UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION
- - -
BRIEFING ON U.S. ENRICHMENT
CORPORATION CERTIFICATION
- - -
PUBLIC MEETING

Nuclear Regulatory Commission
One White Flint North
Rockville, Maryland

Friday, March 22, 1996

The Commission met in open session, pursuant to notice, at 2:00 p.m., Shirley A. Jackson, Chairman, presiding.

COMMISSIONERS PRESENT:
SHIRLEY A. JACKSON, Chairman of the Commission
KENNETH C. ROGERS, Commissioner
GRETA J. DICUS, Commissioner

STAFF PRESENT:
JOHN C. HOYLE, Secretary of the Commission
KAREN D. CYR, General Counsel
PRESENTERS:
HUGH THOMPSON, Deputy Executive Director, NMSS & Operations Support
CARL PAPERIELLO, Director, NMSS
ELIZABETH TEN EYCK, Director, Fuel Cycle Safety and Safeguards Division, NMSS
CYNTHIA PEDERSON, Director, Division of Radiation Safety & Safeguards, Region III
JOHN HICKEY, Chief, Enrichment Branch, NMSS

P R O C E E D I N G S

CHAIRMAN JACKSON: Good afternoon, ladies and gentlemen. This afternoon the staff will be briefing the Commission on the current status of the certification process for the United States Enrichment Corporation, USEC, gaseous diffusion facilities in Paducah, Kentucky, and Portsmouth, Ohio.

The Energy Policy Act of 1992, which established the U.S. Enrichment Corporation, placed added responsibilities on the NRC. The Act required that we establish standards to govern the gaseous diffusion uranium enrichment facilities in order to protect public health and safety. This requirement was satisfied by the Commission in September of 1994 when we published 10 CFR Part 76 regulations pertaining to the certification of gaseous diffusion plants.

The Act also required that the NRC establish a certification process to ensure that the USEC complies with the standards we established in 10 CFR Part 76.

The USEC submitted an application in September 1995 that the NRC is currently reviewing. Today the staff will be briefing the Commission on the status of that review.

In November of last year I had the opportunity to tour the gaseous diffusion facility at Paducah. So I am

particularly interested in hearing from the staff on the status of its review of both the Paducah and the Portsmouth plants.

I understand that copies of the staff's paper and

charts are available at the entrances to the meeting.

I would like to note for the record that Commissioner Dicus has indicated her recusal from actions relative to USEC certification because of her previous service on the board.

Commissioner Rogers, do you have anything to add?

COMMISSIONER ROGERS: Nothing, thank you.

CHAIRMAN JACKSON: Commissioner Dicus?

COMMISSIONER DICUS: Nothing.

CHAIRMAN JACKSON: Mr. Thompson, you may proceed.

MR. THOMPSON: Thank you, Chairman Jackson, Commissioner Rogers, and Commissioner Dicus. I hope that you will be informed of some of the staff actions, because as we do go forward with other potential areas and looking at DOE facilities, there are some lessons learned that we will have here that will be helpful in understanding what potential future challenges the staff and NRC may face. Today we are nearing completion on a really unique and important element in our agency's responsibility.

Dr. Paperiello, who is the director of NMSS, and his staff, and Cynthia from Region III are here today. It

. 5

has been a team effort. We have had a lot of effort on the part of the NMSS staff. The regional staff and the resident inspectors have been working very hard on this area.

Some significant areas have been identified. We will give you a discussion of those today. With that, I will turn it over to Dr. Paperiello to introduce the staff and start today's briefing.

MR. PAPERIELLO: Thank you. Our presentation today will be made by Elizabeth Ten Eyck, who is the director of the Division of Fuel Cycle Safety and Safeguards in NMSS. I also have Cynthia Pederson, who is the cognizant division director under whom the inspectors at the fuel cycle facilities work in Region III; and John Hickey, who is in charge of our certification people under whom the headquarters staff works.

Before Elizabeth Ten Eyck makes her presentation, I would like to reflect on a couple things. This certification frankly has taken longer and has been more difficult than I would have expected. I do plan, after we complete certification, to conduct a lessons learned, eliciting input from USEC to find out in the future when we get these one of a kind type of activities what we do to expedite the process.

I will note that had we to do it all over again, I would have provided written expectations to U.S. Enrichment

. 6

Corporation, because at times some of the material received was either less than expected or differed from our expectations. We had a lot of meetings. I don't think anybody at these meetings attempted to do any miscommunication, but when understandings aren't necessarily in writing, that may have contributed to it. Something like a standard review plan but something we could have given people up front.

The second difficulty has been emergent issues, issues that we never expected when we got into this thing, such as the seismic status of Paducah, the fact that the facility really didn't meet DOE's expectations, and the issue noted in the slides that we are going to talk about today, the autoclave testing. There were things that came up which we could not have anticipated.

So I think those two things have added to the time that it has taken to do this and the difficulties we have had.

Liz, if you would like to make your presentation.

MS. TEN EYCK: Good afternoon. Since 1992 staff has been working on the certification process of the gaseous diffusion plants located at Paducah, Kentucky, and Portsmouth, Ohio. We believe that we are nearing the end of the initial certification process, and we are here today to provide you a status on our activities to date and also on

. 7

the work remaining.

[Slide.]

MS. TEN EYCK: Our comments today will be grouped in four major areas.

We will provide a brief background of how we got into the certification business.

Then we will spend the majority of our time discussing the status and significant issues that remain to be resolved.

We will then discuss our activities in working with the public and other government agencies.

Finally, discuss our projected schedule for completion and our plans for completing the certification process.

[Slide.]

MS. TEN EYCK: As the Chairman mentioned, the Energy Policy Act of 1992 established the USEC for the purpose of leasing and operating the gaseous diffusion plants. It also directed the NRC to establish standards which would govern the safety, safeguards, and security of the GDPs within two years and to provide for a certification mechanism to Congress regarding the compliance with those standards.

It is important to note that we will be certifying the gaseous diffusion plants and not licensing them, which

. 8

is the normal NRC process. The certification will be based on an application and a certification plan. The Act actually provided for a compliance plan. It viewed that the GDPs may not be able to come up to NRC standards immediately and provided for a compliance plan.

A compliance plan will be developed by the Department of Energy and submitted by the USEC which will identify areas where they are not currently in compliance with our requirements. It will contain a justification for continued operation, including compensatory measures, and it will identify their plan of action for coming into compliance with NRC's requirements.

A compliance plan doesn't really have any counterpart in the NRC licensing process where normally NRC would not license facilities unless they met NRC requirements.

[Slide.]

MS. TEN EYCK: The USEC's initial application was submitted to the NRC in April of 1995, but it was rejected because it did not contain enough information for the staff to make a determination on whether the gaseous diffusion plants met our requirements. The NRC staff then, to include Headquarters, Region III and the four resident inspectors stationed at the two gaseous diffusion plants, worked very hard to communicate with USEC our expectations with regard

. 9

to certification. The advice and the assistance that were provided by Region III and the resident inspectors proved invaluable to us in this certification process.

The USEC then submitted a substantially revised application to NRC in September of 1995. In November of 1995 they submitted a compliance plan which contained unanticipated exceptions to the compliance plan.

USEC has been operating the facilities since July of 1993 with the assistance of their contractor Lockheed Martin Utility Services. DOE provides the regulatory oversight for the operation of the facilities and will continue to do so until NRC assumes regulatory jurisdiction.

[Slide.]

MS. TEN EYCK: The first bullet lists some significant issues that have required resolution and have required a lot of staff effort in the recent past. Only the broad worker protection issue has been resolved to date, and we have accepted their submittal in that area.

Some of the remaining issues have had many, many meetings to discuss our expectations at many levels of USEC. We have, we believe, come to an understanding on some of them. Others still demand further meetings to reach a resolution.

In each case staff will be required to review the final submittals for the application and the compliance

. 10

plan, which really are complementary documents that support each other, before we can issue a certification.

Now let's take a brief look at some of the topical areas where we have had to spend this extra effort in resolution and, as Dr. Paperiello said, could not really have been anticipated prior to the certification effort.

[Slide.]

MS. TEN EYCK: In the area of worker protection, we are concerned about the hazards to the worker from the large inventory of uranium hexafluoride and also other hazardous chemicals that are part of the enrichment process.

The certification process is governed by 10 CFR Part 76 and is based on technical safety requirements, or TSRs as they are commonly called, and they would be very

similar to tech specs in our reactor space.

The staff supports a comprehensive TSR for worker protection where the worker will be in close proximity to lethal chemicals, hazardous chemicals, I may add, of substantial quantities, and they support very specific TSRs to prevent or mitigate accidents that could result in unplanned releases that far exceed our Part 20 requirements.

Although some DOE orders and DOE operating safety requirements had addressed worker safety, the USEC did not think that they had to provide worker safety provisions to us in the NRC TSRs. However, we have subsequently, through

. 11

meetings, resolved that misunderstanding, and as I mentioned earlier, they have submitted to us a comprehensive worker safety requirement that staff has found acceptable.

CHAIRMAN JACKSON: Before you go on from there, let me ask you a question.

Does OSHA have a role to play in the evaluation of worker safety? Do we have an MOU with OSHA? Has it been finalized? And how does that affect what we consider to be the acceptability or not in this area of the question of worker protection?

Finally, is a final MOU required for certification?

MS. TEN EYCK: Let me start by saying that both NRC and OSHA have statutory authority over the UF6 and hazardous chemicals at the plant. Because of this, we felt it was imperative that we have a firm understanding between each agency regarding their role. That coordination has been documented in an MOU which will be forthcoming to the Commission in the very near future. So we have a common understanding between us and OSHA regarding our respective roles.

CHAIRMAN JACKSON: Is that a requirement for certification?

MS. TEN EYCK: It's not actually a requirement, but we think it's a very important part of our regulatory

. 12

oversight role and we plan to have it completed well before certification.

CHAIRMAN JACKSON: The fact that it is not finalized at this point, will that have any impact on the resolution of the worker protection issues?

MS. TEN EYCK: No. Actually, we have a draft that has been reviewed by the staffs of both agencies and it's just a question of getting it up and formally signed at this point.

CHAIRMAN JACKSON: Okay.

COMMISSIONER ROGERS: Are there any limitations on the extent of our authority with respect to chemical hazards at these plants?

MS. TEN EYCK: The authority will really be based on the MOU, because we tend to have overlapping responsibilities. We look at the MOU as the vehicle to clearly specify the roles of each agency. There would be some potential overlap in some areas, but we plan to work very closely with them to minimize any overlap from a negative perspective.

MR. THOMPSON: You may recall, Commissioner Rogers, the regulatory gap that had been identified sometimes with the fuel cycle facilities. The approach had been to have an MOU where we have the NRC inspectors undergo some OSHA training so that we would have the ability to

. 13

identify to OSHA those hazards that we may not have a regulatory responsibility for and be able to make sure that the USEC would be aware of something we identified as well as to make sure OSHA, who would have the enforcement authority for those activities, would be notified of those and take action if they deemed that to be appropriate.

As Elizabeth said, there are areas where we have dual jurisdiction and there are areas for which OSHA has the only responsibility, and that's why we have an MOU approach to how we communicate when we identify those regulatory gaps.

MS. TEN EYCK: I also understand that our resident inspectors have received some OSHA training already.

COMMISSIONER ROGERS: Thank you.

[Slide.]

MS. TEN EYCK: Here the quality assurance issue is limited to what is necessary as quality assurance to assure safety. Items relied on for safety must be available and reliable when needed.

USEC's initial application did not provide adequate quality assurance for UF6 confinement, criticality prevention, or fire protection.

One QA issue that needs to be resolved is defining safety boundaries. Just as safety systems are required to be available and reliable, they often depend upon support

. 14

systems such as electricity and compressed air, which also must be equally available and reliable.

Resolution of these issues means coming to agreement on what is actually appropriate safety boundaries and also the level of QA that is appropriate commensurate with the risk of the safety systems.

COMMISSIONER ROGERS: QA has several different aspects. One of them is the documentation aspect that is so important to actually provide some way of identifying that certain things are in place, certain procedures have been followed. It's a documentation aspect as well as quality control aspect. To what extent are the issues here more in the area of documentation, providing adequate assurance through appropriate documents that all the bases have been covered?

MS. TEN EYCK: I can assure you that it's not just the documentation area. To give you an example. For a fire protection system it would be very important to provide quality assurance to, say, the sprinkler heads when the system depends on deluge of water to eliminate the problem. But we feel it's also appropriate that they provide reliability of the water source, the piping that delivers the water, and the pumps that would be used in the sprinkler system. We have seen indications at the facilities where all of that equipment is not in appropriate condition to

. 15

assure a reliable system. So it's definitely not just a documentation issue.

CHAIRMAN JACKSON: What role does an integrated safety assessment play?

MS. TEN EYCK: They are doing something similar to that, looking over the plant and determining where the risks are and then identifying what equipment is necessary to assure the availability and reliability to preclude that risk from happening. We are talking about the quality assurance on that equipment that has been identified as critical to providing adequate controls.

CHAIRMAN JACKSON: Okay.

[Slide.]

MS. TEN EYCK: TSRs, or technical safety requirements, define the conditions, the safe boundaries and the administrative or management controls necessary to ensure the safe operation of the plant. As such, they are really the operating safety envelope.

Many TSRs initially submitted by the USEC were not adequate because either they were unclear, uninspectable, or in some cases didn't appropriately address very important systems. We would like to give you an example of such a situation, which regards autoclave testing.

The tests rely on extrapolating low pressure data to accident pressures. We found that the tests had not been

. 16

validated using actual autoclaves that are installed at the facility. We depend upon an autoclave to confine any UF6 that might accidentally be released while heating the cylinders. It is our understanding that none of the autoclaves at either of the GDPs had actually been tested to accident conditions. We expressed this concern to USEC, and we understand now that such testing is underway.

CHAIRMAN JACKSON: When do you expect this testing to be completed?

MS. TEN EYCK: Mr. Hickey.

MR. HICKEY: At least some of it will be completed in a few weeks. Depending on the results of that, they may need to continue to do some more testing after that.

CHAIRMAN JACKSON: The intention is that it would be completely done before certification?

MS. TEN EYCK: Definitely.

CHAIRMAN JACKSON: Are there any other issues of this magnitude or other projects or tests that would be required to be completed before certification is issued? Are there other things out there? That's really the question.

MR. HICKEY: There is one other that comes to mind. There are some UF6 detectors that they test, and they have not really validated or quantified that test, in our

view. That would tell them if there is a big UF6 leak.
. 17
They are also working on a method to improve and validate that test.

CHAIRMAN JACKSON: Again, the expectation would be that that would have to be completed before certification?

MR. HICKEY: Yes.

CHAIRMAN JACKSON: Okay.

MS. TEN EYCK: Staff is working very closely on all of these TSRs and we will continue to do that before we can reach initial certification.

[Slide.]

MS. TEN EYCK: Another area of significant concern is the DOE-owned contaminated material and equipment that is stored in many locations at both Portsmouth and Paducah. Some of this material has not been characterized or quantified.

NRC requires that any material that is stored in USEC space needs to be characterized and treated commensurate with the risk that it presents. Details on how USEC and DOE will provide adequate accountability and physical protection of this material has yet to be resolved or provided to NRC. So this is another outstanding issue. We are waiting for resolution.

CHAIRMAN JACKSON: This is one again that would be resolved before a certification decision?

MS. TEN EYCK: Yes. All of these will have to be
. 18
resolved before a certification decision.

COMMISSIONER ROGERS: What is the mechanism for resolution?

MS. TEN EYCK: There could be a number of ways. That is something that is being discussed between USEC and DOE right now. We feel that if the material remains in USEC leased space and it is under USEC control, then they need to know what is in there, what the quantity is, and to provide appropriate containment of the material.

If DOE should maintain custody of the material, then we feel that it needs to be appropriately isolated from USEC space so that it does not provide ready access to all of the employees.

There are various solutions somewhere between the two, I think. At this point we are looking to USEC and DOE to provide a solution that they feel acceptable and then come to us and see if it meets our requirements.

CHAIRMAN JACKSON: In your opinion, how far from resolution is this?

MS. TEN EYCK: It has been an issue that we have been discussing for a long time. They knew from the very beginning -- we haven't changed our position on any of these issues as such -- that they were going to have to address it. They have tossed many alternatives back and forth between them. I am confident that we will come to a
. 19
resolution on this and that it will not impact on the initial certification.

MR. HICKEY: Could I make a clarification? When we say that it will resolve it prior to certification consistent with the compliance plan, there may be a corrective action where we have agreed on a schedule that may carry past the certification date. So we are not saying all the corrective actions will necessarily be taken before certification, but we will agree on what the corrective action is and the schedule for anything that is not carried out.

MR. THOMPSON: If compensating measures need to be taken to assure assurance, those will be put in place.

CHAIRMAN JACKSON: This one is a little bit of an issue in the following sense. Presumably you have a methodology for resolution that then gets put into the compliance plan, which then is part of the schedule, but you are talking about something that has not yet been characterized nor quantified. At a certain point there is a lack of knowledge relative to the potential for resolution within some specified time frame. So I guess I am somewhat confused as to how much of a methodology for resolution has to be in place and does it include characterization and/or quantification of this material in order to have something realistic put into the compliance plan.
. 20
MS. TEN EYCK: There could be solutions that would not require them to characterize the material. That would be either DOE moves it off site or collocates it all in one

area and then provides protection for it under DOE authority. Even if it's not moved out, if DOE could isolate that material so that there would not be ready access by USEC employees, then they would maintain custody of the material and they wouldn't necessarily have to characterize it to NRC.

CHAIRMAN JACKSON: Without characterization at a certain level, you don't know the degree of hazard.

MS. TEN EYCK: Exactly.

MR. PAPERIELLO: You would then have to create margin. In other words, make assumptions on how bad it could be and then make sure there was enough margin. The material could be, at least from a first principles viewpoint, something that is flammable, something that is chemically reactive, an oxidizer, or reactive criticality, depending upon enrichment and how much and all that. You would have to create enough margin in your system so if it did burn you could put it out; that you kept enough other uranium away from it so you couldn't create a critical configuration. You would have to create that kind of margin around it.

CHAIRMAN JACKSON: You are basically saying, to

the degree that it's not characterized, that also determines the degree of stringency in terms of the margin.

MR. PAPERIELLO: That's what it would appear to me, yes.

MS. TEN EYCK: I would also like to note that the majority of this material is really low level waste.

CHAIRMAN JACKSON: I appreciate that. The real issue has to do with having some assessment of what the significance of it is relative to what you put into place in a compliance plan. That's all it is. It is not implying that it is all on the order of spent fuel.

MR. PAPERIELLO: Yes. That's exactly right.

CHAIRMAN JACKSON: You would tend to put margins in that would have extra stringency built in. So to the degree that you don't have the characterization, you could be overly stringent for that.

MR. THOMPSON: Right.

MR. PAPERIELLO: That's right.

CHAIRMAN JACKSON: Okay.

[Slide.]

MS. TEN EYCK: USEC requested certification to enrich uranium to 10 percent or less and thus has avoided more stringent NRC requirements that would apply to higher enrichments. Recently it has been determined that at Portsmouth there is material that is enriched to more than

10 percent but less than 20 percent in the cascade.

Contributing factors are believed to be both plant configuration and the fact that DOE has been re-feeding high enriched uranium into the cascade, although we are led to believe that even if DOE was not re-feeding HEU at this time, there still could possibly be material that would be enriched to greater than 10 percent.

DOE and USEC are working on this issue and have indicated to us that they believe they will be able to come to some resolution of it before initial certification. However, if that is not accomplished before the initial certification, more stringent NRC requirements would be appropriate.

COMMISSIONER ROGERS: Was this an unanticipated event here?

MS. TEN EYCK: It's material that they are finding that before we took over and had to be below 10 percent was not a real issue, but apparently above the area where they would withdraw product there is an area of purgery, as they call it, which has lights and other contaminants. This is, I believe, where we have been told that they are finding the higher enrichments. Prior to NRC taking over regulatory authority it wasn't a real issue, and now they are looking to see how they can resolve it.

[Slide.]

MS. TEN EYCK: The safety analysis reports provide the safety basis for the certification process. They analyze the accidents, estimate the consequences, and actually are the basis for the TSRs to maintain the operation of the facility within safe boundaries.

The SARs that currently govern the certification process were issued by the DOE in 1985. DOE is now preparing an upgrade of that safety analysis report, and

they expect to have it completed by February of 1997.

The USEC will then have six months to propose for NRC approval any corrections that would address weaknesses that might be identified in the updated SAR. However, the new SAR is a compliance plan issue that is part of the initial certification process, and as such, we feel that any corrective actions that are necessary as a result of the 1997 SAR will not come under the backfit provision.

CHAIRMAN JACKSON: Let me ask this question. This is more one of tracking in terms of where things stand, in terms of how far along the SAR is. I note that you will be talking about your calendar soon, but it does anticipate the NRC assuming regulatory jurisdiction over the plants before this new SAR will be in place. I guess I am trying to get some understanding. In regulatory space, how do we come to closure in terms of once we've assumed regulatory jurisdiction that we get a satisfactory SAR?

. 24

MS. TEN EYCK: It would be written into the certification that any items or weaknesses that are identified in the upgrade SAR will have to be resolved. As I said earlier, the USEC would have six months to come to us with their proposed resolution on any of these weaknesses. So we want them to be addressed timely once they are identified.

CHAIRMAN JACKSON: Have we laid out what we feel those weaknesses and uncertainties are from the 1985 SAR?

MS. TEN EYCK: We certainly have in the 1985 SAR. These are the issues that we are trying to come to resolution on now, but at this point we don't have any idea of any potential problems that may be identified as the Department of Energy finalizes their SARs for the two sites.

CHAIRMAN JACKSON: Dr. Paperiello, you were going to make a comment?

MR. PAPERIELLO: This is sort like a certification versus licensing. DOE has a facility that is operating and they are in the process of lateralling a football over to us. That is sort of the situation we are in. When we certify, the certification is going to be hedged. The rule recognizes this. It will be conditioned on the compliance plan, and the compliance plan will be the commitment needed to upgrade the facility. That upgrading program was in place before the certification process ever started. So we

. 25

are sort of taking this moving process and taking it over from DOE. It's not a license; it's a very different sort of thing.

CHAIRMAN JACKSON: I'm going to come back to you.

MR. PAPERIELLO: Sure.

[Slide.]

MS. TEN EYCK: This is one of the more contentious issues that we have been dealing with. The Paducah plant is located near the New Madrid fault, which was the epicenter of one of the most intense earthquakes that has ever occurred in the North American Continent. DOE's 1985 SAR established criterion that the ground acceleration rate should not exceed .18g for the remaining 25 year life of the plant. What are the consequences of this?

During the 1985 SAR DOE had an occasion to evaluate what the release would be of 64,000 pounds of UF6 and determined at that time that there would be no offsite fatalities but there could be renal damage within approximately three miles of the facility.

DOE, in upgrading their 1985 SAR, have subsequently identified some structural weaknesses in the supporting structures or the rocker arms for sections of the roof and floor for two of the process buildings. The safety concern here is that portions of these structural components would fall onto the process equipment and breach confinement

. 26

and thus an uncontrolled release of the material to the environment.

Until structural modifications are made, the sites are operating under compensatory measures. They operate at sub-atmospheric condition so that if there should be a breach of confinement, the resulting release of the chemicals of UF6 would be much smaller, and they are also limiting worker access into the areas where structural weaknesses exist.

COMMISSIONER ROGERS: Doesn't that assume that the building integrity is not breached?

MS. TEN EYCK: Yes.

COMMISSIONER ROGERS: You can't maintain negative

pressure if the building has been sealed.

MS. TEN EYCK: They are maintaining sub-atmospheric pressure in the actual process equipment in the cascade, so that if there should be a breach of that process equipment, it would tend to allow less material to --

COMMISSIONER ROGERS: But not the building integrity.

MS. TEN EYCK: Not the building itself.

MR. HICKEY: It has to do with the amount of energy that is available to force the release.

COMMISSIONER ROGERS: I understand.

. 27

MR. PAPERIELLO: This system is not operated at high pressures. Pressures can go from sub-atmospheric to about 1-1/2 atmospheres. They are keeping it below atmospheric pressure. Physically it is big. It's a big hole. So it's not like air going in through a small hole, but it would tend not to blow the material out. There would be less material in terms of poundage, less material in process.

COMMISSIONER ROGERS: I understand. Thank you.

[Slide.]

MS. TEN EYCK: The staff has formed an in-house review group to evaluate the seismic issue, consisting of representatives from Research, NRR and NMSS, who have been involved in reviewing seismic issues in the past. This group has met with DOE, visited Paducah, and has also reviewed documentation that has been provided by DOE.

This review group has identified new information, some of which is as yet unpublished, concerning fault and liquefaction features recently observed in the site vicinity and possibly indications of repeated occurrence of large earthquakes associated with the New Madrid fault zone before the historical 1811-1812 earthquake sequence. The review group feels that this new information could result in a higher ground acceleration estimate for a 250 year earthquake.

. 28

This information has been provided to DOE as it has become available in two separate packages, and the staff is currently reviewing the DOE response to the first package.

CHAIRMAN JACKSON: What kind of effective G value are you talking about?

MS. TEN EYCK: They are looking as a solution to protect at the 200 year earthquake more like .2g.

CHAIRMAN JACKSON: You were talking about some information having to do with faults and liquefaction, et cetera, that would suggest larger ground motion, and I'm saying what kind of G factor.

MS. TEN EYCK: Up in the area from .2 to .24, as compared to the original 250 year earthquake, which was estimated to be apparently a .18g. I understand also under some new calculational methods they feel that maybe .15g is more appropriate for the 250 year earthquake. So we are in a range of somewhere between .15 and .2 to .24.

CHAIRMAN JACKSON: How confident is the staff about this new information?

MS. TEN EYCK: They have gotten this information through conversations with members of the USGS who have been looking and working in this area and from papers that have been provided at different conferences.

Unlike the NRC process of kind of publishing data,

. 29

apparently it has not had any peer review that we are aware of at this time, and at this point it is being provided to DOE for their understanding and to make sure that they are aware of it when they propose information back to us. I understand that they have people that have been looking at this data and were aware of a lot of it prior to us identifying it to them.

Our concern was to make sure as they review and propose to us these modifications to upgrade the building that they were aware of in as current information as is available.

CHAIRMAN JACKSON: As things stand, we are comfortable with the .15g for the 250 year earthquake?

MS. TEN EYCK: What we would want to do is to propose whatever we felt was appropriate after everyone analyzes it. What we are finding is that one group of analysts might come up with a different number than another group of analysts. So we are going to have to come to a

resolution based on the best data that we have in determining what is the appropriate G number.

Considering the limited life of the plant, the staff is proposing that we certify the facilities based on a number of items.

CHAIRMAN JACKSON: The compensatory measures would track with whatever you settled out to be what the most

likely risk is in this particular case. Going back to the seismic issues for the moment.

MS. TEN EYCK: What would be the most likely risk?

CHAIRMAN JACKSON: You talked about compensatory measures with Commissioner Rogers in terms of sub-atmospheric conditions being maintained, restrictions in terms of worker access. That is predicated on the .15g 250-year earthquake figure. I'm saying that your anticipation would be that as this shifts the compensatory measures shift.

MS. TEN EYCK: My anticipation is that once our staff gets a chance to look at their data that we will come to some resolution on what is the appropriate G number that they protect against in making the modifications to the structure of the building.

CHAIRMAN JACKSON: Okay.

MS. TEN EYCK: As I was saying, what we basically are planning to base our certification on at this point is a firm commitment that they will upgrade the buildings to the 250 year earthquake, that they will provide us adequate justification for continued operation, which would include the continuation of the existing compensatory measures, and that we will work closely with them on reviewing their proposed modification information. Also, looking at it from a cost-benefit perspective, if they could achieve upgrading

to a higher G number without a significant increase in cost, then we will definitely discuss the pros and cons of doing this with the USEC.

MR. PAPERIELLO: It is a compliance plan issue. It was a compliance plan issue even at the place we were a few months ago where we have a facility that was thought to meet a .15g ground motion and didn't; it was at .05g. And it is going to take some time to get the plan upgraded. So that was already known to have been a compliance plan issue.

[Slide.]

MS. TEN EYCK: Staff has used numerous means to communicate with the public and to publicize the certification process, to solicit comments from the public and also other federal agencies. These means include such things as:

Establishing a public document room near each of the facilities.

Advertising, conducting and transcribing of a public meeting at each of the sites.

Noticing NRC staff technical meetings so that they would be available to be attended by the public.

Providing a 45-day comment period which was advertised in the Federal Register for both the application and the compliance plan.

Having meetings with labor union representatives

and also meetings with representatives from the state and local governments and representatives from the Department of Energy, the Environmental Protection Agency, and also the Occupational Safety and Health Administration.

CHAIRMAN JACKSON: The Energy Policy Act of 1992, I understand, requires that the NRC is to consult with the EPA during the certification process.

MS. TEN EYCK: Right.

CHAIRMAN JACKSON: To your knowledge, is the EPA officially satisfied with our review of the USEC application and with the certification process?

MS. TEN EYCK: I was going to address that on the next slide. Yes, we have consulted with them and their comments regarding the application and compliance plan raise no new issues.

CHAIRMAN JACKSON: They have said that? I don't know what all is required.

MS. TEN EYCK: From all indications from them, they are satisfied that if we address the issues that they raised during their comments, they would be satisfied, and those had already been identified and were being addressed.

Also public comments we have received. They identified no new issues that the staff had not already

addressed, and we plan to provide responses to their comments, and our compliance evaluation plan will actually
. 33
be the record and the basis for our recommendation for certification.

I talked earlier about our interaction with OSHA and the MOU, so I think we have already addressed those topics.

[Slide.]

MS. TEN EYCK: As I previously mentioned, NRC, DOE and USEC have all had important roles and interest in the certification process. Coordination among the three groups will become even more important as we near the end of the certification process.

It has been necessary to make some assumptions to come up with a meaningful schedule for certification. These assumptions are listed on the viewgraph there.

Of particular importance is the last assumption where we assume that USEC and DOE will coordinate very closely on the compliance plan so that it can be submitted to USEC without any exceptions or recommended changes. We feel that that is a very, very important thing if we are going to meet the schedule.

Based on the assumptions provided, we feel that we can reach the initial certification by the end of June. NRC would then assume regulatory authority 120 days later, or approximately the end of October.

CHAIRMAN JACKSON: This all assumes that the
. 34
compliance plan is adopted by USEC without any exceptions.

MS. TEN EYCK: It really assumes a lot.

CHAIRMAN JACKSON: I know it assumes a lot. This one assumption.

MS. TEN EYCK: That is just one assumption. It assumes that, as we listed there, the USEC promptly submits the revised versions of the application and the compliance plan. We understand that they had proposed to provide us the application which had slipped from a previous date by about the 5th of April. We now understand that that date is going to slip. So that is kind of a moving target at this point.

It also has to be recognized that the staff needs to have both the final application and the final compliance plan side by side, because they really are very supporting documents. We need about four to five weeks after we receive both of those documents to be able to be prepared to have the recommendation for certification.

Any delay that would come in a compliance plan where there were exceptions, which is what happened last time on the submittal of the compliance plan, would certainly add a lot more time to the schedule. We are already finding in some cases that the proposed dates were optimistic. Of course, I know USEC has been working very hard to meet these dates, but there has been slippage that
. 35
we have been notified to anticipate for the upcoming application submittal.

CHAIRMAN JACKSON: Is there any interaction or intersection between the privatization of USEC and our certification action?

MS. TEN EYCK: We don't view that as having anything to do with it. We will proceed on our initial certification effort as soon as we can, and we don't see that the privatization issue is influencing us at all.

CHAIRMAN JACKSON: And vice versa?

MS. TEN EYCK: Vice versa, they are very anxious to get the plant certified. We are aware of that. You would have to ask USEC how the privatization would impact on that decision.

CHAIRMAN JACKSON: Okay.

[Slide.]

MS. TEN EYCK: As provided for in 10 CFR Part 76, the decision on the certification will be issued by the director of NMSS. He plans to consult with the Commission prior to that certification decision. That consultation could take many forms. It could be a memorandum to the Commission, a Commission paper, or a Commission briefing. Barring any unforeseen situations, we feel that a full Commission briefing may not be necessary if things proceed along as we anticipate at that time, but we will be looking
. 36
to the Commission for their preference for follow-up actions.

The next three items, the preparation of the compliance evaluation report, the notification in the Federal Register, and the notification of congressional oversight committees, are all normal procedures that take place when the Commission makes an important decision. So we don't see any problem on that.

Also provided in Part 76 is a provision for an appeal. Any interested party -- by that we mean any person that has spoken at one of our public meetings or has provided written comments -- will be able to submit a petition to the Commission 15 days after the decision by the director of NMSS regarding certification, and that would be addressed as an appeal.

As you can see, the activities that were envisioned by the Energy Policy Act of 1992 are soon to become a reality, and I can assure you that everyone involved is looking forward to reaching that milestone.

That concludes my comments this afternoon. Are there any questions?

CHAIRMAN JACKSON: Commissioner Rogers?

COMMISSIONER ROGERS: Just one. I thought this was an excellent briefing. I appreciate it very much.

In the new SAR due in February that is going to

correct errors and weaknesses and reduce the uncertainties in the earlier one, have you been able to characterize the problems that you saw with that in such a way as to provide some general guidance to the Enrichment Corporation in dealing with those issues?

MS. TEN EYCK: As I mentioned earlier, we have been working very, very closely with them at the staff level and also the management level. Carl has met periodically, every two to three weeks with USEC management. And we've had a very good working relationship with both USEC and DOE. I think they understand all of the concerns that we have. I think they are very sensitive on doing the safety analysis upgrade. In fact, it was underway before NRC actually got involved. So it is something they knew needed to be accomplished. I feel that we will have a SAR that addresses any issues that may remain outstanding.

COMMISSIONER ROGERS: You mentioned in your opening remarks, Dr. Paperiello, that written expectations were not really in hand when we started this process. I wonder at the end whether one could develop a set of written expectations from this that would be a useful guide for anything else in the future of this nature.

MR. PAPERIELLO: I think you could. I think that is something to look into. I'm not aware that we have looked into it.

COMMISSIONER ROGERS: You can deal with it piecemeal, issue by issue, but it might be very helpful to try to reduce that to some more general statements of our expectations that then might come in handy in the future.

MR. PAPERIELLO: Yes.

CHAIRMAN JACKSON: Commissioner Rogers, Dr. Paperiello and I have talked in the past about the need for trying to come up with a more generalized approach for developing or having in hand appropriate standards or criteria even in these cases where there are special facilities that are going to be certified, or whatever the regulatory action is, so as to avoid this going forward.

COMMISSIONER ROGERS: Thank you.

CHAIRMAN JACKSON: The Commission would like to thank the staff for what has been an excellent briefing on the certification process for the USEC's gaseous diffusion facilities. We are pleased to see the progress that has been made in the past six months. We would like to see that progress continue and we would like to see things resolved in as timely a manner as they can be consistent with appropriate safety standards and requirements.

In closing, I would like to stress two points to the staff.

First, as I have said, the staff should move ahead with the certification process in as expedient a manner as

possible. However, in moving ahead the staff should ensure themselves that they have not overlooked any significant safety issues, that there aren't other emergent issues out there that could reach up that need to be resolved before granting certification. Because this is a certification, as you have pointed out, and not a licensing, the methodology for the resolution of significant safety issues and how it

is to be folded into the compliance plan needs to be clearly delineated and documented.

Secondly, the staff indicated that in several areas discussions between the staff and the USEC is still ongoing. If significant new information becomes available or new safety issues are identified that could affect the certification process, the Commission should be informed as soon as possible. As you said, the certification schedule assumes many things, and given that, we will leave open the issue of what the follow-on consultation mechanism should be. Instead, I will confer with my fellow commissioners for the appropriate consultation mechanism.

Again I would like to thank you for today's briefing.

Commissioners, do you have anything to add?

COMMISSIONER ROGERS: Nothing more, thank you.

COMMISSIONER DICUS: Nothing.

CHAIRMAN JACKSON: We stand adjourned.

[Whereupon, at 2:57 p.m., the meeting was adjourned.]