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UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

Title: BRIEFING ON
STATUS OF EXTERNAL REGULATION OF DOE
FACILITIES
PUBLIC MEETING

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2 NUCLEAR REGULATORY COMMISSION

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4 BRIEFING ON
5 STATUS OF EXTERNAL REGULATION OF DOE FACILITIES

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7 PUBLIC MEETING

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10 Nuclear Regulatory Commission
11 One White Flint North
12 Rockville, Maryland
13 Friday, March 19, 1999
14

15 The Commission met in open session, pursuant to
16 notice, at 9:05 a.m., Shirley A. Jackson, Chairman,
17 presiding.
18

19 COMMISSIONERS PRESENT:

20 SHIRLEY A. JACKSON, Chairman of the Commission
21 NILS J. DIAZ, Commissioner
22 GRETA J. DICUS, Commissioner
23 EDWARD McGAFFIGAN, JR., Commissioner
24 JEFFREY S. MERRIFIELD, Commissioner
25

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1 STAFF AND PRESENTERS SEATED AT COMMISSION TABLE:

2 ANNETTE L. VIETTI-COOK, Secretary of the Commission

3 KAREN D. CYR, General Counsel

4 WILLIAM TRAVERS, EDO

5 CARL PAPERIELLO, Director, NMSS

6 PATRICIA RATHBUN, NMSS

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P R O C E E D I N G S

[9:05 a.m.]

CHAIRMAN JACKSON: Good morning, ladies and gentlemen. Today the NRC Task Force on Oversight of the U.S. Department of Energy will provide the Commission with a briefing on its interim report of the findings of the Task Force to date.

In June 1997, then Secretary Pena and I agreed to establish a pilot program to examine NRC regulation of a set of Department of Energy facilities through what was called simulated regulation. To date, pilots have been completed at the Lawrence Berkeley National Laboratory, the Radio Chemical Engineering Development Center at Oak Ridge National Laboratory, and at the Receiving Basin for Offsite Fuels at Savannah River.

The three pilots have given us an opportunity to better understand the ramifications and implementation issues that would be associated with regulating these facilities and to look to work closely and collegially with the Department of Energy and its contractors.

The pilot program was expected to last two years and to include from six to eight facilities. However, recently, in a letter to Senator Warner, Secretary Richardson indicated that the benefits expected to be seen from external regulation were not demonstrated during the

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1 pilots.

2 Additionally, the Secretary indicated that the
3 Department of Energy plans no additional pilots and will
4 forward the final report of the Lawrence Berkeley pilot to
5 Congress later this month.

6 This week the NRC staff provided its interim
7 report to the Commission on the pilot program. The
8 Commission has not yet had the opportunity to fully review
9 the pilot reports, which are still under revision by the
10 Department of Energy. Therefore, the Commission looks
11 forward to this briefing as a means of gaining the NRC Task
12 Force views on the findings and positions taken by the
13 Department in the final Lawrence Berkeley report.

14 Unless my colleagues have anything they would like
15 to add, Dr. Travers, would you please proceed.

16 MR. TRAVERS: Thank you, Chairman Jackson, and
17 good morning. As you have indicated, for the past two years
18 the NRC staff, specifically the NRC Task Force on External
19 Regulation, has been working closely with the Department of
20 Energy on a pilot program to examine the technical, policy
21 and regulatory issues associated with possible NRC
22 regulation of DOE facilities.

23 DOE and NRC jointly established a pilot program,
24 as you have indicated, to evaluate the feasibility of NRC
25 regulation of DOE facilities and to support a decision on

1 whether or not to seek legislation to authorize external
2 regulation by NRC.

3 Today we plan to give you a status report on our
4 activities. With me today is Dr. Carl Paperiello, the
5 Director of the Office of Nuclear Material Safety and
6 Safeguards, and Dr. Pat Rathbun, who is the senior technical
7 assistant to the project Task Force.

8 So I'm going to turn it over to Carl, who is going
9 to start the presentation.

10 MR. PAPERIELLO: This presentation is intended to
11 brief the Commission on the status of staff efforts on the
12 pilot program for the external regulation of DOE.

13 Since the joint reports by the NRC staff on the
14 three pilots are not yet final, it is very difficult at this
15 time to accurately represent the DOE position on all the
16 issues that will be discussed today. You've previously
17 alluded to the Secretary of Energy's letter. So I won't go
18 into that.

19 We are preparing a paper. We have prepared an
20 interim paper to capture what we believe has been learned
21 from the three pilots to date so it might be used in any
22 future efforts on the external regulation of DOE on the
23 efforts currently under way to license DOE's facilities such
24 as a MOX facility and other DOE facilities and to support
25 any legislative interest in DOE regulation.

1 It is our intent to revise this paper once the
2 three pilot reports have been issued and final.

3 Working with DOE on these pilots has evolved. As
4 DOE management has changed during the project, the attitude
5 toward the concept has changed, and this has influenced
6 inputs and revisions of the reports. Currently we are both
7 trying to agree on language that we both can live with.
8 That is the status of trying to get the reports out.

9 [Slides shown.]

10 CHAIRMAN JACKSON: Is there some overarching
11 statement you can make about those differences?

12 COMMISSIONER McGAFFIGAN: Madam Chairman, I was
13 just going to point out for the record for those who are in
14 attendance that the Lawrence Berkeley pilot report really
15 has been ready for the better part of a year and we have not
16 been able to get it out because our friends at DOE have not
17 been able to agree with us, and we have had a hard time
18 getting anything out of DOE.

19 I think Carl is understating the frustration of
20 dealing with the Department of Energy over the past year.

21 MR. PAPERIELLO: I am just stating the facts.

22 COMMISSIONER MERRIFIELD: If I may weigh in, I am
23 somewhat reminded of back when I was a congressional staffer
24 and worked for Senator Bob Smith, who was then and now the
25 Chairman of the Armed Services Subcommittee on Strategic

1 Forces.

2 One of the things that I did for him was review
3 external regulation of these pilot projects and received a
4 series of briefings and had always heard very encouraging
5 things about how those pilot projects were going and very
6 positive things about the relationship between NRC and DOE
7 as those were going along. Needless to say, it was quite a
8 shock and surprise to me, after having become a
9 Commissioner, without really any new information coming from
10 those pilot projects, that the conclusions seemed to be
11 dramatically different than what I had been briefed.

12 MR. PAPERIELLO: The results of the pilot to date.
13 We found that the regulation of DOE facilities appear to be
14 feasible. We didn't look at all the types of facilities,
15 but based on what we have looked at, the facilities that we
16 examined or in a pilot program appeared to be operating
17 safely.

18 This is a performance-based, outcome-oriented
19 conclusion. We did not get into details as to every
20 procedure being followed all the time, but when we looked at
21 the outcomes of the way they are being operated, they
22 operated safely.

23 CHAIRMAN JACKSON: Let me interject a question
24 which I think gets to the heart of some of what some in the
25 Congress even would have a question about. I recognize that

1 you are only talking about the pilot facilities that you
2 examined. If DOE appears to be operating the facilities
3 safely, what is the value added by NRC external regulation?

4 MR. PAPERIELLO: I think the value added would be
5 a well defined process, the openness, a question of public
6 confidence. The issue of cost right now is really debated.
7 I am sorting of jumping to the very end, to my concluding
8 remarks. If the parties to this thing would sit down and
9 say how can we do this as cost-effective as possible, I
10 think you would see some drastic changes in cost estimates.
11 I am really giving you the end.

12 CHAIRMAN JACKSON: It's okay. You have had some
13 career in research, as did I. We always know the best way
14 to give a talk is to give your conclusions at the beginning
15 and then come back and give your conclusions at the end.

16 Commissioner Diaz.

17 COMMISSIONER DIAZ: I don't want to correct Carl,
18 but would you add consistency on a national basis to both
19 the regulatory framework and the outcomes?

20 MR. PAPERIELLO: That is true. How much the
21 consistency would be economically worth to DOE, I don't
22 know. They would know better than me. I am going to
23 emphasize at the end it is important to be risk-informed,
24 performance-based, outcome-oriented. I can turn around and
25 if I take existing regulations and not even think what they

1 mean in terms of risks to a given facility, it can obviously
2 drive costs up considerably.

3 One of the issues that the Secretary talks about
4 in his letter is reconstructing the design basis of a
5 facility could cost a lot of money. The question is, before
6 you ever do that, why don't you look at the risk? You may
7 find out you only need to know about 5 percent of the
8 facility because that dominates the risk.

9 We are proposing integrated safety assessment as
10 part of Part 70. DOE is doing it.

11 CHAIRMAN JACKSON: If that is the case, why have
12 you not been able to come to some common resolution in terms
13 of a go-forward path? It is less a statement about you as
14 potentially about DOE. If all of this sweetness and light
15 in terms of their moving down a line would be consistent
16 with how we would regulate anyway, that automatically begs
17 the question.

18 I didn't mean to preempt Commissioner Dicus, but
19 let's just leave it as a background question as we go
20 through.

21 Commissioner Dicus.

22 COMMISSIONER DICUS: I want to say at the onset I
23 think it is very important to emphasize the fact that these
24 pilots may not be representative at all of the bulk of the
25 DOE facilities. In fact, I don't think they are, and I

1 think we have to be very careful of saying something like
2 DOE appears to be operating the pilot facilities safely, and
3 say, but they may not be representative. I think there is a
4 host of facilities out there that are not at a safety level
5 that we would prefer, and bringing them under NRC regulation
6 will be very costly.

7 CHAIRMAN JACKSON: Commissioner Dicus raises a
8 good point. I think when you lead with a certain kind of a
9 statement that people can read many implications into, one
10 has to take note of that. So I actually thank you for
11 raising that point, because an issue that has also has been
12 infused through this all the time is the difficulty of
13 identifying pilot facilities that represent the most
14 challenging aspects of the nuclear operations and facilities
15 of the DOE.

16 Commissioner McGaffigan.

17 COMMISSIONER MCGAFFIGAN: This follows up on the
18 Chairman's question. Part of the answer to the Chairman's
19 question on the benefits of external regulation comes to
20 this letter that Secretary Richardson sent to Warner and
21 many other people on the Hill. If I were a DOE contractor,
22 I might be a little worried about it.

23 Having rejected external regulation, at least for
24 any foreseeable time, he goes on and says, we are going to
25 work on our efforts. As an immediate step, however, the

1 Department will redouble its efforts to provide a safe and
2 healthy workplace, protect the communities near our
3 facilities, and build credibility with the public.

4 That implies that maybe they are not there at the
5 moment.

6 We learned from our experience at the pilot
7 projects that DOE standards, technical competency and
8 operations are sound from a safety point. What we need to
9 do better is oversee compliance with our requirements and
10 where deficiencies exist ensure that managers are held
11 accountable and corrective actions are taken.

12 That implies maybe accountability and corrective
13 action programs are not the greatest.

14 We therefore will be adopting a number of safety
15 enhancements.

16 Then they go through the long list of safety
17 enhancements, including a secretarial safety council.

18 It strikes me that all of that sounds sort of
19 costly and duplicative of what would be a more efficient NRC
20 regulatory program. I am not going to preempt the whole
21 briefing, but one of the fundamental issues is, who is the
22 licensee?

23 We have flexibility as to who the appropriate
24 licensee is place to place, but if DOE is the licensee at
25 Lawrence Berkeley Laboratory and you have the DOE rules and

1 orders and whatever being imposed by a DOE workforce and
2 then we are coming in and also checking it, then you
3 probably have the worst of all worlds.

4 If the University of California is the licensee,
5 as we have proposed, then we are probably going to treat
6 them just like we would any other large university campus
7 that happens to have radiological materials, like the
8 University of Florida, and it is going to be relatively
9 straightforward and not costly.

10 One of the benefits that Tom Grumbly talked about
11 when this whole effort started was he wanted the DOE labs to
12 act more like businesses. I think this would put them on a
13 very businesslike foundation. DOE may well be about to
14 further perfect its system, but you can create monstrosities
15 by pairing us with them in the worst way.

16 I think that is the way they have been driving the
17 pilots: we are going to do everything that we are doing and
18 there is not going to be any efficiency within the DOE
19 system, and then you are going to be a costly tag-on.

20 We can talk about the cost, but a typical
21 university facility, I believe, gets, what, 1/20th of an FTE
22 a year or something?

23 MR. PAPERIELLO: I don't know exactly.

24 COMMISSIONER MCGAFFIGAN: It's small.

25 MR. PAPERIELLO: I am jumping ahead, but in the

1 case of a facility like Berkeley, I compare them to our
2 large academic licenses, like the University of Missouri
3 with a research reactor, and 2/10ths of an FTE a year for
4 combined licensing, inspection, everything you do, is
5 probably about right. We put about 2/10ths of an FTE a year
6 for NIH, which has 15,000 radiation --

7 COMMISSIONER McGAFFIGAN: Madam Chairman, I would
8 posit that what we really have done is demonstrate that at
9 least the ER and NE facilities could easily be regulated in
10 a much more cost-effective manner by the NRC provided we
11 have the right licensees, namely, the contractors. I think
12 Commissioner Dicus is exactly right. For the much more
13 complex defense facilities with 50 years of history, it may
14 be more difficult. That is the part that we really did not
15 tackle in the pilots and would have to tackle under the
16 Grumbly proposal.

17 CHAIRMAN JACKSON: One could argue that de facto
18 we have some insights, having gone through the certification
19 of the USEC gaseous diffusion plants. It is a different
20 kind of thing, but if you compare it to this receiving basin
21 for offsite fuel, looking at the ISFSI for the Fort St.
22 Vrain spent fuel at the Idaho site as well as the debris
23 from TMI, if you are thinking of fuel storage facilities,
24 those are more complicated and interesting examples.

25 Commissioner Diaz, then Commissioner Discus, then

1 Commissioner Merrifield.

2 COMMISSIONER DIAZ: I agree with Commissioner
3 McGaffigan's comments.

4 I want to go back to the phrase "appears to be
5 operating the pilot facilities safely." What I found is
6 such a difference between this phrase and the phrases that I
7 normally see coming -- is Sam Collins around here from NRR?

8 CHAIRMAN JACKSON: Suspiciously missing.

9 COMMISSIONER DIAZ: You never see, practically
10 speaking, a phrase so final. What we would say would be "we
11 found no significant weaknesses," or "no significant hazards
12 being encountered," or "no major threats to public health
13 and safety have been found." That is what normally our
14 phraseology is.

15 However, in this case, coming from NMSS and maybe
16 tailored by Mr. Paperiello,, we actually make a very
17 substantial statement. I think there should be some
18 reconciliation on how these things are stated in the future.

19 MR. PAPERIELLO: I agree with you. I think in the
20 reform of the NMSS program -- and I use the phrase
21 "outcome-oriented" -- my goal is tell licensees, if the
22 outcomes are okay, you are safe.

23 CHAIRMAN JACKSON: Commissioner Dicus.

24 COMMISSIONER DICUS: I just want to belabor the
25 point.

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1 COMMISSIONER MERRIFIELD: I want to belabor it as
2 well.

3 COMMISSIONER DICUS: Then I almost promise not to
4 bring it up again.

5 Just going back and making sure that we are very
6 clear that we are only talking about these very limited
7 pilots, I am referring to the SECY paper, the advanced
8 copy. On page 4, the next to the last bullet on the page,
9 the first sentence starts out "few changes to DOE facilities
10 or procedures would be needed under NRC external
11 regulation."

12 Later on in the paragraph you do refer to the
13 pilot programs. I think it is so important that the
14 sentence should really start out "for the pilot programs, it
15 appears that few . . ."

16 CHAIRMAN JACKSON: Or "few changes to the DOE
17 pilot facilities."

18 COMMISSIONER DICUS: Right. Something to make it
19 really clear, because that is just a misleading sentence.

20 CHAIRMAN JACKSON: Commissioner Merrifield.

21 COMMISSIONER MERRIFIELD: I want to go back to
22 that same sentence regarding operating pilot plants safely.
23 Sometimes belaboring a point is a good thing. I am reminded
24 of an early briefing we had this week talking about Yucca
25 Mountain. We had the Advisory Committee for Nuclear Safety,

1 and they were talking about the science that DOE was using
2 at Yucca Mountain.

3 One of the members, and I don't remember who it
4 was, said that they felt very good about the science that
5 DOE was using, but the problem is -- this comes into where
6 the NRC can add a value-added product to the Department of
7 Energy -- that you don't have the quality assurance; they
8 can't back up the fact that they are doing the right
9 science.

10 I would argue the same thing is the case with
11 these pilots. It's okay that they are operating those
12 plants safely. Look at the history, as I have, in a lot of
13 these DOE operating plants. If you go to Hanford, talk to
14 some of the folks in Oregon who live not too far away, or
15 you go to Oak Ridge, or you go to other places, there are a
16 number of DOE sites where there isn't that public confidence
17 and where there is a real distrust over what DOE is doing.

18 That hasn't changed. I think for the DOE to
19 assert that it has is incorrect. I think that we can add a
20 value there in terms of public confidence. It may very well
21 be that in many, hopefully most, instances we would be able
22 to validate that the DOE is doing things in a safe manner.
23 I think the fact that we would be there acting as an
24 impartial advocate of protecting human health and safety is
25 important.

1 I think it's important for us to translate that to
2 our congressional oversight committees. I think we ought to
3 be ready, willing and able to go and testify on those issues
4 before them, and I think we ought to make a vigorous
5 demonstration that we do believe -- we are a new agency.
6 Perhaps some of the folks at DOE are thinking of the old
7 NRC. I believe we certainly have a new NRC that is willing
8 to not only reduce unnecessary burden, but, in the opposite
9 sense, not impose unnecessary burden, and that we can do it
10 in a cost-effective and sensible way partnering with DOE to
11 make sure we have that public confidence.

12 CHAIRMAN JACKSON: Let me see if I can tie the
13 threads together to allow us to turn the page. If I think
14 about what we have been hearing, one has to say and be clear
15 that, whatever judgments you make at this stage of reference
16 to the specific facilities, you've had the opportunity to
17 review.

18 Secondly, there is nothing wrong with rendering a
19 summary judgment, but even as we move to be outcomes
20 oriented we always have to indicate what the basis of the
21 summary judgment is and the basis of our judgments about the
22 extent to which certain outcomes are achieved.

23 The question has to do with conveying complete
24 information, which brings us to Commissioner Merrifield's
25 point having to do with one can be operating safety; it

1 could be serendipitous, but one has to understand all the
2 fundamentals there, or the cornerstones there. That is
3 where we are going in the regulatory program. I think it is
4 that kind of level of discussion. Otherwise it appears to
5 undercut what we think NRC's regulation adds in terms of
6 value. Commissioner Diaz has spoken to some of that in the
7 large, but even in the specific instances that point can be
8 made.

9 We have to be clear on this. It is not our going
10 out looking for new territory. Some have argued the NRC or
11 even Chairman Jackson is out looking for new territory. It
12 is not about that. It is where can one do a job for the
13 country and where is the value added. That is what we want
14 to stay focused on.

15 COMMISSIONER MCGAFFIGAN: I second what the
16 Chairman just said. I'm sure we all would.

17 COMMISSIONER MERRIFIELD: I second the Chairman.
18 That was very well put.

19 COMMISSIONER MCGAFFIGAN: One issue of cost at
20 Lawrence Berkeley comes up. Assistant Secretary Michaels
21 has testified that it will cost them \$80 million, mostly for
22 D&D, to get ready for NRC regulation or to implement NRC
23 regulation at Lawrence Berkeley National Laboratory. Isn't
24 there more than adequate flexibility in our decommissioning
25 rule? There is a timeliness standard. Is there any intent

1 of the staff to push Lawrence Berkeley National Laboratory's
2 D&D ahead of Hanford's or Savannah River's or anyone else?
3 Can we just put that one out of the ballpark right now?

4 MR. PAPERIELLO: No, there isn't. I have repeated
5 this over and over again to DOE, and I am not even sure what
6 the current version of the report says.

7 Let's talk about a practical point. Right now we
8 don't even have authority to regulate accelerators. Absent
9 authority to regulate accelerators, how could I require them
10 to decommission the thing?

11 CHAIRMAN JACKSON: I think we should get to the
12 finale.

13 MR. PAPERIELLO: I had a few more words to say --
14 [Laughter.]

15 MR. PAPERIELLO: I agree with what the
16 Commissioner said.

17 COMMISSIONER MERRIFIELD: We read your briefing
18 materials and we thought they were very good.

19 MR. PAPERIELLO: I was going to note that
20 generally simpler facilities were chosen for the pilot.
21 They were all volunteers, and a review of some other
22 facilities might have given different results.

23 [Laughter.]

24 CHAIRMAN JACKSON: Let me just say the following.
25 It has really been a question of where you put the

1 paragraph.

2 COMMISSIONER DICUS: You have to put those
3 disclaimers at the very front.

4 MR. PAPERIELLO: Let's go to the next slide.

5 A few things I want to touch on. I recognize that
6 most of us may know this, but just to bring everybody up to
7 the same point. DOE has always been self-regulated. When
8 there was an AEC, that part of the AEC was not regulated by
9 the people who regulated the civilian sector. They were
10 self-regulated.

11 In 1994, legislation was proposed to require the
12 study of external regulation.

13 In January of 1995, Secretary O'Leary created the
14 Advisory Committee on External Regulation of DOE.

15 The committee recommended that essentially all
16 aspects of safety should be externally regulated.

17 The committee was divided on who should be the
18 regulator.

19 Subsequently, Secretary O'Leary accepted and
20 endorsed the report and formed the DOE Working Group on
21 External Regulation to make recommendations on how to
22 implement the Advisory Committee's report.

23 The Working Group recommended that NRC be the
24 regulator, with a phased transition of ten years.

25 They recommended that NRC regulate defense

1 programs, also at the end of ten years, and the Defense
2 Nuclear Safety Board be merged with the NRC.

3 The regulation of DOE was addressed by the NRC in
4 strategic assessment. Public comment was favorable for NRC
5 oversight of DOE.

6 In December of 1996, Secretary O'Leary announced
7 intent to seek legislation to transfer oversight to NRC.

8 In March of 1997, the Commission endorsed the
9 proposal and formed a task group to address issues.

10 In June of 1997, Secretary Pena and Chairman
11 Jackson agreed to refocus the effort on a pilot program
12 which was not to include defense facilities.

13 In November of 1997, the NRC and DOE entered into
14 a Memorandum of Understanding to establish a pilot program.
15 Six of ten facilities were to be evaluated. At the end of
16 the program, DOE and the NRC were to determine whether to
17 seek legislation to give NRC authority to regulate
18 individual or classes of DOE nuclear facilities.

19 CHAIRMAN JACKSON: I think there are two points
20 that were included in your remarks that need to be
21 emphasized. One is that the Working Group always
22 recommended, and that formed the background template for the
23 pilot, that the transition be a phased transition beginning
24 with a period where one would try to work out the technical,
25 policy, legal issues, and one could argue that the pilot

1 program was structured to do that.

2 MR. PAPERIELLO: Right.

3 CHAIRMAN JACKSON: That regulation would then
4 begin in a initial five years for energy research and
5 nuclear energy facilities.

6 MR. PAPERIELLO: Right.

7 CHAIRMAN JACKSON: That in the second five years
8 the focus would be on the environmental management type
9 activities and would also be giving DOE time to shut down
10 and D&D facilities that would not longer operate.

11 At the end of the ten years a decision would be
12 made, based on a recommendation to the President, as to
13 whether the DOE defense facilities would be regulated by
14 NRC, and if so, the Defense Nuclear Facility Safety Board
15 would be phased out and/or absorbed into NRC. But that
16 decision would be informed by all that went on in
17 essentially the previous 12 years, including the two years
18 of the phase-in.

19 That is one important point, that it was never
20 even in the initial construct that there would be immediate
21 regulation of defense facilities by the NRC.

22 The second point I want to emphasize, because
23 there has been a lot of obfuscation on this issue, is that
24 the pilot then was specifically structured not to focus on
25 defense facilities.

1 MR. PAPERIELLO: That's exactly right.

2 CHAIRMAN JACKSON: Because of in fact the initial
3 background template and the thought that in fact the actual
4 regulation of the other facilities would serve to inform the
5 decision about the defense facilities.

6 I just wanted to get that one on the record.

7 COMMISSIONER McGAFFIGAN: Madam Chairman, there is
8 also one other piece of the chronology that the staff is
9 omitting, and that is the mention of the 1998 conference
10 report. My recollection is that the fiscal 1998, calendar
11 1997 appropriations conference report was encouraging to
12 external regulation and indeed mandated in report language
13 that new DOE facilities after FY-2000 should be regulated to
14 NRC standards. I don't think they said there would be NRC
15 regulation precisely, but the words could be used at least
16 that they be designed and constructed to NRC standards.

17 I took that at the time to perhaps even include
18 new defense facilities. We would have to ask the Congress
19 what they meant. But that was reiterated again, I think
20 last year. So there was positive congressional feedback in
21 this same time frame as spoken through the Energy and Water
22 Appropriations conference reports.

23 CHAIRMAN JACKSON: Why don't you go on.

24 MR. PAPERIELLO: The pilot was to begin with three
25 DOE pilot facilities selected by DOE and the NRC. Reports

1 were to be issued by the staffs and presented to the
2 Secretary and the Commission after each pilot.

3 Within three months of the two-year program ending
4 the staffs were to prepare and provide to the Secretary and
5 the Commission a report on the advantages and disadvantages
6 of NRC regulating DOE nuclear facilities based on the pilot
7 program experiences.

8 The report was to include recommendations on which
9 classes of facilities should be externally regulated. If
10 there were such a recommendation, DOE and the NRC were to
11 prepare draft legislation giving NRC such authority.

12 We actually completed the original pilot at
13 Lawrence Berkeley National Lab at the end of 1997. We
14 completed the site work at Oak Ridge in June of 1998, and at
15 Savannah River in September of 1998.

16 Then in September the Energy and Water conference
17 report redirected the effort -- and I will discuss this a
18 bit later -- and, among other things, reopened the Lawrence
19 Berkeley National Lab pilot.

20 We conducted an OSHA pilot at the Lawrence
21 Berkeley Lab in January. Concurrently, we revised drafts of
22 the Lawrence Berkeley National Lab and the Savannah River
23 Lab report for review. The latest versions came in this
24 week.

25 This slide shows the objectives of the pilots as

1 described in the MOU. These include:

2 Determining the value of NRC regulation.

3 To test regulatory approaches to regulation, such
4 as licensing versus certification.

5 Determine the safety status of a set of DOE
6 facilities included in the pilot.

7 Determine the cost to DOE and the NRC of external
8 regulation.

9 Evaluate alternative regulatory relationships.

10 Identify transition issues.

11 Look at legislative and regulatory changes that
12 might be needed.

13 And determine how stakeholders might be involved.

14 The first facility in the pilot was the Lawrence
15 Berkeley National Laboratory. It was chosen because it
16 appeared to be typical of many broad-scope licenses already
17 regulated by the NRC.

18 It was known to have accelerators, but this
19 appeared to add no greater complexity than large
20 universities which possess research reactors. We believed,
21 and correctly so, that the issues likely to be identified
22 would be more legal, administration and regulatory than
23 safety.

24 Not only was an inspection conducted of the
25 facility, but a simulated or mock license application and

1 license were actually prepared. No significant safety
2 issues were identified at the facility; it could be
3 regulated under a broad-scope license.

4 If the NRC was to be the sole regulator, the NRC
5 would need the authority to regulate accelerators and
6 natural and accelerator produced radioactive material. A
7 major issue arose, which has not been resolved, involving
8 the deactivated Bevatron facility which Commissioner
9 McGaffigan has alluded to. The conclusion is that drives
10 cost-benefit.

11 The other issues identified included:

12 Would the State of California or the NRC be the
13 regulator?

14 Would the regulated entity be the University of
15 California or DOE, or both?

16 Would the contractor keep Price-Anderson coverage
17 under DOE authority?

18 NEPA issues. Would all DOE EISs be adopted, or
19 would all have to be redone by the NRC?

20 And there were other decommissioning planning and
21 legacy issues.

22 COMMISSIONER McGAFFIGAN: Could you answer some of
23 those questions? We obviously would not have to redo all
24 the EISs, or Congress could take care of that in any
25 transition legislation, correct?

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1 MR. PAPERIELLO: I believe so.

2 I am going to talk a little later about a license
3 which we are actually issuing today. Many of these issues
4 seemed to have been solved with no great amount of stress.

5 CHAIRMAN JACKSON: You are going through those
6 issues specifically in terms of your resolution of those
7 issues as part of your discussion?

8 MR. PAPERIELLO: Yes, I will.

9 CHAIRMAN JACKSON: I think otherwise you are just
10 giving us a list.

11 MR. PAPERIELLO: No. I understand that.

12 CHAIRMAN JACKSON: I think it is useful, even
13 though we will have the benefit of having your paper, to
14 just talk it through.

15 MR. PAPERIELLO: I will.

16 COMMISSIONER McGAFFIGAN: Could you give us the
17 conclusion now, as the Chairman suggested earlier? Are any
18 of these issues issues that would take more than a
19 nanosecond or two to resolve?

20 MR. PAPERIELLO: I believe we can justify in terms
21 of regulated DOE complex the benefit for the NRC rather than
22 an Agreement State or a state to be the regulator. It's a
23 balance of accelerators and NARM, which frankly match many
24 things that we already do, versus regulating reactors and
25 critical masses of fissionable material, which takes the

1 greater skill.

2 I don't want to allude negatively on resources. I
3 have enough trouble keeping criticality people on my staff.
4 We do it here rather than the regions because the regions
5 have great difficulty keeping criticality experts on their
6 staff. I couldn't imagine what most Agreement States might
7 have if they had the same challenge.

8 As a practical matter, NARM looks like what we
9 already regulate. Accelerators are not a whole lot
10 different than a large walk-in type irradiator. There is a
11 little bit of difference. There is some rather unusual
12 dosimetry of very high energy neutrons, but I think we have
13 staff that could learn that.

14 Then there are issues of sovereign immunity and
15 stuff like that, but as a practical matter, it's one
16 regulator across the whole DOE complex.

17 With the regulated entity, I will tell now ahead
18 of time we have had every combination of these work within
19 the NRC. We have regulated owner-operators, operators,
20 non-owners; we have had people who were multiple owners and
21 the license named all the owners and the operator. So we
22 could make anything work.

23 I will tell you the approach right now. We are
24 regulating DOE. We are issuing licenses today to DOE as the
25 licensee. Price-Anderson coverage, I think, is almost a

1 non-issue if we license DOE. They are self-insured. That
2 is at least what is happening at Idaho.

3 NEPA. The license we are issuing today, we
4 adopted the DOE EIS. We did it very formal. The Commission
5 was involved in all these decisions. It came out as a
6 NUREG. It was done.

7 There are decommissioning planning and legacy
8 issues.

9 DOE in the United States is the holder of last
10 resort of all the radioactive waste material that there is
11 no home for. DOE already has a perpetual license issued by
12 the NRC as part of Part 40 to possess the uranium mill
13 tailings piles. They are going to be the operator of the
14 high level waste repository. When we have orphan sources
15 and we can't put them anywhere else, DOE takes possession of
16 them. By law they are responsible for greater than class C
17 waste.

18 I think there has to be in the legislation a
19 reflection that decommissioning timeliness and perpetual
20 care, if it has to live anywhere in the United States, is
21 their responsibility.

22 So I think there are answers to all those
23 questions. Much of it is just practical.

24 COMMISSIONER McGAFFIGAN: The only answer that I
25 heard that I thought was different from what we have heard

1 in the past is I thought last summer when we were trying to
2 deal with the appropriations committees on potential
3 legislation for Lawrence Berkeley that the licensee at
4 Berkeley was going to be the University of California.

5 I know we do owners and operators and I know we
6 have some experience with the ISFSI at Idaho, but DOE is the
7 regulator. The DOE as the regulator brings -- this is not a
8 typical owner. This is an owner with an ES&H department and
9 regional offices that try to regulate in or oversee in
10 safety. So it's a different model.

11 I know the cost-benefit is driven by
12 decommissioning, but I thought it was also driven by whether
13 UC was the licensee or DOE was the licensee.

14 MR. PAPERIELLO: Commissioner, I believe I could
15 structure it with either one being the licensee and not
16 change the cost.

17 At the midyear Health Physics Symposium the
18 University of California Berkeley people made presentations
19 on external regulation. Unfortunately the slide was not
20 part of the proceedings and I didn't think to ask for a
21 copy. The management structure under NRC regulation versus
22 DOE regulation would be far simpler, because in fact the RSO
23 at the Berkeley Laboratory receives direction from three
24 separate entities within DOE. If we were the regulator, it
25 would be just one.

1 I think I could make either one work with no
2 change in resources.

3 CHAIRMAN JACKSON: Why don't you move on.

4 MR. PAPERIELLO: The next facility was the
5 Radiochemical Engineering Development Center, which was the
6 second facility. It was located at Oak Ridge National
7 Laboratory.

8 It's a facility with hot cells and its facilities
9 are used to fabricate targets which are irradiated in a high
10 flux research reactor and then they process these targets
11 for transuranic elements.

12 The facility was chosen as an example of a
13 facility that used large quantities of radiologically toxic
14 material which required remote handling of hot cells.

15 Currently the NRC regulates similar but not
16 identical cells in facilities which fabricate sealed sources
17 and manufacture radiopharmaceuticals.

18 The NRC noted that this facility was also operated
19 safely. We did identify a regulatory void, however. REDC
20 used, in significant quantities, transuranic elements which
21 are fissile. Currently 10 CFR Part 70 includes only those
22 radionuclides defined as special nuclear material as
23 fissile. Heavy transuranic elements are byproduct material
24 under our regulations, and we have no regulations or
25 licensing criteria for fissile byproduct material. No NRC

1 licensee possesses these heavy radioisotopes in quantities
2 where criticality could ever be an issue.

3 Practically, 10 CFR Part 70 is adequate, and we
4 conducted our inspection efforts and licensing efforts
5 assuming the material is special nuclear material.

6 I don't know all the legal background, but there
7 is a very formal legal process to define something as
8 special nuclear material.

9 We conducted a similar mock licensing effort.

10 The REDC is currently implementing more recent DOE
11 guidance on the preparation of safety analysis reports. The
12 safety analysis methodology is very similar to those we are
13 proposing as an integrated safety assessment as part of a
14 revised Part 70.

15 The probability of criticality appears low and is
16 based on mass control. However, if the full criticality
17 alarm requirements of 10 CFR Part 70.24 were imposed, they
18 would impose significant backfit costs. The staff believes
19 that due to the shielding capability of these hot cells
20 along with mass control on criticality the risk is
21 sufficiently low to justify an exemption if we license the
22 facility.

23 There would be similar issues with regard to
24 safeguards, which don't recognize the nature of these very
25 heavy elements.

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1 Lastly, the staff found the staff was heavily
2 supported by the Oak Ridge National Lab organization for
3 health physics, analytical chemistry, waste management,
4 emergency response, and environmental monitoring.

5 The staff believes that the regulation of this
6 facility separate from the rest of the Oak Ridge National
7 Lab is probably not very efficient. It's not that we
8 couldn't do it; it's a question of efficiency, cost-benefit.

9 A similar conclusion was found at the receiving
10 basis for the offsite fuel at Savannah River.

11 I would also note that at the gaseous diffusion
12 plants the NRC is regulating U.S. Enrichment Corporation on
13 a DOE site with split facilities, although there is much
14 less program overlap. So the issue is efficiency and not
15 that it couldn't be done.

16 CHAIRMAN JACKSON: Is it also possible to clearly
17 delineate the non-defense areas at Oak Ridge?

18 MR. PAPERIELLO: Yes. In fact, Oak Ridge
19 operations office currently does this. There is an Oak
20 Ridge National Lab Non-Defense. There is the Y12 -- I want
21 to say K25, but I may have the acronym wrong. Three
22 physical separated areas.

23 COMMISSIONER MERRIFIELD: Y12 is an area whereas
24 K25 is a building.

25 MR. PAPERIELLO: Next slide.

1 The third facility at which a pilot was conducted
2 was the Savannah River Receiving Basin for Offsite Fuels.
3 This facility contains a variety of spent fuel, almost all
4 of it being research reactor fuel. The fuel has a
5 relatively low thermal output compared to power reactor
6 fuel. The high enriched uranium fuel being returned from
7 foreign reactors through East Coast ports is being stored
8 here.

9 The facility had well documented safety analysis
10 reports and included all the elements of an integrated
11 safety assessment. This facility, however, is scheduled for
12 decommissioning and a fuel transfer to dry storage around
13 2006. For this reason, we would probably not consider it a
14 candidate for external regulation.

15 CHAIRMAN JACKSON: What is the operating life
16 again?

17 MR. PAPERIELLO: I understand it is to 2006, when
18 they are going to move the fuel to a dry storage facility.
19 I think the concept, at least in the Working Group report,
20 is facilities that are going to be decommissioned over the
21 next ten years would not be subject to external regulation.
22 On the other hand, we did look at the facility.

23 CHAIRMAN JACKSON: Why was it in the pilot then?

24 MR. PAPERIELLO: In retrospect, we should have
25 used another facility. The way the pilot program ran, where

1 DOE was looking for volunteers and not --

2 MS. RATHBUN: At the time that is what they
3 proposed to us, and there truly were no other options,
4 although DOE has recognized recently that it was probably
5 not the best choice for a pilot.

6 CHAIRMAN JACKSON: I visited the facility, as you
7 know. I don't know why it was a pilot.

8 MR. PAPERIELLO: Although there were no safety
9 issues identified, the staff did identify differences in the
10 area of material control and accountability between NRC
11 methodology and DOE methodology. This facility would not
12 meet NRC requirements for material control and
13 accountability.

14 In addition, DOE appears to be of the view that if
15 external regulation did occur, it would not include
16 safeguards. This issue has held up the report for sometime.
17 I would also note that DOE is in the process of reevaluating
18 its own safeguards requirements.

19 This is another facility in which the
20 infrastructure supporting the facility extends over a large
21 portion of the site. In particular, both security and
22 safeguards programs extend over this facility and collocated
23 facilities. A lot of defense-related facilities in the
24 area. There are interfaces for the protection of classified
25 and sensitive information, materials, facilities, and areas.

1 As we were completing the pilot reports, the
2 Energy and Water conference placed certain requirements on
3 DOE, as shown on this slide.

4 I would note, of these, the second has been done,
5 and the third will be completed hopefully by the end of this
6 month, as directed by Congress. It does not appear that
7 items 1 and 4 will be done.

8 CHAIRMAN JACKSON: Has the committee responded to
9 DOE's decision to stop the pilot programs?

10 MR. PAPERIELLO: I'm not aware of that, Madam
11 Chairman.

12 CHAIRMAN JACKSON: Has your Task Force reviewed
13 the latest LBL pilot report and do you agree with the
14 findings and positions taken in that?

15 MS. RATHBUN: We have reviewed it. As of Friday,
16 there are still outstanding issues.

17 CHAIRMAN JACKSON: What are they?

18 MS. RATHBUN: By and large, they have to do with
19 all of the issues we have talked about that have come out as
20 red herrings, the decommissioning, the cost. The cost is
21 the biggest issue because we cannot agree with their costs.

22 The other issue that has caused extreme heartburn
23 in the Task Force is the deletion of the value added
24 section. In May we had come to agree with them and the labs
25 on, although not quantifiable, what is the value that NRC

1 external regulation could add. That section has been
2 substantially reduced. We have prevailed, and we have a
3 paragraph now, but that is an area of great disappointment
4 to the Task Force.

5 CHAIRMAN JACKSON: Do you feel that the proposed
6 revisions and positions that have been made by DOE in the
7 report are meant to support the conclusions the Secretary
8 had already reached in his letter to the Hill, to Senator
9 Warner?

10 MS. RATHBUN: I don't know that we can say that,
11 but I do know that the report in May was one that we could
12 have lived with. Over time it did depart markedly from what
13 we as a Task Force felt we could agree to.

14 In fairness to DOE, last week, when they met with
15 Carl and with me, they had come around substantially in many
16 of their hard-line positions. The problem is, I believe
17 they are rushing to complete it this weekend so they can put
18 it on the Secretary's desk, and so we may not see that last
19 version.

20 CHAIRMAN JACKSON: Does your Task Force feel
21 strongly enough about these differences between the report
22 that you felt you could live with in May and the current
23 version that you feel that the NRC should endorse that or
24 that the NRC should send a separate report to the Hill?

25 This is your chance to just tell us that.

1 MS. RATHBUN: It all depends on what they write by
2 next week. It tends to change from day to day. If indeed
3 the report were the report we could have agreed to, we
4 wouldn't need a separate report for you. There is the rub.

5 I think that the Task Force would feel more
6 comfortable at this point if we had more time for you to
7 review our paper, to go thoroughly through the issues. The
8 facts on the table are the license that we are going to
9 issue today. That has resolved a number of these things
10 that have been hanging out throughout the pilot program.

11 I think we would like the opportunity to re-look
12 at our report to you in light of reality. We are issuing a
13 license today to DOE.

14 CHAIRMAN JACKSON: This license is the one to
15 which one?

16 MS. RATHBUN: The TMI-2 at Idaho.

17 I am not trying to dodge your question. It's just
18 that I think we really need more time to go through these
19 issues with you and your staff.

20 COMMISSIONER MCGAFFIGAN: Madam Chairman, we have
21 all followed this closely. I really believe that once this
22 letter went on February 19th that it was inevitable that the
23 DOE would take very hard-line positions, as they have been
24 really since they started changing last May. I personally
25 am very close to be willing to vote, if I am not already

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1 there, for a second report that would just simply say what
2 we believe.

3 They have a point of view. They have been trying
4 to torque the costs around in the direction that they are
5 very high, bringing up red herring after red hearing, all of
6 which could be solved. At some point maybe we should just
7 say that. I don't think they are going to sign off on that,
8 and I don't know that we have to sign off on reports that
9 torque the costs around and claim that there is an endless
10 list of major policy issues that cannot possibly be resolved
11 in the history of the Republic.

12 CHAIRMAN JACKSON: It strikes me that if you go
13 back to the original report, which may have had a number of
14 issues delineated, and then you take it and you play it off
15 against how they have been resolved in the context of the
16 TMI-2 license, and come up with a statement relative to the
17 pilots, whether you think that that resolution in the TMI-2
18 case would also allow the resolution of the issues vis-a-vis
19 the pilots, it strikes me that that is the way. Then you
20 have that come to the Commission.

21 We have to decide on a time line that is fast
22 enough to allow us to be responsive to the Congress, because
23 we are sitting here and it's the 19th of March, and I'm not
24 one who believes that we should not respond to Congress' due
25 dates.

1 So I want you to tell us if you think you can put
2 something together like that by the end of the month, and if
3 not, shortly thereafter. I could ask for an extension. I
4 would rather that we try to do it by the end of the month,
5 which only gives you about two work weeks. I know that is a
6 lot.

7 If you feel this strongly but at the same time you
8 have resolved these within the context of TMI-2, it seems to
9 me that what you have to do is do the crosswalk relative to
10 the pilots, as to whether the resolutions are transferable
11 to what you found in the pilots. That is what I think the
12 Commission needs to see. But you need to try to get it to
13 us by the end of the month and we have to try to give it a
14 fast review so we can then decide what we are going to do.

15 Do my colleagues agree with that?

16 Commissioner, you wanted to make a comment.

17 COMMISSIONER MERRIFIELD: I want to make a couple
18 of observations. I have had the opportunity over the course
19 of the last few months to meet with some site managers for
20 DOE. I won't name them because I don't want them to be
21 subject to a chilled atmosphere. The reactions that I got
22 from them was that they thought external oversight wouldn't
23 be a tremendous hurdle. There would be some up-front costs
24 they would have to deal with, but they thought it would be a
25 good idea.

1 I am somewhat curious. After 200 years Congress
2 finally imposed the laws of society on itself. People who
3 work up in the House and Senate are subject to OSHA and the
4 full protection that our government provides. If you went
5 out and asked the folks who work at these various DOE
6 facilities what they would think about the notion of making
7 sure that they received the same protection for health and
8 safety that American nuclear workers in the private sector
9 receive, my guess is you would get overwhelming support
10 among the DOE employees in that respect.

11 That is certainly something that isn't noted
12 particularly in these materials here, but I think the health
13 and safety of our fellow government employees is important
14 to remember as well.

15 CHAIRMAN JACKSON: Thank you.

16 Now that we have gone through the whole thing, you
17 should be able to speed through the balance of these
18 viewgraphs.

19 MR. PAPERIELLO: Could we have the next slide.

20 I'm going to skip this. I think the Commission
21 discussed this.

22 Next slide.

23 Actually, there isn't much more to say on this
24 one.

25 Let's go on to the next one.

1 And even this we have discussed in response to
2 Commissioner McGaffigan. I think I clearly stated that I
3 believe we ought to be the regulator. I think we have
4 flexibility on who we regulate and issue a license to, and
5 it may be different on different entities.

6 My own inclination is for those DOE facilities
7 like the Lawrence Berkeley National Lab where the contract
8 has been there forever -- Lawrence Berkeley will tell you
9 they existed before there was a DOE or an AEC; they go back
10 to 1931 -- I would be extremely comfortable in licensing the
11 contractor. Perhaps where contractors change more
12 frequently a different arrangements would be preferred.

13 CHAIRMAN JACKSON: I think the more important
14 thing is to be able to address the following question, which
15 actually goes back to something Commissioner McGaffigan
16 raised earlier on.

17 If you feel that it can work with DOE being the
18 licensee as well as with the contractor being the licensee,
19 you have to be able to say what would have to happen not to
20 have layering over layering so that you get to the safety
21 performance of who is doing the work. That is the
22 fundamental question.

23 If you are going to tell us that it's an open game
24 and it can depend upon the circumstance, the fundamental
25 issue from our perspective as health and safety regulators

1 is how do you get to this and have control on the safety
2 performance of the people who do the work, who have
3 responsibility. That's on our side.

4 On the side of addressing the issue of costliness
5 and duplication, in answering the first question you answer
6 the second of structurally what has to happen so that you
7 don't end up with unnecessary layering.

8 COMMISSIONER McGAFFIGAN: Madam Chairman, I think
9 flexibility is necessary.

10 CHAIRMAN JACKSON: Absolutely.

11 COMMISSIONER McGAFFIGAN: The ISFSI facility in
12 Idaho, DOE is the contractor. Mr. Bergholz, who is the
13 operations manager in Idaho, was in a meeting with several
14 of us yesterday, and he told us the way he was going to deal
15 with this duplication is he basically was going to try to
16 keep the ES&H folks away from that facility, because there
17 is no sense them inspecting it if we are inspecting it, et
18 cetera.

19 My recollection is the MOX facility, DOE's
20 intention is that their contractor be the the licensee.

21 I think a compelling case is made in the May
22 version of the report for Lawrence Berkeley to be the
23 licensee. You said earlier something about the costs; you
24 can work our costs to be about the same no matter what.

25 I think the issue is whether there are savings in

1 the DOE system, the exact point the Chairman made. We are
2 probably a low- cost add-on or a low-cost regulator for
3 these ER facilities, but if we are an add-on to a high cost
4 ES&H infrastructure, then I don't know that that works.

5 I think you need the flexibility. There may well
6 be sites. I don't think it's a matter of whether the
7 contracts turn over. That's another red herring that they
8 came up with. Owners turn over or licensees turn over, and
9 we transfer licenses all the time, and it is no big deal,
10 provided they have a responsible new contractor.

11 I think the issue is the complexity of the site.
12 The Hanford tanks, if we ever license those, I think their
13 intention is the contractor be the licensee. The BNFL,
14 right? So they are inconsistent insisting that DOE be the
15 licensee. If you assume a hard line position and your goal
16 is to drive up costs or to eliminate benefits, then
17 insisting for purposes of this effort that DOE be the
18 licensee in every instance, or multiple licensees, DOE and
19 the contractor both be licensees, that's a heck of a way to
20 try to drive up costs, if I'm assuming the worst.

21 CHAIRMAN JACKSON: Let me reiterate. The metric
22 is not how often the contractor turns over, because
23 presumably we should have a process that allows us to
24 transfer the license, if that is what is warranted, in a way
25 that is not onerous, that one can build the box within which

1 that would be done and evaluated in an expeditious manner.
2 So the metric for whether the contractor should be the
3 licensee or DOE is not whether the contract turns over and
4 with what frequency.

5 The metric really relates to the complexity, as
6 the Commissioner said, and relates to what does it take for
7 us to get to the people who are responsible for safety in
8 the operations. The further metric is how then is that done
9 in a way that avoids unnecessary duplication and cost
10 add-ons.

11 To me those are the only three metrics,
12 complexity, getting to those responsible for the safety
13 performance, and being able to have something happen when we
14 feel there is an issue, and doing that in a way where there
15 is not additional layering and duplication of effort. Those
16 are the metrics that matter, and those are the metrics at
17 the heart of the question of value added; for NRC
18 regulation, those are the things that sweep away all of
19 these other red herrings.

20 MS. RATHBUN: Can I just say one thing? There is
21 a corollary to that, and that is the degree to which DOE
22 will in fact relinquish authority.

23 CHAIRMAN JACKSON: No, no, no. I'm not talking
24 about what they will do. I am just saying what we need to
25 say is what ought to happen in order to make it work. Then

1 what DOE is willing to do vice what the Congress may want
2 them or us to do is for them to decide. The way we help the
3 decision-making is to talk about how the thing ought to be
4 structured to address those issues. Do you understand what
5 I am saying?

6 MS. RATHBUN: Yes, I do.

7 CHAIRMAN JACKSON: Commissioner.

8 COMMISSIONER MERRIFIELD: I want to associate
9 myself with the comment that you made earlier, Chairman.
10 Ultimately I believe what it comes down to is a
11 congressional decision. They really have to choose whether
12 they want us to be involved or not.

13 I also agree with the Chairman. Neither am I
14 supportive of our seeking new jurisdiction. It's a matter
15 of can we do a job if Congress decides they want us to do
16 it. I think we can and should demonstrate a few things.

17 First, I believe we ought to demonstrate that we
18 can provide a common sense oversight of these DOE facilities
19 without imposing unnecessary burdens.

20 Number two, I think we can and should demonstrate
21 that we are a value added product both from a health and
22 safety standpoint as it relates to a facility, the
23 individuals who live near it, and the folks who work there
24 on a day-to-day basis.

25 Third, I think we can and should demonstrate that

1 we can accomplish those goals without adding significant new
2 costs. There may be some limited up-front costs that we
3 will have to address, but in the long term, I think in the
4 end we can demonstrate that it does not add long-term
5 unnecessary costs for them. If Congress chooses to do that,
6 I think that is the message we ought to provide them.

7 CHAIRMAN JACKSON: Summary.

8 MR. PAPERIELLO: Could I make an observation on
9 this? First, this issue of who is going to be the licensee
10 was really thrown in more by DOE than the NRC. We didn't
11 raise that as an issue. They raised it as an issue. We
12 tried to address it, and most of the hand-wringing seems to
13 be on their part and not on our part. My observation when
14 we looked into it is we could make anything work, and we had
15 made all of them work.

16 In the case of Lawrence Berkeley, again, doing a
17 thought experiment, regardless of who is the licensee
18 mechanically, if the Department of Energy had one person who
19 sat on the Radiation Safety Committee, that person would get
20 all the correspondence between us and the University of
21 California. They get all the inspection reports. They
22 would get a chance to do what the committee normally does:
23 review procedures, ensure that the RSO --

24 CHAIRMAN JACKSON: Carl, let me just stop you. I
25 think we are getting too hung up in what has made the

1 thicket a thicket for us. We just need to be focused on the
2 purity of the thing here: What is the complexity at the
3 facility? How do we get down to ensure the safety
4 performance? How do you avoid unnecessary duplication?

5 Going back to your basic viewgraph 6 on the
6 objectives of the pilot program, there are some very
7 specific things, and our responsibility is to have our best
8 answer and/or best judgment in each of these bullets within
9 the context of these three overall points.

10 To the extent that we can use the experience with
11 licensing of the TMI-2 fuel ISFSI to do a crosswalk to say
12 how these questions would be addressed, let's just do that
13 and forget about how this one feels and whose hands are
14 wringing, because it gets us into, first of all, the kind of
15 back and forth with another agency that is not particularly
16 helpful. Since Congress has the responsibility to make a
17 decision as to what it wants to do, our responsibility is to
18 give them our best informed information and judgment to
19 allow them to make that decision. That's all we have to do.

20 COMMISSIONER MERRIFIELD: Simplicity and clarity.

21 CHAIRMAN JACKSON: Right.

22 COMMISSIONER MCGAFFIGAN: Madam Chairman, there is
23 one thing that was promised earlier we never let Carl get
24 to, to talk about the ISFSI. It wasn't on his viewgraphs, I
25 guess, unless there is a backup.

1 MR. PAPERIELLO: It turns out I was handed a copy
2 of the license last night. Basically, the NRC is the
3 regulator. DOE is the licensee. DOE wrote the EIS and we
4 adopted it. The M&O will operate the facility. If they
5 change M&O, we will be informed 90 days in advance, and they
6 will assess M&O's performance within 180 days. DOE is
7 self-insured.

8 It was licensed under existing Part 72
9 regulations, and it is being licensed, inspected, and any
10 enforcement will be conducted under existing requirements
11 and practices. We are regulating one facility in a larger
12 DOE site, and I think on a practical basis we've answered
13 many of the questions.

14 CHAIRMAN JACKSON: But you are going to document
15 that.

16 MR. PAPERIELLO: We will.

17 CHAIRMAN JACKSON: That is what Dr. Rathbun has
18 asked to do, and we are going to let you do that.

19 MR. PAPERIELLO: Thank you.

20 CHAIRMAN JACKSON: But you have got to do it fast.

21 COMMISSIONER DIAZ: These differences between
22 costs, is there any one or two aspects that you can
23 summarize that really said what the difference between their
24 estimates and ours are?

25 MR. PAPERIELLO: They will read our requirements

1 and say, you will make us do this regardless of whether or
2 not there is any risk involved. And major issues, things
3 like old facilities, the design basis: we will have to
4 reconstitute the entire original design basis regardless of
5 risk, and that will be a very, very expensive thing to do;
6 or, you will require us to immediately decommission every
7 unused facility.

8 You're talking about \$300 billion as the estimates
9 to clean up DOE over a 75-year period. We've seen the
10 reports.

11 Then there are other costs -- and I don't have
12 insight -- well, we're going to have to rewrite all our
13 administrative; we are going to have to rewrite all our
14 contracts with all our contractors, and this is going to
15 generate very, very large costs. That I have less of a feel
16 to.

17 They feel they have to do all of the oversight
18 that they have now even if we are the regulator.

19 COMMISSIONER DIAZ: That's it.

20 MR. PAPERIELLO: That's a major thing. There is
21 no way they can back down.

22 The working group report shows a significant
23 back-down by DOE, both in headquarters and the field, of
24 oversight of areas that we have oversight over, and it's
25 significant. Obviously that would be a cost saving, and

1 that is not reflected in these various cost estimates.

2 COMMISSIONER McGAFFIGAN: Madam Chairman, that is
3 the heart of it and I think it goes to something Pat Rathbun
4 said earlier about willingness to relinquish, and it gets to
5 something Carl was talking about when you interjected with
6 him about he can make any model work.

7 Having somebody on the Lawrence Berkeley Lab
8 Radiation Safety Committee from DOE, if DOE then has a bunch
9 of orders in place and that guy goes up his chain of command
10 and lots of churning happens and orders come back down and
11 they are doing everything we do except maybe by a factor of
12 ten, then the nation hasn't benefited much.

13 The question that is going to the Congress is, if
14 you want NRC to do this, the contract condition would be
15 something like, you will be regulated by the Nuclear
16 Regulatory Commission for radiological safety.

17 They now have a rule out on performance on safety.
18 Your contract fee will be judged based on whether NRC has
19 found any significant violations during the two-year period.
20 They are out of the business at that point. But if they
21 maintain their entire structure and are micromanaging the
22 laboratory and then we are an add-on, then there isn't a lot
23 of benefit.

24 CHAIRMAN JACKSON: You are saying whether there is
25 a performance-oriented contract where performance and safety

1 is linked to the regulatory performance under NRC
2 regulation.

3 COMMISSIONER McGAFFIGAN: Right.

4 COMMISSIONER DIAZ: I know it's hard to get
5 lessons learned from these things because there might few
6 lessons that are fixed sufficiently to learn from, but when
7 we look at the MOX, which is coming, the things that are
8 happening here should be clearly assembled so we can get a
9 base of things that we should do or not do.

10 COMMISSIONER McGAFFIGAN: Madam Chairman, there
11 was one more question I was going to put to the staff. The
12 single area we spend the most money on at the moment in
13 external regulation of DOE, and it comes in our general fund
14 appropriation, as it should, is the pre-licensing activity
15 associated with the Hanford Tank Waste Remediation System.
16 I think it's about \$2 million of the approximately \$3.9
17 million that is in our general fund appropriation. We have
18 a resident there. He just issued a standard review plan.

19 Should this be the year we go to Congress and say,
20 do what you did with MOX last year and make a decision as to
21 whether we are going to regulate this particular new
22 facility, the tank waste vitrification facility at Hanford,
23 or whether we are going to back off?

24 It seems like we are spending an awful lot of time
25 and effort getting ready to license that. It is a

1 multibillion dollar facility. There would be public
2 confidence benefits, but at some point we have to make a
3 decision as to whether this is leading to something.

4 COMMISSIONER MERRIFIELD: The only question I may
5 ask of the staff and the issue we never really resolved is
6 having a site-wide pilot, picking a DOE site and saying we
7 want to pilot the whole thing. Given our experience with
8 the pilots so far, not to disagree with Commissioner
9 McGaffigan, but is that next step a logical way to go, or do
10 we have sufficient information from the pilots now to make
11 the policy call that Commissioner McGaffigan has asserted?

12 MR. PAPERIELLO: I would very much like to do a
13 major site. That way you would have an integrated look.

14 COMMISSIONER MERRIFIELD: A fair, honest appraisal
15 of whether we can or shouldn't do it.

16 MR. PAPERIELLO: Could I have the last slide?

17 CHAIRMAN JACKSON: The summary slide, please.

18 MR. PAPERIELLO: Yes.

19 These facilities were volunteers. Looking back at
20 it, particularly on the Oak Ridge and Savannah River, on a
21 very big site and sites for which we know there are legacy
22 problems, the particular facilities that volunteered are
23 both facilities that had recently revised their safety
24 analysis reports using the integrated safety assessment
25 approach. As noted earlier, the fact that they may be

1 operating safely because of a certain amount of
2 pre-selection can't be ruled out. I have to report what I
3 found. Picking a whole site would certainly be a very
4 valuable exercise.

5 COMMISSIONER MERRIFIELD: If I may ask one
6 follow-up question. The pilots were volunteers. We didn't
7 have any control over those. Do we have any understanding
8 of DOE sites that we think would be particularly good
9 candidates for being site-wide pilots?

10 MR. PAPERIELLO: Yes.

11 COMMISSIONER MERRIFIELD: What would those be?

12 MR. PAPERIELLO: I would like to do Oak Ridge.

13 COMMISSIONER MERRIFIELD: That may be part of the
14 message we have got to tell Congress.

15 COMMISSIONER DICUS: Yes.

16 The third bullet here, which we haven't given you
17 a chance to get into. I want to go back to this cost
18 situation. The DOE estimates of cost to accommodate NRC
19 regulations, are you talking about the pilots, or are you
20 talking in general?

21 MR. PAPERIELLO: I'm talking about right now the
22 pilots that we have done.

23 CHAIRMAN JACKSON: It sounds like embedded in it
24 is some understanding that goes beyond that. If it involves
25 a literal reading of the NRC regulations and that it is

1 going to be a literal slap-on, then that goes beyond it. If
2 it involves the fact of DOE not dismantling any of its
3 "regulatory" infrastructure, that goes beyond it.

4 MR. PAPERIELLO: That is in fact correct. There
5 was no reason to believe that the cost estimates that DOE is
6 developing based on this would change when we went to other
7 facilities, because you are not dismantling your own
8 oversight. You are saying we will do it this way.

9 MS. RATHBUN: I'll be very specific about the cost
10 that I think is bothering us the most, and I think Walt can
11 help me on this. That is the rub-off costs which are
12 estimated. This is a facility which we found we would
13 require no change whatsoever. The DOE cost estimates for
14 regulating this facility are between \$6 million and \$13
15 million.

16 MR. PAPERIELLO: Most of it is start-up costs.

17 MS. RATHBUN: Start-up costs. Then it's about \$5
18 million a year.

19 CHAIRMAN JACKSON: Five million a year?

20 MS. RATHBUN: Right.

21 CHAIRMAN JACKSON: You are talking reactor land.

22 MS. RATHBUN: This was puzzling to the NRC staff.
23 This would be a very expensive swimming pool if you come
24 right down to it.

25 What it really means, if I interpret DOE

1 correctly, is that is what it would cost to disaggregate
2 rub-off from everything else, essentially leaving what we
3 believe to be between \$6 million and \$13 million of
4 administrative costs. Looked at another way, perhaps we
5 would save them that if we could do it.

6 CHAIRMAN JACKSON: How do you get a \$5 million
7 go-forward cost per year?

8 MS. RATHBUN: Do you want to answer that, Walt?

9 MR. SCHWINK: The principal cost that DOE is
10 focused on is not satisfying our regulations in the context
11 of acceptable risk. They violently agree with us that
12 rub-off is very acceptable in the context of risk, that it
13 exceeds DOE requirements, and they characterize it as one of
14 the second best facilities in the entire DOE complex in
15 terms of risk.

16 They further agree that at the real worker level,
17 the person who is really going to move the fuel, the person
18 who is really going to affect safety adversely or
19 positively, the procedures at that level and the facilities
20 at that level and the equipment at that level wouldn't
21 change; we would not cause them to change that. They agree
22 with us. There is no disagreement with that.

23 What they think will change is the administrative
24 layer above that that is roughly equivalent to our
25 management directive system, and their view is that they

1 would have to now change that level of documentation, and
2 that would be this extreme cost.

3 For example, in their documentation that they
4 provided to us the administrative changes for the facility
5 are in the range of \$2 million.

6 CHAIRMAN JACKSON: I don't even want to parse how
7 they might arrive at that as a transition cost. That's what
8 you are talking about. I want to go back to this \$5 million
9 annual cost. That is interesting.

10 MR. SCHWINK: Their annual costs are driven by
11 what they believe would be us driving them to change
12 facilities, equipment, staffing, and documentation in the
13 form of licensing amendments. What I pointed out is once we
14 have established an acceptable facility and here is your
15 license, quite frankly our level of effort drops to about
16 3/10ths of an FTE annually, and that would only be for an
17 annual inspection that is principally driven by the high
18 enriched uranium at the facility in terms of material
19 control and accounting.

20 MR. TRAVERS: We are not out there driving many
21 license amendments these days.

22 CHAIRMAN JACKSON: You aren't kidding.

23 MR. SCHWINK: In fact, with "do more for less,"
24 we'd really like to do less licensing amendments.

25 COMMISSIONER MCGAFFIGAN: Madam Chairman, it may

1 be that DOE is actually in the base 2 number system.

2 [Laughter.]

3 CHAIRMAN JACKSON: The thought crossed my mind.

4 COMMISSIONER McGAFFIGAN: Maybe we are just
5 working with different number systems.

6 CHAIRMAN JACKSON: We have to be careful that
7 people do not use code words like license amendments and how
8 much they cost to process; license transfers and how long it
9 is going to take. So I understand. Thank you very much.

10 I think we are done. I would like to thank the
11 staff. I want all of you to stand up so the Commission can
12 see who you are, those who are here on the Task Force.

13 MS. RATHBUN: We have one back doing slides.

14 CHAIRMAN JACKSON: Come out.

15 [Applause.]

16 CHAIRMAN JACKSON: I will say that to the extent
17 possible you've done exactly the job that the Commission
18 expected of you, and you've done it well. In fact, I think
19 you have shown to us that external regulation of certain DOE
20 nuclear facilities by the NRC is feasible, but not only
21 feasible, it is relatively straightforward. So we want to
22 thank you for that. I know you have been operating in a
23 fluid environment as you have done that. So thank you.

24 The Commission recognizes the position of the
25 Secretary of Energy in this recent letter to Congress.

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1 Notwithstanding the position of the Secretary, the
2 Commission will review the results of the pilot projects and
3 make an independent decision regarding the objectives of the
4 pilot program. Our briefing today and the interim report of
5 the Task Force and this crosswalk relative to the issues by
6 making the comparison with the license we are issuing on the
7 TMI-2 storage facility at Idaho will assist us in that
8 decision.

9 Again, let me thank the Task Force for your
10 diligent efforts expended over the past two years and for
11 providing the briefing today.

12 With that, we are adjourned. Thank you.

13 [Whereupon at 10:32 a.m. the briefing was
14 concluded.]
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CERTIFICATE

This is to certify that the attached description of a meeting of the U.S. Nuclear Regulatory Commission entitled:

TITLE OF MEETING: BRIEFING ON
 STATUS OF EXTERNAL REGULATION OF DOE
 FACILITIES
 PUBLIC MEETING

PLACE OF MEETING: Rockville, Maryland

DATE OF MEETING: Friday, March 19, 1999

was held as herein appears, is a true and accurate record of the meeting, and that this is the original transcript thereof taken stenographically by me, thereafter reduced to typewriting by me or under the direction of the court reporting company

Transcriber: Mike Paulus

Reporter: Mike Paulus



EXTERNAL REGULATION OF DOE FACILITIES

INTERIM REPORT

March 19, 1999

Dr. Carl Paperiello

Director, Office of Nuclear Materials Safety and Safeguards

RESULTS OF THE PILOT PROJECT INDICATE:

- **Regulation of DOE appears feasible**
- **DOE Appears to be operating the pilot facilities safely**
- **A transition period will permit time for:**
 - **Legislative Adjustments**
 - **Regulatory Changes**

CHRONOLOGY

- **DOE self-regulates radiation safety since Atomic Energy Act of 1946.**
- **Legislation proposed in 1994 to require study of external regulation.**
- **In January 1995, DOE created Advisory Committee on External Regulation of DOE nuclear safety.**
- **Committee recommended that essentially all aspects of safety should be externally regulated.**
- **Committee divided on what entity should be regulator.**
- **Secretary O'Leary accepted and endorsed the report.**
- **DOE Working Group on External Regulation formed to make recommendations on how to implement recommendations.**

CHRONOLOGY, continued

- **Working Group recommended NRC be the regulator with a phased transition.**
- **September 1996 – NRC published DSI 2 on options for taking a position on regulating DOE.**
- **Public comments favorable to NRC oversight of DOE.**
- **December 1996 – Secretary O’Leary announced intent to seek legislation to transfer oversight to NRC.**
- **March 1997 – Commission endorsed the proposal and formed a Task Force to address issues.**
- **June 1997 – Secretary Peña and Chairman Jackson, representing the Commission, agreed to refocus the effort on a pilot program.**

CHRONOLOGY, continued

- **October 1997 - January 1998 – Conducted on-site work at LBNL**
- **February 1998 - June 1998 – Conducted on-site work at ORNL/REDC**
- **May 1998 - August 1998 – Conducted on-site work at SRS/RBOF**
- **September 25, 1998 – Energy and Water Conference Committee Report**
- **October 1998 – PNNL Pilot postponed by DOE (never re-scheduled)**
- **January 1999 – OSHA Pilot held at LBNL in response to Conference Report**
- **February 19, 1999 – Secretary Richardson issued letter regarding external regulation**
- **March 16, 1999 – DOE provides revised draft LBNL and RBOF to NRC**

OBJECTIVES OF PILOT PROGRAM

- **Determine value added**
- **Test regulatory approaches**
- **Determine status of a set of DOE facilities**
- **Determine costs of regulation**
- **Evaluate alternative regulatory relationships**
- **Identify transition issues**
- **Identify legislative and regulatory changes**
- **Evaluate stakeholders involvement**

LAWRENCE BERKELEY NATIONAL LABORATORY

- **Could regulate under a broad-scope license**
- **Regulation of accelerators and NARM**
- **Decommissioning of Bevatron**

RADIOCHEMICAL ENGINEERING DEVELOPMENT CENTER

- **Need to develop regulations for non-SNM fissile materials.**
- **Do not recommend regulating REDC separately from the High Flux Isotope Reactor and rest of non-defense national laboratory-type facilities**
- **Cost of criticality alarms.**

RECEIVING BASIN FOR OFFSITE FUEL

- **Could regulate under 10 CFR Part 70.**
- **No safety issues.**
- **Some safeguards issues.**
- **Do not recommend regulating RBOF
due to its short operating life**

ENERGY AND WATER CONFERENCE COMMITTEE (09/25/1998)

- **DOE must include NRC, OSHA, and appropriate State and local entities in any future Pilot Projects**
- **Directs DOE to address all of the issues involving OSHA and State and local regulation of worker safety and health in LBNL Pilot Project**
- **DOE to provide a report to the Committees on Appropriations on the results of the comprehensive LBNL Pilot Project by March 31, 1999**
- **DOE to initiate a pilot project for a multi-program, non-defense laboratory such as Argonne NL or Brookhaven NL**

DOE 2/19/99 LETTER

- **DOE believes legislation implementing external regulation of DOE is premature**
 - **Potential benefits of external regulation have not been demonstrated.**
 - **Benefits appear outweighed by costs and difficulties**
- **DOE does not believe that additional pilot projects will clarify issues or resolve problems**
- **DOE will adopt a number of internal safety enhancements**

STAFF DRAFT REPORT

- **Most MOU objectives addressed**
- **Additional pilots needed for completion**
 - **Uncertainty in cost estimates.**
 - **Although NRC regulation provides value added, it is difficult to quantify.**

MAJOR ISSUES

- **Who should be the regulator?**
- **Who should be regulated?**

SUMMARY

- **Observed DOE Pilot facilities operate safely.**
- **NRC regulatory framework and DOE's practices can be blended in a risk-informed, performance-based environment.**
- **DOE estimates of cost to accommodate NRC regulation are higher than NRC believes is justified.**
- **Some issues and unique DOE circumstances may require legislative and/or regulatory changes.**