore the cooling problem will be a little bit greater, they'll have to use more ice and more water to cool and that will result in even hotter water. Hotter water is changing the ecology. Somebody has been reporting -- several people have reported a 10-foot alligator in Lake Norman and they say that he probably survived there because the lake is now hot enough for the alligator. I'm not afraid of the alligator, some people are. Some people won't let

their kids in the water this summer because of it, but if you have an alligator you can have all sorts of ecological changes all the way down to bottom of the food chain microscopic level and that needs to be part of the consideration.

One other thing that you have not dealt at all with the question of terrorism on the highway. If I were a terrorist I'd be driving along on the road in my truck full of fertilizer and kerosene and I would be -- I would know that my buddy down the road was going to -- at a given point was going to drop this load on the road so that the traffic would have to come to a halt. I would be -- stay beside the plutonium truck, the traffic would come to a halt, I would stop my truck beside the plutonium truck, I would get out, I would climb over the fence and when I got about two miles away I'd call a certain number on my cell phone and vaporize the plutonium truck. That could happen -- from what they tell me the truck would be leaving about every nine days.

MR. CAMERON: Robert, I'm going to have to ask you -- let's got to Lou Patrie, and I do -- I don't want to rush you through, but I would like to at least give our -- each of our Russian visitors a little bit of time.

MR. PATRIE: I'm Dr. Lou Patrie. I am the president of Western North Carolina Division for Social Responsibility and I am a member of the board of the Western North Carolina Air Quality Agency, and I am from Buncombe County.

I am a critic of the statement that I picked up about the Nuclear Regulatory Commission's goal of informing the public about this matter. I've talked to people in Raleigh, Charlotte, Greensboro, Winston-Salem and Asheville and asked them what they think of MOX and they don't have any idea of what MOX is. I also notice that there is a scarcity of letters to the editor about the subject in all the newspapers of those areas except for Asheville. I also realize that upon receiving a little information over 160 of our citizens requested a hearing in Asheville last fall. Perhaps this meeting tonight is a partial response to that request, I don't know, but it's an opportunity that I did not want to pass up to come here. I wanted to contradict what some people say and support what others have, but in as much as weapons grade plutonium has never before been used, and I am talking about weapons grade plutonium, used in commercial reactors, these proposed actions are experimental. These experiments have potential impact

not only on the population of Mecklenburg County, but on the entire southeastern United States, potentially. The selection of McGuire and Catawba reactors has been questioned already. I think that still that there is further questions. What justifies the selection of reactors located in proximity to a major metropolitan area? These are questions that I think should be included in the scoping process. What data is used to ensure that weapons grade plutonium fuel will not adversely endanger operations involving the containment vessels and the operation of control fault in these reactors. What data supports the safe use of weapons grade plutonium fuel in such aging nuclear reactors as the -- what criteria supports the selection of these reactors considering they're dependence upon metal containment rather than thick concrete containment barriers. What criteria supports the selection of these reactors considering their dependence on ice cooling? This question has a basis recently confirmed by the Nuclear Regulatory Commission that should contain commercial power as well as backup power to any of one of these four reactors failed for even a few hours there is nearly a 100 percent chance of a serious reaction which brings to mind meltdown and Chernobyl. Are there not

various scenarios that could result in such catastrophe including severe weather events such as a major tornado, terrorist intervention or just an accident. What would be the financial, safety and health costs of such a scenario? What measures could be utilized to prepare the public for appropriate response to such an event? That's a question of mass evacuation of such a large metropolitan area can address and I'm not just talking about a ten-mile radius which the Nuclear Regulatory Commission mentions in their publications.

In the planning of experimental use of this fuel estimates of the extent of short-range and long-range mortality and morbidity have been made. Shouldn't such estimates be carried out and taken into consideration, the increased numbers of fatal cancers projected by the use of MOX fuel as compared to a comparable accident involving uranium fuel? Have area, regional and national medical facilities been identified as to their capacity to manage acute and long-term casualties should such a circumstance arise?

Now that the potassium iodide against thyroid cancer has been approved by the National Regulatory Commission -- the Nuclear Regulatory Commission, what provisions should be in place to

ensure that supply is available and the public is prepared in order that it be offered immediately and in sufficient quantities to provide protection to infants, young children and pregnant women from the risk of thyroid cancer and other thyroid conditions. I recognize that there is some disagreement among various international and U.S. agencies about the use of iodized prophylaxis, but to (indiscernible) for the above purpose has been established as opposed to not using it to a significant incident if warranted in its use. It's been estimated in terms of the extent of the resulting morbidity and costs to society.

Almost finally, are governmental and industrial nuclear experts going to risk lives, health, safety, our economy and the livelihood of our citizens in order to carry out this experiment? Finally, has consideration been made about public reaction to the entire nuclear industry should this experiment result in a major nuclear accident?

MR. CAMERON: Thank you, Lou. We have a short statement from three of our Russian visitors and then we have a few more speakers and then we'll be done and I would ask the first -- are you going to be first?

MS. MIRONVA: Andrei.

MR. CAMERON: Okay. Go ahead.

MR. TALEVLIN (By Translation): My name is Andrei Talevlin. I am from Russia from (indiscernible). Mox in Russia is also developing. We're also concerned about the same kind of problems that you have. Naturally, Russia has its own particularities, but plutonium stays plutonium and a nuclear reactor is nuclear reactor. We ask our government how many times does the gender increase -- accident increase if this reactor will use MOX fuel. Is transportation of MOX fuel safe -- (unidentified Russian speaker: spent) -- spent fuel? Will the population be able to control the fuel during the program? We have not received a good answer. The main task about the fuels into this nation is to make world a safe place to live. To withdraw plutonium from the cycle, for example, the project of immobilization of plutonium. Plutonium must be made inaccessible to reach and not to develop kind of problems as MOX problem. Thank you.

MR. KHIZHNYAK (By Translation): Last year we had a big international conference on plutonium problems, about the plutonium and MOX problems. We have here several people who visited us at that conference, Russians and Americans. We were not three

hours as here, but we were -- we had been working for five days. We listened our nuclear specialist from nuclear energy production, but we didn't hear any adequate answers on MOX fuel and using plutonium based energy. In Russia it's really a political problem and our politics they didn't used to listen to population of doctors, and scientists and environmentalists. That's why we cannot agree with MOX program, and that's why we suggest only one decision as immobilization of plutonium and (indiscernible). Thank you.

MS. AKHMADEEVA: Good evening. My name is Ekaterine Akhmadeeva, Chelyabinsk Young Ecological (indiscernible). Now there is a possibility of government (indiscernible). For example, (indiscernible) in Russia (indiscernible) they were dismissed, and my message is most of the plutonium problems as future generations have to deal with the consequences, consequences (indiscernible). Thank you.

MR. CAMERON: Thank you very much. Thank you. Let's go to Chuck Bietsman, Ann Weiss and Frank Summers and then we have two more people. Do we still have Chuck with us?

MR. BIETSMAN: Yeah. My name is Chuck Bietsman and I've lived in the Carolinas since 1974. I moved here from Missouri to go to work at a small newspaper in South Carolina where I met my wife and we had five kids and they're all native Carolinians now either in South Carolina or North Carolina. Plus I have cousins and uncles and aunts and in-laws all over both states and live in the shadow of many nuclear reactors, Oconee Station and the ones here, McGuire, Catawba. I've been a Duke Power customer for almost 27 years now. That didn't prevent them from turning off my electricity yesterday because I was a day late paying my bill. They're not in it for the money although tax dollars have built just about every one of their facilities and it's, you know, like TVA generated electricity it should be a public commodity and not something that can be shut off irresponsibly, and I've talked to many people, worked at -- I worked in the public schools now, I have been a writer, an editor, a journalist. I'm not a public speaker so I'll probably ramble on here a couple minutes. I'm very good at acronyms so you people like talking in alphabet soup, I'll write you a lot of alphabet soup up here and I'll get it over with real quick. But one thing -- I'm not mad about Duke because my power's

back on, it's just that we have very irresponsible media, one of which I worked for for many years, the Charlotte Observer, all of those is really fluff pieces that Duke PR puts out about this issue. Okay. But my main responsibility right now is educating children in the Charlotte-Mecklenburg schools, and that's what I'm here to ask the Nuclear Regulatory Commission to do is to help me and other educators of the school educate the children so they can go home and educate their parents who aren't getting any education from the media who are supposed to be the school masters to the public of which the oldest journalism school in the United States has some of which I'm a graduate and I'm also Clemson University, North Carolina's connection although I have this very strange sounding foreign name. Please help us, Nuclear Regulatory Commission, because we have an irresponsible energy company in this town serving this whole region and we have irresponsible media here who aren't going to help the children protect the environment that they're going to be living in for a long time I hope, and that's about all I have to say.

MR. CAMERON: Thank you.

MR. BIETSMAN: We'll be getting lots of these petitions to you from teachers and others.

MR. CAMERON: Thank you. You have a good voice, it carries very well. Thank you. How about Ann, Ann Weiss? And then -- we really need to be out of this room by ten-thirty so I'm asking people to try to summarize. Ann? Okay. Frank Summers. Leslie and Karen, but you don't need to do it as a duet.

MS. MYERS: Hi, I drove up here from Columbia, my name is Leslie Myers and I work at the environmental (indiscernible) and I've requested we do have a meeting in Columbia, and also thank you for not shaking us down. The last time NRC was in Columbia they didn't pat us down but they searched our purses. I was kind of curious about that. Why did you all do that? Anyway, I agree with the Russian gentleman, whose name I can't pronounce, that this is a political decision. We are building a MOX plant in South Carolina because it is our little third world section of the country. We started the Civil War (indiscernible), but there is no direct relationship between South Carolina being the lowest in education, highest in teen pregnancy, highest in illiteracy rate, but sometimes Mississippi vies with us, so thank God for Mississippi, and there is a direct relationship between that and us having (indiscernible) MOX facility which I know that the government and the

nuclear industry would like to see it eventually turned into a national reprocessing center for spent nuclear fuel. We can forget Yucca Mountain, we can rename Savannah River, not after Strom like (indiscernible). This is planned, this is all planned because the nuclear industry is near its life span as someone else has mentioned and they're desperate and this is what they're working on with taxpayer dollars. Someone said that nuclear energy was cheap. What? What is the tax amount that's been subsidized by -- since its inception? 47 -- is it billion or million? After a while it just all runs together. Another thing is it's a high -- I went to DOE meeting last week in Columbia about the tank farms, I lost that number too, millions and millions of gallons of liquid waste that they do not know what to do with that's been sitting there since the '40s, they keep accumulated it, they just cancelled this last that they spent $500 million on. They can't be able to do that and now they're going to spend a whole bunch more for this MOX plan. When they first came up with this deal on the MOX plan they sort of glossed over it. It's just going to be a little bit of liquid waste.

Well, now it's going to be up to millions of gallons of liquid waste which we in South Carolina

are going to sit on in eight of those tanks -- nine or ten of those tanks (indiscernible). We're tired of it. This is not what we need to do with this excess plutonium. You need to immobilize it. We need to come up with another plan. What is the big rush and what happens to the immobilization plan? I really want to know. What about the cleanup? We don't need any more mess down there. Please come down to Columbia and I'll tell you this all over again. Thank you.

MR. CAMERON: Thank you. Thank you, Leslie. Karen Gordon.

MS. GORDON: Good evening. My name is Karen Gordon and I'm also from Columbia, South Carolina, and I'll do this real quick because most of you people have covered what I wanted to cover. But there were a couple of issues, safety issues, transportation issues and accidents. Well, I use to live near there, interstate nuclear services of the Savannah River Site and they (indiscernible) the trucks are contaminated. Plutonium can contaminate the (indiscernible). You know, what happens if plutonium is lost? It only takes a small amount of plutonium to make a bomb. It only takes a small amount of plutonium to make people sick. So those are

my concerns about transportation, and (indiscernible) transported to the nuclear reactors. And my final safety concern is does anybody know that the Savannah River Site is on a fault line? You know, and it hasn't gone off yet, but when it goes off it could be big and that would be just a tremendous disaster, and I just wanted to recommend to the Commission that immobilization is the way to go and if they can't decide to do that now then you need to wait until they find a better alternative, but it's not safe. Thank you.

MR. CAMERON: Thank you. Thank you, Karen, and thank all of you for your comments and for listening tonight and thank you, visitors from Russia, thank you for your comments and the NRC has heard a couple of process issues, meeting in Columbia, extend the comment period, the staff has asked me to just note that regardless of what is done on this that comments that come in after the comment period will be considered in developing the EIS. They might not make it into the scoping report, but I would just thank all of you and I think they're going to be trying to move us out of here pretty quickly so we, unfortunately,

don't have time to chat, but thank you and we're adjourned.

(Whereupon, the meeting was concluded at 10:30 p.m.)