

# ORIGINAL

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

In the matter of:

COMMISSION MEETING

Meeting with NARUC  
on Implementation  
of Nuclear Waste  
Policy Act

(Public Meeting)

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1 UNITED STATES OF AMERICA  
2 NUCLEAR REGULATORY COMMISSION

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4 MEETING WITH NARUC ON IMPLEMENTATION  
5 OF NUCLEAR WASTE POLICY ACT

6 - - -

7 PUBLIC MEETING

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9 Nuclear Regulatory Commission  
10 Room 1130  
11 1717 "H" Street, N.W.  
12 Washington, D.C.

13  
14 Tuesday, April 15, 1986  
15

16 The Commission met in open session, pursuant to  
17 notice, at 2:08 o'clock p.m., NUNZIO J. PALLADINO, Chairman of  
18 the Commission, presiding.

19 COMMISSIONERS PRESENT:

20 NUNZIO J. PALLADINO, Chairman of the Commission  
21 THOMAS M. ROBERTS, Member of the Commission  
22 JAMES K. ASSELSTINE, Member of the Commission  
23 FREDERICK M. BERNTHAL, Member of the Commission  
24  
25

1 STAFF AND PRESENTERS SEATED AT COMMISSION TABLE:

2  
3 S. CHILK

4 M. MALSCH

5 E. ANDERSON

6 R. BRATTON

7 A. MEAD

8  
9 AUDIENCE SPEAKERS:

10  
11 V. STELLO

12 R. BROWNING

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

CHAIRMAN PALLADINO: Good afternoon, ladies and gentlemen. Today the Commission is meeting at the request of the National Association of Regulatory Utility Commissioners known as NARUC. We are meeting with NARUC's subcommittee on Nuclear Waste Disposal.

We will be discussing NARUC's views of NRC's approach to the licensing requirements of the Nuclear Waste Policy Act as it impacts Department of Energy nuclear waste activities and associated resource expenditures.

NARUC has expressed interest in assuring effective project management and adequate cost controls for the nuclear waste disposal program's financial support that is ultimately provided by the ratepayers.

Here today representing NARUC are Commissioner Edwyna G. Anderson, Chairperson of NARUC's Electricity Committee and Subcommittee on Nuclear Waste Disposal as well as Commissioners Robert W. Bratton of the State of Washington and Anne Mead of the State of New York.

Ladies and gentlemen, we thank you very much for coming here to share your thoughts with us and unless there are any other Commissioner comments, we look forward to hearing your presentation. Are there any other Commissioner comments?

(No response.)

1 CHAIRMAN PALLADINO: All right. Then let me turn  
2 the meeting over to, I gather you are going to be the  
3 spokesman, Ms. Anderson.

4 MS. ANDERSON: Initially, yes. Thank you very  
5 much. We are very grateful for the opportunity to meet with  
6 you this afternoon to discuss some of our concerns and I will  
7 be giving you a summary of how we got involved and why and  
8 Commissioners Mead and Bratton will have some questions that  
9 we would like to pose to you with regard to the Nuclear Waste  
10 Disposal program and the NRC's role in it.

11 We would like to have this as informal as possible  
12 in the sense that we have come to discuss. We have not come  
13 necessarily just to present but are very much interested in  
14 your input.

15 The development and construction of a high-level  
16 nuclear waste disposal facility is as important an issue as  
17 any in our time both from a physical and a fiscal point of  
18 view.

19 Creation by the Congress of the Nuclear Waste Fund  
20 under Section 302 of the Nuclear Waste Policy Act of 1982  
21 results as you know in the assessment for this project of one  
22 mil,1 for each kilowatt-hour of electricity generated by  
23 nuclear fuel.

24 Funds are to be used to dispose of all spent fuel  
25 from commercial reactors. Despite frequent references to

1 utilities which are called on to collect the money, it is  
2 ratepayers who are the source of all these revenues.

3 Recognizing this, the National Association of  
4 Regulatory Utility Commissioners or the NARUC established, by  
5 unanimous resolution at its 1984 annual meeting, its intention  
6 to investigate and to monitor on an ongoing basis the national  
7 nuclear waste disposal program.

8 To implement the resolution, a standing subcommittee  
9 on Nuclear Waste Disposal was established and represents the  
10 views and the positions of the NARUC as contained in this  
11 statement.

12 The Subcommittee seeks to provide critical  
13 information to commissioners in all states and to impart to  
14 the Congress and to the Department of Energy the NARUC's  
15 unique expertise in utility regulation: so as to enhance the  
16 conduct and cost effectiveness of the federal program.

17 We are here today to open with you, the members of  
18 the Nuclear Regulatory Commission, what we hope will be a  
19 continuing dialogue on this matter of great importance.

20 The NARUC is a quasi-governmental, nonprofit  
21 organization founded in 1889. Within our membership are the  
22 governmental agencies of the fifty states and the District of  
23 Columbia, Puerto Rico and the Virgin Islands engaged in the  
24 regulation of utilities and motor carriers.

25 Among other duties, the NARUC is the national

1 representative of state commissions responsible for the  
2 economic regulation of utilities now operating nuclear-powered  
3 electric generating stations. As such, these commissions have  
4 been charged under law with the task of ensuring that the  
5 power provided by such generating stations is reliable and  
6 reasonably priced, in short, that the public interest is  
7 protected.

8           The driving force behind the NARUC's involvement in  
9 this federally-mandated process, aside from the safe and  
10 orderly removal of spent reactor fuel from temporary storage  
11 at in-state nuclear reactor sites, is the concern for sound  
12 fiscal management of the program.

13           Recognizing the technical complexity, the public  
14 apprehension, the need for absolute assurance of safety, and  
15 the necessity in the public eye for administrative  
16 credibility, it is no wonder that this program represents a  
17 vast financial commitment, now estimated to total \$25 to \$35  
18 billion dollars.

19           My colleagues and I in commissions across the nation  
20 are required by law to judge the fiscal bases for the  
21 reimbursement by ratepayers of every penny of nuclear waste  
22 program payments made by utilities to date.

23           In attempting to place in focus the concerns and  
24 recommendations of the NARUC on the high-level waste disposal  
25 program and to suggest solutions to problems identified by us,

1 it is essential first to understand some of the painful  
2 learning experiences that public service commissioners have  
3 accumulated from a closely-related activity, nuclear power  
4 plant construction review.

5 That this experience carries messages for the waste  
6 disposal program rests, to be sure, with the obvious nuclear  
7 focus of both arenas, but much more with the fact that this  
8 nation is once again moving toward construction of a very  
9 expensive first-of-a-kind technically complex nuclear facility  
10 both proposed and licensed at the federal level.

11 Actions of the safety licensing agency, the NRC,  
12 will very substantially affect program continuity, extent and  
13 cost. The NRC may make changes in definition of an acceptable  
14 final facility throughout and perhaps even beyond the  
15 construction program.

16 The constructor, the DOE, while cost-conscious, has  
17 a task of taking nuclear waste by 1998. Thus, cost may be a  
18 secondary concern.

19 However, all total costs are to be laid at the feed  
20 of, or more aptly, in the pockets of ratepayers. Public  
21 service commissions are faced with the unenviable task of  
22 determining whether all future costs have been discovered and  
23 whether, to date, program costs were prudently incurred.

24 Our review should not be understood as an assessment  
25 of the nuclear option. The NARUC is painfully aware that the



1 national experience with nuclear power ranges from excellent  
2 to abysmal. The popular press has made most citizens aware of  
3 the troubled, expensive and checkered past of nuclear electric  
4 generation.

5       Whereas nuclear construction costs have soared to  
6 levels never imagined by anyone years ago, the even more  
7 astounding fact is that despite massive infusions of capital,  
8 many nuclear plants will never be finished.

9       Not so noticeable to the public but obvious to  
10 public service commissioners is that not all nuclear plant  
11 projects have been troubled.

12       Why have apparently similar companies had such  
13 different degrees of success? Are there reasonable answers or  
14 explanations to the widely-varying results of performing  
15 essentially the same job?

16       There are many reasons offered and perhaps all have  
17 some relevance. They all point to, among the many factors,  
18 the level of competence, ability and aggressiveness of project  
19 management as a key factor in the success or failure of a  
20 project.

21       Evidence from failures points to management. Some,  
22 not all, that underestimated the size and scope of the task  
23 before them and, as the challenges grew and complexity  
24 increased, repeatedly continued to underestimate the challenge  
25 and mismanage the projects.



1           We are sadder, but perhaps wiser, veterans of a  
2   process in which gaps in interests and responsibilities among  
3   utilities, state and federal regulators and others appeared,  
4   remained unresolved and which in the end will reduce  
5   efficiency and results, and will be left to public service  
6   commissions to overcome.

7           There are three central conclusions to be drawn from  
8   this brief description of a lengthy, complex, arduous,  
9   expensive and controversial experience. The first is that,  
10  despite all the acknowledged changes, interruptions,  
11  diversions and reconsiderations, there are well-managed plants  
12  whose overall costs are on an industry-wide basis within  
13  reasonable limits. That proves that the job can be done.

14          Secondly, excellent management of a project is  
15  mandatory if the project is to be successful.

16          Third, constructor and regulators, both state and  
17  federal, must coordinate so as not to drag the system down.

18          The NARUC seeks to reach out to overcome any  
19  jurisdictional, management or regulatory gaps among major  
20  partners in the waste program without interfering with any  
21  other entity's purview or prerogative.

22          That means we will not wait until 1990 or 2010 for  
23  whatever price tag may eventually result from the  
24  deliberations, disagreements, deals and conclusions of other  
25  parties. Our mandated responsibility to our ratepayers

1 requires our full involvement in the assessment of the nuclear  
2 waste project to assure that cost-effective decisions are made  
3 throughout the program.

4 With that introduction before you, we appear today  
5 to open discussion on matters of waste disposal program  
6 management, licensing and continuity.

7 We have planned some questions for you that we  
8 believe would help us carry out our responsibilities. We also  
9 make ourselves available to you in a cooperative spirit in  
10 hopes that this dialogue will contribute to a safe, deliberate  
11 and cost-effective disposal of our nation's high-level nuclear  
12 waste.

13 With that, I would turn to Commissioner Anne Mead.  
14 I might indicate that we have with us also three of our staff  
15 members to the subcommittee; Mr. Ron Callen, who chairs that  
16 committee, Mr. Fred Haag of the State of New York and Ms. Kim  
17 Hoover who is from the State of Washington. They are experts  
18 in this field and would be also very responsive to any  
19 technical or other kinds of questions and concerns that you  
20 may have with regard to our activity and existence.

21 Commissioner Mead.

22 MS. MEAD: Good afternoon. In looking and reviewing  
23 the waste management program, we have obviously reviewed the  
24 role of NRC in the licensing process. We have several  
25 concerns about that area.

1           The first concern we have, I think, is how the NRC  
2   Commissioners, how do you view your role in assuring that  
3   there will be an effective and efficient licensing process.  
4   By that, I mean how will you oversee the staff in seeing that  
5   precise definitions are arrived at, that there is some  
6   precision in your requirements to DOE so that in their  
7   responses to you, there would be enough precision in what you  
8   require so that any confusion or sending things back for  
9   further review and development and so forth might be avoided.

10           We just wonder how you view your role in this whole  
11   licensing procedure?

12           CHAIRMAN PALLADINO: You would like us to answer  
13   now?

14           Well, I could give you some preliminary thoughts and  
15   my fellow Commissioners are free to chime in.

16           We have not been down this road before as you have  
17   indicated and so everything that we might do may not be  
18   recognized at this time but we do have periodic meetings with  
19   our staff and we do get periodic reports or significant memos  
20   that they generate.

21           We are encouraging and I believe the staff has been  
22   having meetings with representatives of various groups to make  
23   sure that we are getting the input from all groups that could  
24   impact on our resources.

25           The staff is also looking at what it is going to

1 take for them to do their licensing job and there are  
2 disagreements between what the staff says and what DOE thinks  
3 we can do. For example, we say the licensing process will  
4 take us three years and DOE keeps saying, "Well, try for 27  
5 months."

6 After listening to the staff, it seems to us like it  
7 may -- and based on our experience, it may very well take the  
8 three years plus some additional time.

9 The staff is also working on a tracking system or I  
10 guess has pretty much developed a tracking system so that the  
11 information that is developed and the information needed for  
12 a decision can be made available not only to staff but to  
13 others that are interested.

14 This is in general how we work with our staff. When  
15 it comes to important decision points the staff prepares  
16 what we call SECY papers and it might be for information. It  
17 might be for decision and we act depending on our feelings  
18 about what they give to us and some times we send them back  
19 for further work.

20 Maybe some of my colleagues here would like to add  
21 or we might even ask some of our staff people to amplify how  
22 it looks from their vantage point.

23 COMMISSIONER ASSELSTINE: Joe, I would add just a  
24 couple of thoughts. I would say, Anne, that I think the  
25 Commission's involvement so far in the waste program has been

1 fairly good and fairly intensive certainly since the Waste  
2 Policy Act was enacted and even before that. A lot of the  
3 questions that we have discussed in our meetings with the  
4 staff and you all have been issues that we focused on even  
5 since before the Waste Policy Act was enacted.

6 The time that would be required for our licensing  
7 process, for example, is something that the Agency focused on  
8 in its testimony before the Congress and we certainly have  
9 paid a lot of attention to since the enactment of the  
10 legislation.

11 In terms of the oversight of the staff's activities  
12 and the program, I would agree with Joe's description of it.  
13 We have been fairly involved in a number of briefings and  
14 overseeing exactly what the staff is doing, looking at our  
15 responsibilities under the Act, looking at the schedules that  
16 are set out under the Act, and ensuring wherever we can that  
17 we stick with those schedules or come very close to it or  
18 exceed it in some instances.

19 I think we have been fairly successful on our  
20 responsibilities, particularly the promulgation of our  
21 technical and procedural requirements, our commenting on the  
22 site selection guidelines and on the mission plan and more  
23 recently on the MRS proposal.

24 One other thing that we do that might be helpful to  
25 you from the standpoint of your concern about fiscal



1 responsibility is that we do have to review and justify our  
2 budget including the waste disposal program and I think that  
3 provides another opportunity for the Commission to take a look  
4 at the specifics of how many people we have, how much money is  
5 being allocated to the waste program, how that money is being  
6 used, how we are achieving progress in terms of carrying  
7 forward our license responsibilities and we do that on an  
8 annual basis as well.

9 Not only do we have to be satisfied but we also have  
10 to convince our authorizing and appropriating committees that  
11 our program is justified and is sufficient and is going to be  
12 carried out in an efficient manner.

13 Wherever the funds come from ultimately, we have to  
14 get the Congress' approval for those funds.

15 So I would say those are a couple of other areas in  
16 which, I think, the Commission has been involved and in which  
17 we are trying to assure that this program is not only  
18 effective but also is as efficient as it can be.

19 I would agree with Joe's comments as well on the  
20 timing of the licensing process. I think we all do need to  
21 recognize that the repository is a first-of-a-kind facility.  
22 It is as I think you have recognized in some of your letters  
23 to us a very complex proceeding involving very substantial  
24 amounts of technical material and information and some  
25 difficult technical questions.



1 I think my own view and I think the view that the  
2 Commission has consistently taken in focusing on the issue is  
3 the 36-month licensing process is probably realistic assuming  
4 that we can do many things very, very well to master as much  
5 of the information and identify as many of the issues as  
6 possible early on in the process.

7 CHAIRMAN PALLADINO: Incidentally, in one of your  
8 letters I think you had expressed concern about the fact that  
9 if we go 36 months rather than 27 months this would impact on  
10 ratepayers.

11 Could you expand the horizon a little bit for any  
12 thoughts you have on what the nature of that impact would be  
13 on ratepayers aside from the fact that it takes longer and  
14 that that might use up some funds.

15 MS. MEAD: That's it. We have found that wherever  
16 there are delays in the planning and construction of any kind  
17 of a facility, that that translates into costs. The interest  
18 keeps growing, you know. If we take a Shoreham, \$50 million  
19 per month for each month that that plant does not come on  
20 line, that type of thing keeps growing and it translates into  
21 costs that go right back to the ratepayer from whom all manna  
22 flows.

23 MS. ANDERSON: We think, too, the impingement of  
24 that extended time on the final deadline for the first  
25 repository, for example, may be significant in terms of the

1 build-up of waste on site for utilities with additional  
2 funding being required there.

3 We would be very careful to say that we do not think  
4 that time should be a factor mitigating against safety. We  
5 are equally concerned about safety and we want the process to  
6 be as safe and as viable as we want it to be cost effective  
7 and I can't emphasize that enough.

8 MS. MEAD: We don't just want haste. We want a  
9 reasonable amount of time that assures safety but that does  
10 not bog us down in horrendous costs.

11 CHAIRMAN PALLADINO: I think we have a common goal  
12 in that regard to be as efficient as we can but we also found  
13 that sometimes trying to cut short some of the processes ends  
14 up in taking more time than if we follow the planned  
15 procedures.

16 I think there will be a lot of interest and there  
17 will be a necessity for hearings on a number of these points  
18 and those are an important part of the process that extends  
19 the time.

20 Of course, if we have safety issues we want to  
21 resolve them and I know you want to resolve them as well. We  
22 don't want to get to a point and wish we had done something  
23 different in order to provide the safety that we expect.

24 COMMISSIONER ASSELSTINE: Edwyna, your opening  
25 statement focused also on learning the lessons from the past

1 reactor experience. I think that is a very good point.

2 I think in a number of respects you can take some  
3 comfort from what the waste management staff in the NRC is  
4 doing. I think the focus really is on making sure that the  
5 job gets done right but also in achieving efficiencies in the  
6 licensing process wherever possible and learning from some of  
7 our experience in the reactor area.

8 One good example, I think, is quality assurance. I  
9 am very proud of what the NRC staff is doing in the waste  
10 program on quality assurance. They have really stressed the  
11 need to DOE to have a strong QA program and to have that  
12 program in place now while they are beginning to collect the  
13 data and information that they ultimately will rely on for  
14 their application for the construction and authorization for  
15 the repository.

16 I think that is a particularly good lesson and it is  
17 one that does come out of the reactor area. That is an  
18 example where, I think, the staff is taking a very forward  
19 looking approach at how can we make sure when that application  
20 comes in that it is a good application and that we can move  
21 along on a reasonable licensing schedule such as the one we  
22 have outlined.

23 I think at our February meeting the staff outlined  
24 some other things that they were doing, one of which is an  
25 effort to try and resolve issues generically through

1 rule-making wherever that can be done and also to identify  
2 issues early on while we are in this pre-licensing phase and  
3 do whatever we can to resolve those issues prior to the time  
4 of the licensing hearing.

5 It strikes me again that those are lessons that we  
6 have learned from the reactor area. You are never better off  
7 if you are deferring issues to later on down the road. If you  
8 can identify them, get them resolved in a way that is  
9 technically responsible and defensible early on in the  
10 process, it has to make the later licensing phase go much more  
11 smoothly.

12 I think finally the effort to try and set up a  
13 computer document system so that everyone is working from a  
14 common base, I know that is an area you have had some concerns  
15 about in terms of cost, but it strikes me that that is another  
16 area where if the costs are reasonable, it ought to improve  
17 the efficiency and effectiveness of the licensing process.

18 If everybody is working from the same basis of  
19 information and everyone accepts that proposition at the  
20 outset, it should make the licensing process go more smoothly  
21 particularly where you have such a voluminous amount of  
22 information.

23 MS. ANDERSON: That brings to mind the question that  
24 Commissioner Bratton had with regard to the volume of data.

25 MR. BRATTON: I do have a question with respect to

1       that. You called it, Jim, computer document system and I  
2       assume, is that the same as you referred to as the tracking  
3       system, Mr. Chairman?

4               CHAIRMAN PALLADINO: Yes, in part.

5               COMMISSIONER ASSELSTINE: That is part of it, yes.

6               MR. BRATTON: There are some estimates that have  
7       been given to our staff and I don't know the source of them.  
8       I don't even know the accuracy of it but the numbers that we  
9       have seen discuss the potential of 300,000 to 400,000  
10      documents developed by the NRC staff and then some potential  
11      of up to 40 times as many documents to be developed by DOE  
12      and/or others.

13              If that were to occur, using the maximum number,  
14      that is something like 16 million documents and my quick  
15      calculations sitting here this afternoon would indicate that  
16      if you captured one of them in machine-readable form in a  
17      minute, that would take 30.44 years.

18              COMMISSIONER BERNTHAL: That's probably about right,  
19      isn't it?

20              (Laughter.)

21              MR. BRATTON: It just is beyond my comprehension how  
22      that many documents could be generated. I guess if those  
23      numbers are -- if I have them correctly and there is that kind  
24      of potential --

25              COMMISSIONER BERNTHAL: Welcome to Washington.



1 MR. BRATTON: -- can you really develop this system  
2 that will capture and have available through some index for  
3 retrieval this quantity of documents?

4 CHAIRMAN PALLADINO: I wonder if Bob Browning might  
5 comment on that.

6 MR. BROWNING: Regardless of the number of  
7 documents, the actual quantity, there clearly are going to be  
8 a lot of documents.

9 CHAIRMAN PALLADINO: Are they going to be in the  
10 300,000 to 400,000 range from NRC?

11 MR. BROWNING: Those are the current estimates but I  
12 would like to indicate that one of our initiatives in looking  
13 at making this whole process more efficient is to try to make  
14 sure that the number of documents is kept to the absolute  
15 minimum.

16 One of the key elements of this whole program is to  
17 make sure that these documents as they get generated are  
18 available to everybody on a real time basis and instantly  
19 available for recall.

20 The whole purpose of this computerized program which  
21 basically DOE has the lead for it will be to make sure that  
22 everyone that is an interested party in this thing has access  
23 to the documents on a real time basis so that when the time  
24 comes for the licensing process, there will be no discovery  
25 period.



1           In most of the other licensing arenas, discovery  
2       could end up being years and with this kind of document base,  
3       you can imagine how long it would take if, in fact, all the  
4       documents had to be dredged out in the usual manner.

5           So this is one of the initiatives we have been  
6       working on very closely with DOE. It is going to be an  
7       extremely cost effective thing in terms of time, real time  
8       when it comes to the licensing process.

9           There also no question but what DOE and we need to  
10      keep the number of documents down to the absolute minimum  
11      necessary in order to do the job.

12          CHAIRMAN PALLADINO: Bob, is your estimate 300,000  
13      to 400,000 from NRC alone? That is roughly 100 documents for  
14      every person that works in the Commission, the whole Agency.

15          MR. BROWNING: But this is over a period of a long  
16      period of time.

17          CHAIRMAN PALLADINO: Even that because not everyone  
18      generates documents in this area.

19          MR. BROWNING: This includes memos, drafts and if we  
20      have an efficient system --

21          COMMISSIONER BERNTHAL: It is everything, virtually  
22      everything.

23          MR. BROWNING: -- it works into this computer  
24      system, will essentially purge the system of all irrelevant  
25      documents. Typically in a discovery process, the lawyers tell

1 me that the problem in these hearings is that all kinds of  
2 drafts come up with marginal notes, et cetera. This system,  
3 if it is put in and discipline is imposed on both DOE and our  
4 systems, that kind of system will not be in place at the time  
5 discovery comes in and the hearing process takes place.

6 COMMISSIONER BERNTHAL: Let me just interject here a  
7 comment or two so you understand what we are trying to do. It  
8 is clear that if we had that many documents with the current  
9 system that this agency has it would fall flat on its face.  
10 We would be drowning in documents. The discovery process  
11 would never end.

12 I think we are going to be saved by technology here  
13 and it took some fighting to get it done and I believe that we  
14 are now embarked on a program in conjunction with DOE to try  
15 to rationalize and computerize with the best technology  
16 available our document system here.

17 So it isn't as bad as it sounds and I would just say  
18 although I am not a defender of document generation, I am a  
19 realist. That includes every memo and every letter, every  
20 piece of paper basically that relates to the Nuclear Waste  
21 Policy Act.

22 It sounds staggering but I am not surprised. That  
23 is the way this city runs.

24 If I may go on in a little bit more general vein, I  
25 don't know what the latest estimate I got of the total

1 fraction of cost in the Nuclear Waste Policy Act execution  
2 that will be attributable to the NRC, I don't know what the  
3 total fraction of that was, maybe Jim can help me out here,  
4 the number ten percent sticks in my mind but maybe it was 30  
5 percent. What is that estimate?

6 COMMISSIONER ASSELSTINE: I think it is a lot  
7 smaller than ten.

8 COMMISSIONER BERNTHAL: Does anybody know?

9 MR. STELLO: Four or five.

10 COMMISSIONER ASSELSTINE: Vic is saying four or five  
11 percent.

12 COMMISSIONER BERNTHAL: Four or five percent, okay.  
13 I have to say that the NRC's track record on timely licensing  
14 is not what it is generally perceived to be on the outside.  
15 It is odd that you would be hearing this from me because I  
16 think I am very much on your side in your concerns and in the  
17 general concerns of the public about the NRC, the efficiency  
18 of the licensing program and what-not, but if you look at the  
19 record this Agency by in large has not been responsible for  
20 delaying plants per se because of the licensing process.

21 Now we can get into arguments over TMI imposed  
22 backfits and things like that but the licensing process per se  
23 has not necessarily been where the money has been spent in  
24 many of these vastly too expensive nuclear power plant  
25 projects.

1           Therefore, I see no reason to make the judgment  
2 ahead of time here that for the four or five percent of that  
3 appallingly large amount of money, \$25 to \$30 billion dollars  
4 I just read, I believe, in your statement, Commissioner  
5 Anderson, that for that four or five percent that the NRC  
6 itself will not manage its four or five percent of that very,  
7 very large quantity of money. We may not, but I would like to  
8 think that at least we will follow the track record that I  
9 think has characterized this Agency in recent years. Let's  
10 give us a couple of years after TMI and that is that we will  
11 do our job with some degree of expedition here and some degree  
12 of efficiency.

13           I would just suggest that it is the nature of the  
14 process that has been set up that is costing \$25 to \$35  
15 billion dollars and perhaps the real comparison to make and  
16 the question to ask is what will the actual construction of  
17 the repository -- what will the cost of that be along with  
18 the licensing if you will?

19           I would not hazard a guess on that. I am sure DOE  
20 would be far better than I would be at it but the difference  
21 between that and it is large and \$25 to \$35 billion dollars is  
22 the process that the Congress of the United States has set up.

23           Now we are paying a very large price for that  
24 process. That is the impact on the ratepayers in my  
25 judgment. I see no way to avoid that because the nature of

1 the system demanded that that process be set up and I think  
2 Jim Asselstine appreciates that as well as anybody at the  
3 table here.

4 I am sure that there will be delays. I hope that  
5 they are not NRC induced delays. But you can almost count on  
6 it. This process is going to go on and part of the reason is  
7 that there is a large segment of society in this country whose  
8 very interest it is in to perpetuate the process.

9 There will be very much perpetuation of process as  
10 we go through this in the next 20 years. I don't have a doubt  
11 about that. All I can do as a Commissioner with a relatively  
12 short term compared to the life of this whole thing is to give  
13 you my assurances that we are going to try to manage this  
14 Agency at least to the extent that I can and I think everyone  
15 at this table in a way that is efficient.

16 I don't think though that even if we did our job  
17 ideally perfectly here that that is going to be the big impact  
18 on your ratepayers.

19 Rather, it is this huge difference between what a  
20 repository will actually cost to build and the total amount of  
21 money that this project is going to cost and that, I am  
22 afraid, is built into the process itself. That was written  
23 into the law. That may be discouraging but I think that is  
24 the way it is and that is probably what we are going to have  
25 to live with.



1 MR. BRATTON: Our point with respect to the number  
2 of documents was not that you haven't come up with the right  
3 system in order to handle it. In fact, I think we commend  
4 your planning with respect to that. It is that estimate that  
5 has us buffaloed because to the degree that that estimate of  
6 the potential number of documents is realized, the ability of  
7 your developing that system and in effect handling that number  
8 of documents.

9 My little example of one minute per document taking  
10 30.44 years is part of the problem and to the extent that this  
11 system may not work, then we have delays and potentially some  
12 issues that can potentially be litigated. They couldn't get  
13 their document. They tried and they couldn't.

14 If you follow what I am trying to say, it is the  
15 sheer number and really will this system work and I suppose  
16 the rebuttal will be "if not that, what."

17 COMMISSIONER ASSELSTINE: Yes.

18 MR. BRATTON: I don't know that but we are just so  
19 overwhelmed or at least I personally by this \$16 million  
20 dollar figure.

21 CHAIRMAN PALLADINO: Our EDO has some comment he  
22 would like to make. Mr. Stello, our Executive Director for  
23 Operations.

24 MR. STELLO: I think the question is a very, very  
25 good question and an important one and one that has led to

1     this whole issue of how is it that you are going to manage  
2     these documents.

3             Even if we were to develop the system which is in  
4     fact developed at the present time, if all of the parties  
5     don't agree to participate in it, we haven't gotten very far  
6     and I will be telling the Chairman and the Commissioners that  
7     hopefully by the end of this week, they will have a package  
8     that is going to suggest that we want to do something  
9     different here.

10            We are going to ask for a negotiated rule-making  
11     process to bring in all of the parties and develop a proposed  
12     rule to get the commitment from all of the parties and the  
13     Indian tribes that they, in fact, will participate and use  
14     this system to avoid that very problem.

15            This means not only will -- and those documents are  
16     not NRC, there are contractors and all the correspondence and  
17     if you look at our files it really boggles your mind as to how  
18     many documents we really deal with but it is a routine  
19     process, but if all the parties participate in it and they  
20     enter in also their documents into this system so that  
21     everybody has immediate access and the decisions can be made  
22     on the basis of those documents that everyone has a chance to  
23     see so that the decision is made on the best available  
24     information, everybody knows what the basis for the decision  
25     is and everybody can see it.

1           Then I expect to see rather substantial and  
2           significant efficiencies in being able to get this job done  
3           with in my mind a very thorough sound basis that everybody  
4           understands as the basis for getting the job done.

5           So I hope that we are successful and that parties  
6           will, in fact, take the first step which is to agree to come  
7           in and negotiate what ought to be in this rule-making to make  
8           sure that everybody's equipment and systems that are in place  
9           are compatible.

10          If everyone agrees to do that, I see a very  
11          substantial improvement in our process and I will -- maybe I  
12          am exaggerating -- but orders of magnitude better than  
13          anything that we can do with our conventional licensing  
14          process today.

15          COMMISSIONER ASSELSTINE: I think that is a very  
16          good point that Vic raises and it ties in with a unique aspect  
17          of this particular proceeding and that is that Congress made  
18          the decision in this case that, as Bob I am sure you are aware  
19          being from a potential host state, that the states and  
20          affected Indian tribes were going to be funded and that they  
21          were going to receive funding from the program sufficient to  
22          hire their own independent experts.

23          What we have is the situation where states and  
24          Indian tribes, in fact some within your own state, that I am  
25          told are hiring some of the best experts that are available

1 in some of these areas and they are going to be generating a  
2 substantial amount of material and information.

3 We can to a certain extent control what we do. DOE  
4 can control what it does but you are also going to have for  
5 the first time, I think, other participants in the process  
6 that are very well funded, that are equipped with some of the  
7 best technical talent that is available in the field and they  
8 are going to have to be part of this process to make it work.

9 I think really this kind of an information  
10 management approach that we are trying to put in place really  
11 is an essential element. Otherwise, as you say, what else? I  
12 don't know what the alternatives are.

13 But this to my mind holds out the prospect for some  
14 management of what is obviously a very challenging task.

15 CHAIRMAN PALLADINO: Incidentally, we would be  
16 interested in any thoughts you have on our Information  
17 Management Tracking System either now or as you see it develop  
18 because your input can be very helpful to us as well as the  
19 input of many other people.

20 MR. BRATTON: Thank you.

21 CHAIRMAN PALLADINO: Do you want to go to another  
22 issue?

23 MS. MEAD: Yes. If I could return to the issue of  
24 the involvement of the Commission. I think that question  
25 arose because of our review of various documents, one of which



1 was the Kemeny Commission Report which indicated that the NRC  
2 Commissioners at that time had largely isolated themselves  
3 from the licensing process and from the overall management of  
4 the NRC.

5 So I think that I gather from what you said that  
6 this Commission will take a more activist role in this  
7 licensing process and hopefully in management of the program.  
8 Is that a correct assumption?

9 COMMISSIONER ASSELSTINE: I think it is and I think  
10 there is one other important distinction that you should take  
11 away with you as far as this licensing process as compared  
12 with the reactor process.

13 When the Commission first set up the licensing  
14 process for the repository, it made a very conscious decision  
15 to divide the process into two parts. One part is the formal  
16 part after we get a license application which will be several  
17 years down the road. From that point forward then the  
18 Commission really is in the position of being the ultimate  
19 judge in the case and at that point, you will have the  
20 hearings and the restrictions on Commission involvement in  
21 those hearings because we will be the ultimate judge of the  
22 case or whoever is on the Commission at the time.

23 But the Commission also recognized that there was a  
24 substantial period of time where significant information would  
25 have to be developed before the formal licensing process



1 starts.

2 In that sense, that is the process we are in now.  
3 The Commission made the conscious decision when it set up the  
4 regulatory framework that it wanted to stay involved in that  
5 part of the process. It wanted to oversee this informal,  
6 pre-licensing portion. I think that is what we are doing.

7 I think that is a difference from the reactor area  
8 because the reactor area, you always start with a license  
9 application that has come into the Commission and the  
10 announcement of an opportunity for a hearing or a required  
11 hearing and almost immediately you are into the formal process  
12 where the Commission has to remain somewhat outside of the  
13 direct involvement of the staff's review and the hearing  
14 itself.

15 We have managed to avoid that, I think, by the way  
16 that the repository licensing process is structured. The  
17 result is more direct Commission involvement and oversight of  
18 what is going on particularly in these crucial early stages.

19 MS. MEAD: As a follow-on to that, Commissioner, it  
20 is my understanding, however, that you are going to use the  
21 same licensing process; that is, a two-step process, the  
22 construction and operating license, as you have used in the  
23 reactor model.

24 We wonder whether or not you have looked at that as  
25 maybe the proper vehicle for licensing a repository because

1 we think that the reactor and repository safety and  
2 construction and operation are not fully alike. Recognizing  
3 the double procedural trouble in entering and maintaining  
4 movement in the process, the legal and organizational  
5 differences between the DOE and an investor-owned utility and  
6 the length of a license years here, it is not 40 years but let  
7 us say forever, we wondered whether a two-step type of  
8 licensing process is a correct process or whether you have  
9 thought about that at all.

10 We wondered whether a more continuous type of  
11 licensing where as things were completed, they would be  
12 reviewed and there would maybe be a sign-off on that  
13 particular area.

14 I refer again and I hope you will excuse me to the  
15 Kemeny Report which said that licensing is a two-step  
16 process. The company must obtain a construction permit and  
17 several years later an operating license and the CP stage does  
18 not require complete design plans and therefore, the full  
19 safety review does not occur until the operating license  
20 stage.

21 By then, and this is our concern, by then hundreds  
22 of millions of dollars have been spent or committed in the  
23 construction process and the ultimate safety review may be  
24 influenced by economic considerations that can lead to a  
25 reluctance to order major changes.

1           Now we know as a matter of fact that some major  
2       changes have been ordered in the reactor area causing the  
3       expenditure of a lot more money.

4           So I wonder if you have looked at that process as  
5       the proper one for this project.

6           COMMISSIONER BERNTHAL: Let me just make a comment  
7       and I am sure there will be others.

8           There is a fundamental difference that Jim already  
9       alluded to, I think, between what caused some of the problems  
10      in nuclear power plant licensing and the licensing process  
11      that I would envision here.

12          First of all, I would expect that the Commission  
13      will be very much involved at every step of the way. I would  
14      expect that our staff will be involved every step of the way  
15      as the design develops for this repository.

16          But the fundamental difference is that this is a  
17      first-of-a-kind. That does not apply to any nuclear power  
18      plant that we licensed, I suppose, since the first one or  
19      perhaps since the Clinch River licensing attempt.

20          CHAIRMAN PALLADINO: And even the first one had  
21      prototypes before it.

22          COMMISSIONER ASSELSTINE: Yes, that is right.

23          COMMISSIONER BERNTHAL: So a one step licensing  
24      process if that is what you are suggesting and that is what  
25      the Commission is suggesting now for nuclear power plants

1 appears to be something that would work very well provided  
2 there is a backlog of experience and provided most importantly  
3 that the utility comes in with a rather complete design.

4 That was not done back in the 1960's and 1970's.  
5 The utility came in and said or basically pointed to a GE BWR  
6 or a Westinghouse PWR, I won't get through all the vendors  
7 here, but said, "We want one of those. We will get back to  
8 you and let you know what the details of the design are  
9 later."

10 That is the way the system was set up. That is the  
11 way the utilities by in large preferred to proceed with the  
12 system. We are not going to let that happen again here  
13 either. This is a first-of-a-kind facility that we are going  
14 to be licensing here.

15 I see no way other than continuous licensing maybe  
16 and whether that is two-step or ten-step, it seems to me isn't  
17 really the question. There has to be continuous exchange  
18 between the NRC and the DOE licensee in this case just like  
19 there was in the case of the Clinch River Breeder Reactor  
20 which may be in some respects at least one of the better  
21 analogies that we can draw at this point.

22 That is very different from doing the 101st or 105th  
23 nuclear power plant license.

24 CHAIRMAN PALLADINO: Let me also add several  
25 points. I wanted to make the point that this matter of a deep

1 geologic repository is a first-of-a-kind as Commissioner  
2 Bernthal said and is a developmental process.

3 Actually, whether or not a one-step or a two-step  
4 process is better, I don't think we have addressed as a  
5 Commission although there may be various views among the  
6 Commissioners about whether or not a one-step process would be  
7 feasible under this kind of a development program.

8 But the staff did address the one-step process in  
9 dealing with the monitored retrievable storage and did feel  
10 that perhaps a modified one-step process might work there but  
11 it does not have the developmental characteristics that a deep  
12 geologic repository has.

13 So while that might be a feasible thought for an MRS  
14 that is completely designed in advance to my way of thinking  
15 it is very questionable with regard to a deep geologic  
16 repository because we have never seen one and the design is  
17 being developed as information is being obtained and we are  
18 trying to keep abreast of it and when we think it is ready to  
19 get a CP license, we would like to see a lot more work done  
20 before we say that it is ready to operate.

21 COMMISSIONER ASSELSTINE: I would add one other  
22 comment. I agree with both Fred's comments and Joe's on the  
23 first-of-a-kind facility but I think one point that you make  
24 to us is a valuable one and one that we should focus on  
25 however many steps there are in the process. That is we



1     should make sure that we don't wait until right before  
2     operation of the repository before we identify or address  
3     significant issues that may come up.

4             This is bound to be a learning experience no matter  
5     how good the site characterization is, it will only cover part  
6     of the geologic area in which the repository will be built.  
7     That means that there are bound to be some surprises and some  
8     new information that comes to light during the construction  
9     process for the repository.

10            However we structure the process, I think your point  
11     is well taken. We need to have the ability to identify  
12     problems and new information as soon as it comes to light and  
13     make sure that if there are new questions that need to be  
14     addressed that they get addressed right away. Don't wait  
15     until the end of the process when the facility is basically  
16     complete and ready to go into operation to be addressing new  
17     problems.

18            I think regardless of how the process itself is  
19     structured, that part ought to be built in and that is  
20     something that we can and should focus on.

21            MS. MEAD: I think that is basically our point  
22     because to go back and do a lot of expensive retrofitting  
23     after all of these billions of dollars have been expended --

24            COMMISSIONER ASSELSTINE: No question about that and  
25     I think that is something that the staff and DOE might want to

1 look at and how to go about that part of the process and now  
2 probably is not too soon to start thinking about that. I  
3 think a lot of our efforts has been focused on the  
4 pre-construction phase that we are now in but it is probably  
5 not too soon to start thinking about how to structure the  
6 staff's involvement and the NRC's involvement in the on-going  
7 construction program to make sure that any problems are  
8 identified, surfaced and addressed right during that process  
9 as soon as they come up.

10 MS. MEAD: We are mindful that it is a  
11 one-of-a-kind. I don't think what I have suggested is an easy  
12 -- I mean this is a very difficult area, I think, in terms of  
13 how to handle it but I am glad that you are going to give it  
14 some thought.

15 COMMISSIONER BERNTHAL: I would just say that if  
16 there is anything that is burned in the institutional memory  
17 around here, it seems to me, is the futility of Monday morning  
18 quarterbacking when it comes to licensing.

19 It has happened a few times to the NRC. I don't  
20 think that any of us right now are in a mood to let it happen  
21 again at least not on our watch, that is certainly the way I  
22 feel, and if your concern is that somehow the second license  
23 for operation if indeed there is one were some step is the  
24 step at which the Commission is going to say, "Hold everything  
25 in 1997. You forgot something in 1987," we certainly are not

1 intending to let that happen.

2 I think that we are extremely sensitive to that sort  
3 of problem because we have been around that track a few times.

4 MS. MEAD: I think both you and all of us don't want  
5 history to repeat itself. We should be learning from history  
6 because we end up in the same situation you do as our  
7 ratepayers attack us.

8 COMMISSIONER ASSELSTINE: You raised the point also  
9 about the degree of completeness of the design and the  
10 application.

11 MS. MEAD: Yes, I did.

12 COMMISSIONER ASSELSTINE: That is something that I  
13 think we haven't really come to grips with yet. Under the  
14 ideal situation, just as I think we are trying to approach in  
15 the power reactor area, you would want a virtually complete  
16 design before you start to build the facility.

17 But I think that the first-of-a-kind nature of this  
18 facility, the unknowns in terms of the geologic environment,  
19 and some of the difficult technical questions are going to  
20 limit our ability to do that.

21 Now where you draw that line in terms of how  
22 complete an application we are looking for, I don't know. But  
23 it strikes me that that is something that again is not too  
24 soon for our staff to start focusing on.

25 How much design information realistically can we

1 expect for this facility and how much would we like to have  
2 and what programs do we need to have or does DOE need to have  
3 in place to meet our expectations in terms of the level of  
4 completeness of the design and the application that they  
5 submit?

6 Clearly the more we can get of good sound  
7 information to justify the design and to complete it, the  
8 better off we are going to be but that is another valuable, I  
9 think, suggestion that you made that we could perhaps ask the  
10 staff to look at.

11 MS. MEAD: It is also another difficult area.

12 COMMISSIONER ASSELSTINE: Yes. It is not easy.

13 MS. MEAD: It is very difficult.

14 COMMISSIONER ASSELSTINE: That's right.

15 MS. ANDERSON: I think we have exhausted what we  
16 came here for today. I must say to you how grateful we are  
17 that we had the kind of dialogue that we have had, that you  
18 enabled us to raise issues and we were able to talk back and  
19 forth.

20 We recognize sometimes the difficulty in the more  
21 formal setting and we are very appreciative of this  
22 opportunity. I would like to request the opportunity in the  
23 future to come back at some point and to talk further with you  
24 as this whole process develops.

25 We thank you very much.

1           CHAIRMAN PALLADINO: We certainly thank you for  
2 coming and sharing your thoughts with us. I hope you are  
3 maintaining an on-going dialogue with our staff and they, in  
4 turn, with you because that will give you the opportunity to  
5 see what their thinking is even before we get it.

6           It gives you an opportunity to get some input at an  
7 early stage and it also gives us an opportunity to get  
8 important reactions and questions that we might tend to take  
9 for granted whereas you might not take them for granted in the  
10 same way.

11           So again, let me thank you for coming and let me see  
12 if other Commissioners have any closing remarks?

13           COMMISSIONER ASSELSTINE: I was just going to ask  
14 one question. Are you satisfied that the arrangements we have  
15 been able to put in place over the past I guess year or so in  
16 terms of having the opportunity to discuss with the NRC staff  
17 the kinds of information or questions that you have or giving  
18 you the information that you need --

19           MS. ANDERSON: You are very helpful and I must say,  
20 Jim, that it has been excellent to have you on board with us.

21           COMMISSIONER ASSELSTINE: Thanks.

22           MS. ANDERSON: It is just an excellent opportunity  
23 though to have the advantage of talking with each of you and  
24 we appreciate that.

25           COMMISSIONER ASSELSTINE: Good.



1 CHAIRMAN PALLADINO: Thank you. We will stand  
2 adjourned.

3 [Whereupon, the Commission meeting was adjourned at  
4 3:05 o'clock p.m., to reconvene at the Call fo the Chair.]

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Waste Policy Act (Public Meeting)

8 PLACE OF MEETING: Washington, D.C.

9 DATE OF MEETING: Tuesday, April 15, 1986  
10

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