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87th Meeting

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D I S C L A I M E R

PUBLIC NOTICE
BY THE
UNITED STATES NUCLEAR REGULATORY COMMISSION'S
ADVISORY COMMITTEE ON NUCLEAR WASTE

OCTOBER 22, 1996

The contents of this transcript of the proceedings of the United States Nuclear Regulatory Commission's Advisory Committee on Nuclear Waste on October 22, 1996, as reported herein, is a record of the discussions recorded at the meeting held on the above date.

This transcript has not been reviewed, corrected and edited and it may contain inaccuracies.

1 UNITED STATES OF AMERICA
2 NUCLEAR REGULATORY COMMISSION

3 + + + + +

4 87TH MEETING

5 ADVISORY COMMITTEE ON NUCLEAR WASTE

6 (ACNW)

7 + + + + +

8 TUESDAY

9 OCTOBER 22, 1996

10 + + + + +

11 ROCKVILLE, MARYLAND

12 + + + + +

13 The Advisory Committee met at the Nuclear
14 Regulatory Commission, Two White Flint North, Room T2B3,
15 11545 Rockville Pike, at 8:45 a.m., Paul W. Pomeroy,
16 Chairman, presiding.

17
18 COMMITTEE MEMBERS:

19
20 PAUL W. POMEROY, Chairman

21 B. JOHN GARRICK, Vice Chairman

22 WILLIAM J. HINZE, Member

23 GEORGE M. HORNBERGER, Member
24
25

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1 ACNW STAFF PRESENT:

2 JOHN T. LARKINS, Executive Director

3 MICHELE KELTON, Technical Secretary

4 RICHARD K. MAJOR

5 HOWARD J. LARSON

6 LYNN DEERING

7 ANDREW C. CAMPBELL

8 RICHARD P. SAVIO

9 MICHAEL MARKLEY

10 CAROL A. HARRIS

11 SAM DURAISWAMY

12 THERON BROWN

13 VIRGINIA COLTON-BRADLEY

14

15 ALSO PRESENT:

16 JIM MILHOAN

17 CLAIRE DeFINO

18 JESSE FUNCHES

19 MAL KNAPP

20 JIM KENNEDY

21 TIM JOHNSON

22 JOHN AUSTIN

23 MEG LUSARDI

24 MIKE WEBER

25 HEATHER ASTWOOD

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

(8:43 a.m.)

CHAIRMAN POMEROY: The meeting will now come to order. This is the first day of the 87th meeting of the Advisory Committee on Nuclear Waste. Today's entire meeting will be open to the public.

During today's meeting, the committee will first listen to a discussion of the Commission's strategic assessment and rebaselining effort. Two, review a Division of Waste Management Branch technical position on requirements for radioactive waste land burial sites previously authorized under 10 CFR part 20. Three, receive our annual ethics lecture from the Office of General Counsel during lunch at the table here, I believe. Fourthly, and our principle activity for today and tomorrow, will be the preparation of a ACNW reports.

Mr. Richard Major, second on my right, is the designated Federal official for today's initial session. This meeting is being conducted in accordance with the provisions of the Federal Advisory Committee Act. We have received no written statements from members of the public regarding today's session.

Should anyone wish to address the committee, please make your wishes known to one of the committee staff. It is requested that each speaker use one of the

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1 microphones, identify himself or herself, and speak with
2 sufficient clarity and volume so that he or she can be
3 readily heard.

4 Before proceeding with the first agenda item,
5 I want to cover I think one or two brief items of current
6 interest. The only printed current interest item that I
7 have is from the industry press, which announces
8 essentially that the chance of a new volcanic center
9 forming and disrupting a potential repository at Yucca
10 Mountain, Nevada, over the next 10,000 years is about one
11 in 70 million per year, according to DOE's probabilistic
12 volcanic hazard analysis for Yucca Mountain, which I think
13 we have all read now.

14 The report was compiled by a panel of 10
15 independent scientists with experiences studying volcanic
16 systems. The panel evaluated the probability of a
17 volcanic event disrupting the proposed repository, and
18 quantified the uncertainties associated with the
19 assessment. Scientists from Los Alamos National Labs have
20 been studying the basaltic volcanoes west of Yucca
21 Mountain and in the surrounding area for about 15 years
22 now. The volcanos range in age from about 20,000 to 3.5
23 million years.

24 The panel's analysis indicates data and
25 conclusions collected by DOE's Yucca Mountain project are

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1 appropriate for use in a performance assessment and the
2 department expects to conclude volcanic studies at Yucca
3 Mountain this year.

4 As the committee knows, we have scheduled a
5 two-day working group on volcanic activity. Both the
6 probability, which this particular item discusses, and
7 consequences, which we feel now are the critical element
8 in the process, and our working group now on volcanic
9 activity will be held during our January meeting. I don't
10 have finalized dates for that, but we'll get to that in
11 the discussions tomorrow on future agenda items.

12 The second thing I wanted to tell the
13 committee was that it was officially announced at the
14 meeting I was at last week on probabilistic seismic hazard
15 evaluation that the configuration or the footprint of the
16 repository has been officially changed. It now will be
17 entirely to the west of the Ghost Dance Fault. There will
18 be no repository area to the east. To make up for the
19 space requirement, the repository footprint will be
20 extended to the north by what I believe is still an
21 unspecified distance, but I am not positive of that.

22 MEMBER HINZE: May I ask are we going to be
23 getting some formal information on that which -- some
24 presentation from the staff or the DOE on this and the
25 motivation behind it?

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1 CHAIRMAN POMEROY: Well, I hoped. You know,
2 the logical process for that would be to have Margaret
3 talk to us about it at a meeting. Unfortunately, we
4 haven't really scheduled a briefing by Margaret into
5 either this meeting or the November meeting because we
6 have or had pressing commitments that we need to meet.

7 I certainly think it would be critical to find
8 out what the rationale for that was.

9 VICE CHAIRMAN GARRICK: Bill, is this a
10 variation on your theme of consideration of setbacks?

11 MEMBER HINZE: It certainly is and could well
12 be, yes, sir.

13 VICE CHAIRMAN GARRICK: It might be an
14 exaggerated variation.

15 MEMBER HINZE: That's right. I think there
16 are a number of implications here.

17 CHAIRMAN POMEROY: Of course it's interesting
18 because all the alcoves from the ESF are going to the east
19 to the Ghost Dance or in that direction. I don't know
20 that once you turn the corner, that there are any alcoves
21 scheduled to go to the west at all. Except for the
22 surface geophysics and geology, the information on the
23 sub-surface was extremely minimal to the west.

24 It's something we should hear about and
25 understand what the implications are for what is going on,

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1 but I don't have anything scheduled. I guess what I'm
2 hearing is that we would like to hear something as soon as
3 we can.

4 Does anybody have any other opening statements
5 or issues? We are still ahead of schedule because we are
6 -- we have people still in the process of coming, I
7 believe.

8 MR. MAJOR: You may want to think about the
9 December meeting. You had four days planned. The
10 majority of that was to look at igneous activity. Two of
11 the members are going to attend the NRC technical exchange
12 on igneous activity here on the days I guess we would have
13 had the working group.

14 CHAIRMAN POMEROY: On what? What's the
15 subject of the technical exchange?

16 MR. MAJOR: Igneous activity.

17 CHAIRMAN POMEROY: Oh that's right.

18 MEMBER HINZE: The igneous process is on the
19 10th and 11th, but the last letter I had is that that was
20 not established yet with DOE. Do we have anything formal
21 on that?

22 MR. MAJOR: I haven't seen anything formal
23 other than what we learned at the conference call. When
24 was that, two weeks ago.

25 CHAIRMAN POMEROY: And Margaret Thayer

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1 indicated that that was not the final date. So I don't
2 know whether that's going to happen or not. We don't have
3 a number of other issues though.

4 MR. MAJOR: We don't have any other formal
5 presentations for the December meeting. You may want to
6 look at whether or not it's worth holding a December
7 meeting, if this technical exchange pans out for the 12th
8 and 13th. I guess it depends how much progress you make
9 in the next two months of letter writing.

10 VICE CHAIRMAN GARRICK: I have been, as you
11 know, Paul, struggling with a conflict that same week. I
12 lost part of the struggle in that if we have an ACNW
13 meeting now, it looks like the only two days I could be
14 here would be Thursday and Friday which would be the 12th
15 and the 13th. I am just unable to find a way to get out
16 of the other commitment for the 10th and 11th.

17 So if we didn't have the agenda items that we
18 were thinking of and wanted to push the 12th and 13th into
19 the planning session, you know, that's one alternative.

20 CHAIRMAN POMEROY: Right. That would give us
21 the November meeting to work on letters essentially, to
22 finally get some finalization on some of the letters.

23 The other alternative is to think about
24 canceling the December meeting in its entirety. I see an
25 affirmative nod.

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1 MEMBER HINZE: Well, one of the things that
2 had been discussed was the possibility of still having
3 some igneous process discussion on the 12th and/or 13th.
4 I think that we -- that is coming out of the 10th and the
5 11th technical exchange, but I really would support
6 delaying that a bit so that we have some gestation time on
7 just what we're hearing at that meeting and seeing what
8 the staff's response will be to that meeting.

9 VICE CHAIRMAN GARRICK: Is there documentation
10 coming out of the meeting on the 11th?

11 MEMBER HINZE: No. The technical exchanges of
12 course are without documentation and without really even
13 superficial minutes. So it will have to be transmitted
14 internally I guess.

15 MR. MAJOR: Something else to keep in mind too
16 is we had originally scheduled a public briefing with the
17 commissioners in December. Now I have pushed that back so
18 you may want to start thinking too when is an appropriate
19 time to schedule the public briefing and the
20 commissioners. I think we've pushed it into January, but
21 now January is going to be filled up with two days of
22 igneous activity.

23 You might want to give it some thought just to
24 when we're going to have enough products done and when
25 we're going to have enough done to be able to sit down

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1 with the commissioners to go over those products.

2 CHAIRMAN POMEROY: I think we should certainly
3 do that. I have also asked Lynn to think about what she
4 might like to say to us about how our briefings, how the
5 Commission responds to our briefings and how they respond
6 to our letters to the extent that she can. I think we're
7 going to try -- that was an initially, we thought we would
8 try to do something like that at our November meeting.

9 I think it is important, because the
10 Commissioners attach, apparently, a great deal of weight
11 to the public briefings to summarize in a nutshell what we
12 might find out in more detail in November. Consequently,
13 those briefings assume a greater importance to us both in
14 terms of effectively communicating our ideas to the
15 Commission and for our own purpose in having them bring to
16 bear their thoughts on what we have said and to get
17 feedback from them.

18 VICE CHAIRMAN GARRICK: Do we want to make a
19 decision about the December meeting now or do you want to
20 --

21 CHAIRMAN POMEROY: I think I would rather have
22 us think about it for an hour. I don't know, we're going
23 to be here anyway if there's going to be a technical
24 exchange. But we need to find out something about whether
25 there is going to be a technical exchange or not. So I

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1 would rather hold off on making a final decision. We do
2 have the input.

3 Do people still have those four days, with the
4 exception of John? Okay, let's try to make a final
5 decision on that tomorrow then.

6 MEMBER HORNBERGER: But I have some other
7 possibilities.

8 CHAIRMAN POMEROY: Oh, I do too. The sooner
9 the better.

10 Okay. Let's see, are we -- very good. Well,
11 if we can then, let's proceed with our first agenda item.
12 Our first agenda item at 9:00 this morning is the
13 strategic assessment and rebaselining overview and status
14 briefing. That will consist of three parts this morning.
15 The first, the overview and status of strategic assessment
16 and baselining, rebaselining. It will be given to us by
17 James Milhoan, the deputy EDO. Welcome here.

18 MR. MILHOAN: Thank you.

19 CHAIRMAN POMEROY: And John Craig, with
20 research, I believe is with him.

21 MR. MILHOAN: John is not here. I will be
22 giving his part of the presentation.

23 CHAIRMAN POMEROY: Okay, fine. And the second
24 part hopefully will be a question and answer session on
25 some of the particular issues if that's amenable to you.

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1 Thirdly, whatever action we might want to take
2 as a result of that is something that we have been
3 discussing and will probably discuss into the future.

4 MR. MILHOAN: When we go in the presentation I
5 have got a little more detailed agenda that I think you
6 can react to. I know that you had requested we cover
7 about four issue papers in addition to the other questions
8 you may have. We are prepared to do that also during the
9 presentation.

10 CHAIRMAN POMEROY: That would be wonderful if
11 you could do that.

12 MR. MILHOAN: Okay. We'll do that. I am
13 getting people to join me at the table now.

14 CHAIRMAN POMEROY: You almost outnumber us.

15 (Laughter.)

16 MEMBER HINZE: He said in number, not in
17 weight.

18 CHAIRMAN POMEROY: In any case, welcome here.
19 Please proceed.

20 MR. MILHOAN: Thank you very much. We are
21 here to give you an overview and status briefing strategic
22 assessment rebaselining initiative.

23 With me at the table, as I said, I am Jim
24 Milhoan. I am one of the deputy EDOs. With me joining me
25 at the table today is Claire DeFino. Claire has been with

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1 us on strategic assessment and one of my special
2 assistants on support staff to the Strategic Assessment
3 Committee. She has been a contributor to the papers.

4 Also with me is Jesse Funches, the deputy
5 director of the Office of Controller. Jesse has been a
6 member of the Strategic Assessment Steering Committee and
7 is leading up to phase III effort on production of the
8 strategic plan. We'll be talking about that today.

9 Also with me at the table is Dr. Malcolm
10 Knapp, who is deputy director of NMSS. Mal has also been
11 a member of the steering committee and been in production
12 of issue papers and materials area, been leading that
13 effort.

14 As I said, we have a little more detailed
15 agenda that I would like to show you that we're prepared
16 to discuss today. I will provide an overview of the
17 strategic assessment and rebaselining phases and discuss
18 phase II status and a summary of the directional setting
19 issues, stakeholder meetings, expectation for comments,
20 review of comments. Then Jesse Funches will discuss the
21 strategic development of phase III, as we call it, phase
22 III of the effort in the NRC strategic plan. Then Dr.
23 Knapp will lead up a discussion of DSI's 5, 6, 9, and 12.
24 Then we'll be prepared to answer any other questions you
25 may have.

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1 Next slide there, Claire. The strategic
2 assessment and rebaselining project was started in August
3 of last year, of 1995, in response to Chairman Jackson's
4 memo to the EDO requesting such an effort be established
5 in part because of the changing environments the NRC is
6 affecting both internal and external, such as changes
7 because of budgetary pressures, changing because of
8 external situations, changing because of internal
9 situations of staff, more experienced staff retiring, the
10 need to retain staff in other activities.

11 The organization is set up to respond to
12 Chairman Jackson's request by establishing a steering
13 committee. Myself and Jim Johnson from the chairman's
14 office were co-chairs of the steering committee.

15 The steering committee then was made up of
16 senior NRC managers. Ed Jordan, who is the director of
17 AEOD was a member of the committee. Frank Moralia, the
18 deputy director of NRR, member of the steering committee.
19 Dr. Knapp from deputy director of NMSS, steering committee
20 member. Jesse Funches, deputy director, Office of
21 Comptroller. Noel Levin, deputy director of IRM. Jim
22 McDermott, deputy director of Office of Personnel. Dr.
23 Speiss, deputy director of Office of Research. Luis
24 Reyes, deputy regional administrator in region II
25 represented the regions on this effort, and also the

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1 deputy director of admin. was a member of the steering
2 committee.

3 We had a support group to support the steering
4 committee in our efforts. We also had a contractor,
5 Public Strategies Group, assist us in our effort.

6 The effort is a four-phased effort. I will be
7 discussing phase I in a little bit more detail on the next
8 slide, but it involved basically the assessment phase of
9 the review of the NRC activities, the development of the
10 strategic issues and the further development of what we
11 call the directional setting issues. I'll discuss that in
12 a little more detail on the next slide.

13 Phase II involved the production of the issue
14 papers and the stakeholder involvement process in which
15 we're at now.

16 Phase III involved the production of the
17 agency's strategic plan, based upon the Commission's
18 decisions on the directional setting issues, going through
19 the stakeholder process that we're going through now.
20 Then based on the final Commission views on the
21 directional setting issues would be the foundation for our
22 preparation of the agency's strategic plan.

23 Then phase IV is the implementation and the
24 budget phase of putting the strategic plan into action.
25 We're trying to do that. Jesse will discuss that when his

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1 part of the presentation is done, in relationship to the
2 budget call next spring for the FY 99 budget, and then
3 preparation of the future budget activities. We'll
4 discuss that a little bit later also.

5 CHAIRMAN POMEROY: Jim, you perhaps will
6 mention this, but I just wanted to ask. Once the
7 strategic plan is completed, that is, when the
8 Commissioners have made their final decision and so forth,
9 will that go out for public comment?

10 MR. MILHOAN: The strategic plan, the
11 foundation for the strategic plan is the Commissioners'
12 decisions on the issue paper. But once the strategic plan
13 is developed, and it should be the early part of next
14 year, we will make that publicly available. But at this
15 present time, do not expect to ask for public comment on
16 that because we're asking for public comment on the
17 foundation for the strategic plan. But it will be
18 available and the public will have --

19 CHAIRMAN POMEROY: I'm sure there will be
20 comments.

21 MR. MILHOAN: If they want to provide
22 comments, I'm sure that we will get reaction from the
23 public on that. It is a living -- obviously it will be a
24 living document. We'll discuss that a little later in the
25 presentation also.

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1 CHAIRMAN POMEROY: Fine.

2 MR. MILHOAN: The next chart really is a block
3 diagram showing the process that we used in phase I. When
4 we started out in phase I, it says phase I was an
5 assessment of the NRC activities. It was a bottom-up
6 approach from -- the first part of phase I was a bottoms-
7 up approach of looking at all of the agency activities.

8 We developed a request to go out to all of the
9 offices back last September and asked the offices. We
10 talked about the lowest basically functional level in an
11 office. Normally that's at the branch level in our
12 organization charts. In other offices, they may be called
13 other things other than branches.

14 But we asked at the lowest functional level
15 for all of the offices to provide to the steering
16 committee response to our request to describe first of
17 all, what activities are you doing. What is the basis for
18 the activities you are doing. It can be a regulatory
19 basis in response to a statute or in response to a
20 regulation, or it can be as simple as we think it's a good
21 idea. Other than that, we think it's something we should
22 do.

23 We also asked at that time for them to discuss
24 the internal and external factors that might influence the
25 way they do their activities over the next five to 10

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1 years. We got all of that response back in. We found
2 that we had about 4,500 individual activities described to
3 us. So we now have all of this. We had all of this
4 response in, so we then said okay, we need to operate on
5 this response and really reduce the organizational factors
6 now. Take away the organization, but describe the NRC
7 does, never mind what it is called inside of the NRC, but
8 what does the NRC do.

9 So we operated on these 4,500 activities. We
10 grouped them into what we call the three major groupings.
11 It's not a surprise, the reactor grouping, the materials
12 grouping, and the management and support grouping. That
13 is not too much of a surprise on the NRC, the way we do
14 business.

15 Inside of those groupings, we then provided,
16 developed what we call a matrix form of describing what we
17 call the lines of business in each of these major
18 groupings and then the functions within a line of
19 business. A line of business, for example, in the
20 materials area would be low level waste, high level waste.

21 I have got a problem I think with the view
22 graph machine. There we go.

23 So we described them, tried to develop the
24 major lines of business in these three major groupings and
25 the function within a line of business. The function, for

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1 example, in a line of business would be licensing
2 compliance, regulation development. But those are sort of
3 the functions within what we call a line of business.

4 So we took each of the 4,500 activities. We
5 bin these activities into these lines of business and
6 functions so that we could operate on these at a higher
7 level for our purpose. We developed narrative write-ups
8 to describe within a line of business and a function what
9 is done and what are the activities that are discussed in
10 there, and also, to describe, to carry along with it the
11 basis for the activity we performed in a function in a
12 line of business, and carry with it the internal and
13 external factors that influence that.

14 We also found when we did this there were
15 certain areas that cross cut all three areas. So we have
16 another grouping calling cross-cutting function. For
17 example, training crosses all three major groupings. So
18 we had a cross-cutting function.

19 We developed the narratives as part of our
20 phase I report. The importance of this now was that we
21 now wanted to take this, now that we had described in a
22 line of business in a function narrative form what the
23 agency does, and why we do it and what are the internal
24 and external factors that affect it, we then wanted to
25 take that and look at it and say from now a top-down

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1 approach, after we consider all this, what are the
2 strategic issues that are raised by these considerations.

3 What we found as a group, as a steering
4 committee, is we identified approximately 170 issues, what
5 we considered strategic issues that needed to be
6 addressed. That's a very large number to operate on. So
7 we then said okay, we really need to look and see these
8 170 issues, are there groupings that we can group these
9 into.

10 What we found was that we had about 25
11 groupings of these 170 strategic issues. These groupings,
12 when we started looking at these groupings, then we said
13 is there a central issue out of this grouping that raises
14 what we call a directional setting issue, one that's
15 really the higher level issue out of all of the grouping
16 and strategic issues.

17 What we found was out of the 25 groupings, we
18 had 22 of them what we considered raised directional
19 setting issues. We identified that in the phase I report
20 to the Commission.

21 The Commission in its review of the phase I
22 report requested the steering committee to consider two
23 other issues which also we considered directional setting
24 issues. Those being the issues of reactor decommissioning
25 and regulatory excellence.

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1 The committee, you asked well why didn't the
2 committee really identify reactor decommissioning as a
3 directional setting issue. It is a very important issue.
4 We initially looked at it and said because of the
5 rulemaking activities that we already have going on, we
6 thought it was already being addressed. The Commission
7 said no, we still want you to address that.

8 So we then took the directional setting issues
9 and went and developed what we call issue papers for
10 Commission consideration on the directional setting
11 issues. That took us, development of the issue papers,
12 took us into phase II. If I can have the next slide.

13 The issue papers, development of the issue
14 papers for Commission consideration started us into phase
15 II. The issue papers the Commission asked us to develop
16 on the directional setting issues were weak in one aspect.
17 They do not follow the regular SECY paper format. The
18 Commission requests us not to follow the regular SECY
19 paper format.

20 They ask us to develop for their consideration
21 what they considered a rich set of options. So if you
22 look at the issue papers, there is a wide range of options
23 developed in the issue papers which address the
24 directional setting issues. That was the intent to
25 develop in both directions what we call out of the box

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1 thinking on the issue papers.

2 The other aspect of Commission consideration
3 was that the Commission requested us not to develop a
4 preferred option, but to provide a range of options for
5 Commission's consideration in its development of its
6 preliminary view. So the steering committee did not
7 provide to the Commission its recommendations on a
8 preferred option in the directional setting issue papers.
9 So we did that.

10 The Commission then in the August time frame,
11 provided its views, its preliminary views to the steering
12 committee. In providing that views, the Commission also
13 provided its views on 16 papers. Also, eight other papers
14 indicated, and it's covered in the document, the framework
15 document which I'll discuss next, provided its direction
16 on the eight other issues of saying some of them were
17 issues which should be decided after the decision on the
18 16 issues it made a decision on. Some of them were issues
19 that they request us to combine with the other issue
20 papers, so that they were no longer separate issue papers.

21 As I say, the framework document discusses,
22 has a matrix of the 24 issue papers we sent to the
23 Commission and what the Commission resolution was on those
24 issue papers.

25 In phase II, the key documents are the issue

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1 papers, what I consider the strategic planning framework
2 document, and the process paper. Those are all available,
3 publicly available. They are on a wide variety of
4 different systems that the public can access to and the
5 NRC employees can access to.

6 First of all, they are on our internal AUTO
7 LAN system now, that each employee can access that system
8 and can look at them on the auto system. Our NRC
9 employees can also request hard copies of the papers from
10 our distribution system. We have made it available on the
11 Internet. We have made it available in FEDWORLD, and we
12 have placed the documents in the public document room.

13 The framework documents, stepping back to the
14 framework document, is a document which lays out the
15 process for what happens with Commission decisions on the
16 issue papers, and then the later production of the
17 strategic plan. So if you want to see a framework for how
18 we produced the strategic plan, the framework document is
19 a very good document to go to to look at that process that
20 we are using.

21 VICE CHAIRMAN GARRICK: Can you give your view
22 of what you consider to be the most important filters for
23 going from 4,500 activities to 16 issue papers? You have
24 described the process. Can you kind of illuminate us a
25 little bit with respect to what was really the most

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1 important factors for this processing the information?

2 MR. MILHOAN: I think I would answer in this
3 way. Obviously we had a lot of information to act on
4 initially. We asked it for all organizations. We had
5 functions, for example, in the regional offices we asked
6 all four regional offices, just to give you an example,
7 responded. Well, there's activities and functions that
8 are similar in the regional office. So we did not want to
9 carry all that together. So we wanted -- the most
10 important thing was to make sure that we didn't lose any
11 data, but we could get to a higher level in our analysis
12 where we could then look top-down on the data to make sure
13 that we had all of the data available and we were not
14 missing anything when we were trying to define the
15 strategic issues facing the Commission.

16 So we had a process of let's say of binning
17 the data so that we didn't lose it, but accumulating it
18 and binning it together so that we could then at a higher
19 level define and describe how will all of the activities,
20 how will these 4,500 activities fit together in one
21 coherent process that the NRC does.

22 So I guess it's the filter of carrying that
23 out so that we could get to the higher level information
24 without losing anything I think was the most important
25 aspect of phase I. It was a very intensive process

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1 because of all of the data that we had to act on to make
2 sure that we didn't lose the data as we put it together.

3 The last paper I would like to talk a little
4 bit about is the stakeholder involvement process paper.
5 That is publicly available. That process paper describes
6 in briefer terms what I have described to you today. But
7 it also describes how the public and the staff can submit
8 comments on the issue papers.

9 The next slide I now will not go through in
10 any detail. It's just a listing of the 16 issue papers
11 that are available for public and staff comment. It
12 describes what we consider the directional setting issues
13 which the Commission is provided in its preliminary views
14 on. We are going to be discussing four of those papers
15 later in the meeting today, and will be able to answer any
16 other questions you may have on that.

17 We are in this phase attempting to get comment
18 on the issue papers, comments on the Commission's
19 preliminary views on the issue papers so that we can
20 provide that feedback to the Commission in the first part
21 of December time frame, which will assist the Commission
22 in making its final decisions on the issue papers.

23 We have already had a series of meetings with
24 the NRC staff. We have met with the senior staff. We
25 have encouraged the senior staff at staff meetings to

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1 inform the employees of the issue papers, to encourage our
2 employees to provide comments on the issue papers.

3 We have also, our steering committee has
4 visited each of the four regional offices and also
5 presented, made a presentation of the process that we've
6 had and encouraged the regional employees to comment on
7 the papers. But we have met with ACRS this month. Then
8 we're meeting with you today. We are meeting with the
9 agreement states organization tomorrow. We have a public
10 meeting October 24 and 25 in Washington. We'll be
11 traveling to Colorado Springs as indicated, October 31,
12 and November 1. Then November 7 and 8, we'll be in
13 Chicago to attempt to encourage the public to submit
14 comments on the issue papers, because we do want the views
15 of the NRC and employees and the public to assist the
16 Commission in making its final decisions on the issue
17 papers.

18 The next slide discusses, as I say, the
19 external stakeholder meetings where we're having them. We
20 will have a process where we will have a plenary session
21 to discuss the process we went through. Then we will
22 attempt at the conference to have an issue paper
23 discussion on each of the issue papers at the two-day
24 conference that we have in the locations I described. Our
25 contractor has assisted us in planning the conferences.

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1 We will have the benefit of facilitators at the public
2 meeting. Those public meetings will be transcribed to
3 assist us in our review of the comments received.

4 Our expectations for comments are really we
5 want to know, we're extremely interested in getting
6 stakeholder views and comments on important considerations
7 that we may have omitted from the issue papers.

8 We are also interested, we provided our
9 assumption and projections for internal and external
10 factors that may affect the way we do business. We are
11 interested in getting comment from our employees and the
12 public on whether or not they agree with those
13 assumptions.

14 We also would like to receive comment on the
15 Commission's preliminary views on the issue papers.

16 Lastly, the Commission in certain issue papers
17 requested us to get feedback on specific questions that
18 they had on some of the issue papers. We have identified
19 that in the individual issue papers, and specifically
20 asking for comments on those individual issues the
21 Commission identified.

22 Comments can be provided in a number of means,
23 by mail, electronically. All comments will be docketed by
24 SECY, so that we can keep track of the comments and
25 operate on the comments. The comment period is closing

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1 November 15. We have had out the papers for comments
2 since mid-September.

3 Review of the comments, we will review the
4 comments received both at the conferences, written in
5 electronically. We will produce what we call a
6 stakeholders interaction report to the Commission, which
7 is due to the Commission the first part of December. We
8 will provide a brief analysis of the comments by
9 individual issue paper. We will identify substantive
10 comments that may have a direct bearing on the
11 Commission's preliminary views.

12 The comments in our stakeholder interaction
13 report will be available to all internal and external
14 stakeholders once we forward it to the Commission, so that
15 they can see how we summarized their comments.

16 At this point, I will pause and ask Jesse
17 Funches to pick it up from here, and discuss the phase III
18 portion of the effort that we've been underway.

19 CHAIRMAN POMEROY: Fine. We can go right
20 ahead I think. I had one quick comment. Do you have a
21 feeling for are you going to receive 10,000 comments or
22 100,000 or 10?

23 MR. MILHOAN: I hope it's more than 10. I
24 hope we get as many as possible. I know we have had on
25 the Internet we've had over 2,000.

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1 MS. DeFINO: Twenty four hundred.

2 MR. MILHOAN: We have had 2,400 I guess
3 interactions on the Internet so far, people have
4 requested, people have accessed this on the Internet. It
5 doesn't mean they submitted a comment.

6 CHAIRMAN POMEROY: No, but at least access.

7 MR. MILHOAN: But we encourage that, but at
8 this time, I really do not have a good feeling. I think
9 after Friday, after the public meeting in Washington, I
10 will have a much better feeling of where we stand on it.

11 It is also human nature, wait until the end of
12 the comment period to provide comments. So we have had
13 more than 10 comments provided so far, but I wish we had
14 more than what we have at the present.

15 CHAIRMAN POMEROY: Let me ask you another
16 question, Jim, if I may. I don't know that you will be
17 able to answer it. But of course both of the advisory
18 committees have been contemplating what their role is.
19 Perhaps Mal might want to join in the answer here too. We
20 are wondering, we don't -- I think neither of the advisory
21 committees that I am -- the ACRW and ACRS, regard
22 themselves precisely as stakeholders in this
23 consideration. In that although our paychecks do say
24 Nuclear Regulatory Commission on them, nonetheless, our
25 reporting function is directly to the Commission. So it's

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1 a little bit different when we comment.

2 I wondered if you have any thoughts or ideas
3 with regard to the place for input from the advisory
4 committees to this process.

5 MR. MILHOAN: I guess first of all, answer
6 specific comments. I agree ACRS and ACNW has a special
7 status, but the way we have defined stakeholder, it's very
8 broad. But we also understand your other reporting
9 relationship to the Commission. We would anticipate and
10 we would certainly request that that -- we'll accept
11 comments in any form we have. You can give them. But I
12 would anticipate that we would receive comments in the
13 usual fashion from ACRS and ACNW, would be my expectation.

14 MS. DeFINO: We already have received a
15 written comment from the ACNW on the low level waste
16 program that we will be considering as part of the
17 comments.

18 MR. MILHOAN: I would following this meeting,
19 any comments in your normal fashion would certainly, we
20 will certainly take those into account. They may be
21 submitted to the normal mechanism, but we will certainly
22 have access to those comments. Then the stakeholder
23 interaction report we would recognize the fact that we did
24 receive those comments and incorporate those into the
25 stakeholder interaction report that we provide the

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1 Commission, even though they may be submitted separately,
2 we would also attempt to put those in our stakeholder
3 interaction report for completeness.

4 CHAIRMAN POMEROY: Could I ask if you have any
5 other comments, Mal?

6 MR. KNAPP: No, not a great deal. But in case
7 I forget it later on, when we talk about the low level
8 program, I think you will find that the Commission's
9 preliminary decision is not very different from the
10 recommendations that you made last year. Certainly a
11 comment that I would be pleased to hear is if you see that
12 there are substantive differences, or if there is
13 something that you would like to be considered in
14 particular in the low level program, that you might want
15 to expand on or elaborate on your comments from last year,
16 I would particularly like to hear that.

17 CHAIRMAN POMEROY: Okay. Thank you.

18 VICE CHAIRMAN GARRICK: Can I ask something?
19 If this is going to be covered later, please let's go on.
20 But one of the things that I am always concerned about in
21 these kinds of activities is industry participation. In
22 the philosophy of the NRC to keep considerable distance
23 between them and industry, I can understand that they
24 wouldn't assume a position like they might in other
25 nations that have regulatory functions and don't have

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1 quite the same philosophy with respect to how to handle
2 industry. But just as we have been trying to figure out
3 the role of ACNW in regard to this process, I guess I am
4 still struggling with the role of industry, which I also
5 consider to be quite a different status than other
6 categories that might impact this.

7 I am always surprised that industry isn't more
8 prominent in this kind of activity, given that they are
9 doing a lot of the work and they are the licensee and the
10 applicant. They are the ones that are going to be hit
11 with any impact that this may have down the road. Is
12 somebody going to talk about this a little bit? Or is it
13 the stakeholder mechanism that is pretty much the process
14 by which industry participates?

15 MR. MILHOAN: We regard first -- I thought you
16 were answering from two different ways. I understand you
17 are asking the question from the standpoint of the
18 industry comment input to the process we have.

19 We would expect the industry -- we made a
20 large number of mailings to industry organizations and to
21 the utilities. We would certainly request that they
22 participate in the stakeholder meetings. We would
23 anticipate that we would certainly receive comments from
24 industry organizations, which would be reflective of the
25 groups.

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1 We've received already one comment from one
2 industry organization. We would anticipate we would
3 receive more. But we see their interaction to be part of
4 the comment process on the issue papers that are before
5 you.

6 We also, and I thought you were asking a
7 question from another standpoint. One of the issue
8 papers, as you notice, is the subject of the role of the
9 industry in the regulatory process. So there's that one
10 that addresses the central issue. Then there's the issue
11 of how can the industry comment on what we have done so
12 far. But we would see the latter one being a part of our
13 comment process that we would have, that are going on
14 right now.

15 VICE CHAIRMAN GARRICK: Okay. Thank you.

16 CHAIRMAN POMEROY: Can I ask one more, I
17 guess, Jim? I will understand if you don't want to
18 discuss this. But of course at one point in time, the
19 advisory committees themselves were subject to one of the
20 DSI papers. That has changed I recognize now. But in
21 specific terms with regard to this particular committee,
22 there are statements there that say basically that the
23 committee is scheduled to go out of business in 1999, and
24 in particular, that its work load is decreasing, a subject
25 that I find hard to believe from my side of the table.

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1 I was wondering if you could give us some idea
2 of the process by which those comments, the basis for that
3 kind of commentary. I will understand if it's better not
4 to do that.

5 MR. MILHOAN: Myself, we do not have -- Mal,
6 do you want to comment on that? I do not have the writer
7 of that particular --

8 MR. KNAPP: No, that writer is not here. I
9 can -- about the only -- I think there's maybe a double-
10 barreled comment here, our question. One was the
11 committee going out of business in a few years. The other
12 is the need for the committee.

13 With respect, I can't speak to the committee's
14 -- the thought on the committee going out of business. I
15 can give you an analogy that may be helpful. That is, as
16 you know, according to current plans, subject to strategic
17 assessment review, the low level waste program itself
18 would be terminated within at the same time. That
19 particular decision was made several years ago under what
20 one might call extreme budget stress, with a recognition
21 that we simply could no longer trim from programs. We had
22 to actually select programs and set them aside.

23 That does not mean that there was a
24 willingness or desire to shut down the low level program.
25 It was simply that we had to shut down something. At that

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1 point, it seemed as though it would have the least adverse
2 impact of the selections available to us. Obviously that
3 was not a decision that the staff was comfortable with, or
4 as you've seen by the Commission's rethinking and desire
5 to include it in the strategic assessment that they were
6 comfortable with.

7 Unfortunately, I don't have firsthand
8 knowledge on anything regarding the ACNW's going out of
9 business in 1999, so I can't tell you what happened there.
10 I can only give you the analogy with the low level. That
11 may provide some insight.

12 With respect to the work load, as we'll go
13 over within the next couple of hours exactly what is going
14 to happen in the waste management over the next few years
15 is very much up in the air. Certainly arguably, the waste
16 management business could be said to decline a great deal
17 in the next few years.

18 I can also give you a scenario where it is
19 going to increase dramatically in the next few years. In
20 the event one were to argue that waste management in
21 general would have less status in the NRC -- that's a poor
22 choice of words -- would have less activity, then one
23 would ask to what extent would oversight of that business
24 be as important as maybe it was a few years ago. That's
25 the best I can tell you.

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1 But as you can tell from the issue papers and
2 from pending legislation and other things, where we are
3 going and where we are headed is very much up in the air
4 on that. That's the best answer I can give you.

5 MR. MILHOAN: As you said, the Commission on
6 that particular issue paper has provided separate
7 direction, and has decided that's not one, an issue that's
8 directional setting but has provided other guidance in
9 their staff requirements and memorandum to address the
10 issue. I think you'll have an opportunity to do that.

11 CHAIRMAN POMEROY: Right.

12 MEMBER HINZE: In terms of the process, I note
13 that you are giving special consideration to the meeting
14 with the agreement states. That is certainly a very
15 reasonable thing to do.

16 I am wondering, however, if you are also
17 making some type of effort to receive input from other
18 Federal agencies that you very much impact. This regards
19 the waste area in particular, because we don't live in an
20 insulated world.

21 MR. MILHOAN: I think Dr. Knapp can address
22 that.

23 MR. KNAPP: I personally provided appropriate,
24 well entire packages of the strategic assessment papers to
25 EPA and asked that they comment. I have given pertinent

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1 strategic assessment papers to the various DOE
2 organizations that are involved, such as high level and
3 such as the DOE Committee on External Regulation with
4 respect to those papers. Again, we certainly seek their
5 comments. I don't know exactly what we'll hear, but I
6 know that they are reading them and that they are
7 interested in being involved.

8 MEMBER HINZE: Great. Thank you.

9 CHAIRMAN POMEROY: Please go on.

10 MR. FUNCHES: One of the major output outcomes
11 of the strategic assessment rebaselining will be an NRC
12 strategic plan. This is also referred to as phase III.
13 The activities that Jim has been talking about earlier,
14 identification of issues, development of issue papers, and
15 a Commission preliminary decision, will provide the
16 foundation for the strategic plan.

17 Internal and external stakeholders comments
18 will be another important input to the Commission as they
19 make their final decision on their particular plan.

20 The primary purpose of the strategic plan will
21 be to set the direction for the NRC for the next five or
22 10 years. It will also meet the requirement of the
23 Government Performance and Results Act.

24 What that act requires us to do is to develop
25 a strategic plan, whose purpose is as I have already

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1 discussed, and also requires us to develop an annual
2 performance plan which would include measurable goals and
3 outcome performance measures. Then later on, we would
4 have to have an annual performance report which would
5 report on execution of the performance plan.

6 The strategic plan, as Jim mentioned, we plan
7 to have completed early next calendar year. That plan
8 then will give us the basis and the framework for
9 developing the fiscal year 1999 budget and the fiscal year
10 1999 performance plan. Both the strategic plan and the
11 budget and performance plan for fiscal year 1999 is due to
12 the Office of Management and Budget in September of next
13 year, of 1997. It will cover fiscal year 1999.

14 The performance report that will report on
15 fiscal year 1999 will be due in the year 2000, I think
16 it's March of 2000, which will be after the fiscal year
17 end.

18 The last phase of the strategic assessment
19 rebaselining is the budget and the performance plan, as I
20 have talked about. We're starting that next year. There
21 will be other activity that will result from that. Those
22 we will know as we make the final decision on the issue
23 papers and on the strategic plan, what those additional
24 activities will be.

25 Before I talk about the actual contents of the

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1 plan, I'll give you just a short feel of what it is and
2 what it isn't. What we envision the plan to be is a
3 relatively short document on the order of 30 to 40 pages.
4 That document will guide the program decisions and
5 resource decisions. It would not specify what the
6 programs are or obviously what the resources are, but it
7 would guide those decisions.

8 It will provide important agency level goals
9 and objectives. It will provide, but it won't give you
10 objectives and goals for each organization unit, for
11 example, each branch, it won't specify each organization
12 unit goals, but it will be written at the agency level.

13 It will include strategies for achieving the
14 goals and objectives. As Jim mentioned earlier, it will
15 provide a provision for periodically updating the plan.
16 As a minimal, we will be required to update the plan every
17 three years to meet the requirement of the act. But we
18 expect to have a process where we will be updating, at
19 least making some type of review of the plan annually. If
20 obviously we get feedback once the plan is made public,
21 feedback from people, those things will be considered as
22 part, in the update of it.

23 This chart is somewhat kind of a schematic of
24 what we see the plan as being. We see five basic elements
25 of the plan. We see a mission, a vision, set of values

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1 and principles, a set of goals, and a set of strategies.

2 The mission basically will state the purpose
3 for NRC existence. I think we all have seen statements of
4 that mission. It will be extracted from the Atomic Energy
5 Act and the Energy Reorganization Act.

6 The vision will basically be a portrayal of
7 where NRC wants to be in the future. The values and
8 principles, we'll be reaffirming those beliefs that guide
9 the NRC employees in their day to day work.

10 The goals and objectives will be what we are
11 likely to achieve. The strategy will be how we plan to
12 achieve the goals and objectives in the mission.

13 In May of this year, the Commission provided
14 the steering committee an early version of its mission,
15 vision, and general goals, prior to us developing the
16 issue papers and prior to their decision on the issue
17 papers.

18 As part of their final decision on the
19 strategic plan, they will be taking another look at that
20 in view of the issue papers and where we are today and
21 making a decision on whether those ought to be updated.

22 In terms of the values and principles, we'll
23 be using the principle regulation that has been
24 promulgated by NRC, the organization bias. There's a
25 safety philosophy that was promulgated earlier this

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1 calendar year.

2 Those documents are listed in the framework
3 and the content of all those documents are in the
4 framework document that was provided with the package for
5 public comment.

6 To articulate the strategies that we plan to
7 pursue, we have organized those in three broad categories.
8 The first category is what we call mission critical
9 strategies. Second, mission enabling strategies. The
10 latter one is the core resource strategies.

11 In the mission critical strategy area, we have
12 basically a set of strategies for achieving safe
13 operations of nuclear reactors, assuring safe use and
14 handling of nuclear materials. The latter one is in this
15 critical arena on waste. That would include both high
16 level waste, low level waste, and material
17 decommissioning.

18 In the mission-enabling strategies, we have an
19 area on building public trust and confidence, providing
20 research expertise, and supporting national objectives in
21 the international area, and providing the internal support
22 that would enable us to meet our mission critical
23 strategies.

24 We define three core resource areas, one
25 basically in our human resource, our people, our finances,

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1 and our information resources, both technology and the
2 information management area.

3 For each arena, the strategy is we plan to
4 write up, we'll discuss the key external and internal
5 involvement, factors that drives us in the future and the
6 objective we're trying to achieve and the strategies for
7 achieving those objectives.

8 As I mentioned earlier, we will be relying
9 heavily on the Commission preliminary decision and the
10 issue papers for drafting those strategies. That's all I
11 have. I'll be glad to answer any questions that you might
12 have.

13 CHAIRMAN POMEROY: Questions?

14 MR. MILHOAN: If not, we are prepared to go
15 into the discussion of the individual issue papers you
16 have requested.

17 MEMBER HINZE: A brief question, if I may,
18 please. Under the core resource strategies, I am very
19 pleased to see you have managing information there as one
20 of these core resources. Where does that come in in the
21 DSIs?

22 MR. FUNCHES: There is, at this point there is
23 no DSI that was released on that particular area. We are
24 doing some additional work looking at some earlier work we
25 had done as part of the issue paper development, but there

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1 is no Commission preliminary decision on that particular
2 area.

3 MR. MILHOAN: We had an issue paper on that
4 subject because of the CIO Act, and the Commission has
5 already consideration of the CIO Act in its decisions on
6 that one.

7 MEMBER HINZE: Excuse me. What is CIO Act?
8 I'm sorry.

9 MR. MILHOAN: A chief information officer.

10 MEMBER HINZE: Oh, okay. Fine, thank you.

11 MR. MILHOAN: And its decisions on how to
12 handle the chief information officer function. They
13 indicated that they did not want us to go further with
14 that paper because of their earlier decision. But we will
15 capture information management in the strategic plan.

16 MEMBER HINZE: Well, it seems to me that's one
17 of the areas in which we might expect the NRC would change
18 most from its present status with rethinking this whole
19 process. That might be in the information area. So I was
20 wondering where that was in the DSI.

21 Does this discuss as specific elements within,
22 for example, high level waste and spent fuel? Or how is
23 it -- is it handled at all within the current DSIs
24 elements?

25 MR. MILHOAN: To the extent that it drives

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1 internal and external factors affecting an option, it
2 would be discussed to that extent. But it would be a
3 separate discussion of internal and external factors.

4 MR. FUNCHES: For example, I know that it is a
5 factor that is mentioned in the operating reactor DSI, and
6 I can't recall any other ones, from the perspective of how
7 you interact with the licensees in terms of documents and
8 maintaining certain documents. So yes, it is addressed
9 there.

10 We will be talking to that core resource in
11 terms of how it would provide the necessary infrastructure
12 to support those mission, critical mission enabling
13 strategies.

14 MEMBER HINZE: I suspect the words managing
15 information mean a lot of different things to different
16 people, and certainly different to me than it does to some
17 of you. It would be I think helpful to the committee to
18 have a little clearer insight as to what that managing
19 information is in the minds of the steering committee.

20 MR. MILHOAN: When we looked at it, and I
21 think we're going to capture the Commission decisions in
22 the strategic plan, obviously you have in managing
23 information you have two different considerations. You
24 have the technology consideration itself. Then you have
25 the actual handling of the data in management information

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1 systems of the different data elements, the different ways
2 that you can handle that, the different system
3 developments that you have. But the technology itself
4 overlays that and affects the information management
5 systems that you do have. It's a big factor. So there
6 are two different ways.

7 You look at the way, for example, that we have
8 handled public comments. In our staff comments and the
9 way that we have, the broad nature of what we've done so
10 far, you ask if that would have been possible five or 10
11 years ago. There's a different information management
12 function we have now. We have the benefit of Internet.
13 We have the benefit of FEDWORLD. We have the benefit of a
14 larger distribution of comments. We have the benefit of
15 both the public and our employees to individually submit
16 comments directly on these papers in electronic form, the
17 way we didn't have. But still we have to manage, we have
18 to have an information management system to manage those
19 comments.

20 MEMBER HINZE: You have to have principles.

21 MR. MILHOAN: No matter what form that they
22 are received in. So there's two different functions you
23 have to look at in that regard.

24 MEMBER HINZE: Well, it seems that that could
25 very much impact budgetary considerations for 1999 and for

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1 ongoing years.

2 MR. MILHOAN: It does. We're going to reflect
3 the Commission decisions in the strategic plan in this
4 area.

5 MEMBER HINZE: Thank you. I wanted to reflect
6 the committee's strong interest in information transfer.

7 CHAIRMAN POMEROY: Mal, before you start, can
8 I just interject a management note here? I suspect we'll
9 want to ask you a lot of questions. Two of us have a
10 10:30 drop dead date. I would like to certainly ask a lot
11 of questions from you and from other people I suspect,
12 from what I do quickly see in the handout. So I hope we
13 can get through the presentation by 10:30, if that's
14 possible.

15 MR. KNAPP: Well, let me offer a suggestion.
16 We are really here to serve you. I could probably take
17 until 10:30 to talk my way through all these handouts.
18 Equally, we can just -- I am ready to move directly to
19 questions if you would like to do that if that's more
20 convenient for you. It's basically whatever the committee
21 will find serves you best.

22 I could also try about a real fast one or two
23 minute walk-through of the DSIs one at a time. So it's
24 your choice.

25 CHAIRMAN POMEROY: How about something like a

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1 five minute walk through for each of the four. Is that a
2 possibility?

3 MR. KNAPP: All right. Let me, five minute
4 for the whole set or five a piece?

5 CHAIRMAN POMEROY: No, five a piece.

6 MR. KNAPP: Fine.

7 CHAIRMAN POMEROY: If you want to try that.

8 MR. KNAPP: All right. Let's see what we can
9 do. Let me suggest let's do them in order and I'll do the
10 walk through, and then we'll discuss that one and then do
11 the next walk-through, if that's okay.

12 Skimming very briefly, in the first place, I
13 would like to note that for the papers today for the first
14 three we'll be talking about, I have been fortunate enough
15 to have the authors present with me. In the case of the
16 first paper, Jim Kennedy is principle author of that
17 paper. When we get to questions that I can't handle, of
18 course I will give them to Jim and put him on the spot.

19 Moving very quickly, the cover question is
20 what should be the role and scope of the low level
21 radioactive waste program. I think with the various
22 situations that have occurred over the last year or two
23 and the ACNW's letter, I don't need to explain why that's
24 a critical question.

25 Moving to the second slide, this has to do

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1 with subsumed issues. You will recall that we took that
2 170 or so issues and dropped it down to about 24 direction
3 setting issues. Some of those were what we called
4 subsumed. These are issues which are generally driven by
5 the decision on the direction setting issue. Among other
6 things, in this case, should we decide to terminate the
7 low level program, these three issues would be mute.

8 I would just as soon pass along on this slide
9 since as you can see, the first two issues have to do with
10 our response to reduction. With the Commission's current
11 preliminary views, that does not appear to be in the
12 cards.

13 The next slide has to do with the key factors
14 that those of us on the staff, the steering committee,
15 thought were important in this area. Here is a place
16 where I would be particularly interested in hearing the
17 ACNW's views as to whether there are other key factors
18 that are more substantive, recognizing of course that I am
19 skimming here. As you look at the paper, you will find
20 these developed further.

21 But to go over them very briefly, we are
22 developing the sites, so the nation is developing its
23 sites. In agreement states at this point, there is some
24 interest among non-agreement states, but the likelihood of
25 receiving an application from one of them in the near

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1 future does not appear to be high. This is something to
2 consider when we think about our resources.

3 We recognize that a problem that needs to be
4 addressed by anyone developing a facility is the lack of
5 broad-based public acceptance of a site. We also
6 recognize that it's somewhat different than 1980 and 1985
7 when the Low Level Waste Acts were passed. There is at
8 this point reasonable access to storage. There are
9 management options available which were not. I'm speaking
10 more specifically to the fact that Barnwell will be open
11 for about another eight and a half years or so, unless
12 things change.

13 And a recognition that as of the moment, as I
14 said earlier in this talk in response to budget demands,
15 the low level program has been decreased from what it was
16 a couple of years ago to a much smaller role today.

17 CHAIRMAN POMEROY: Don't you think though,
18 Mal, that that's a little -- that fourth bullet is a
19 pretty strange situation? Barnwell certainly is open
20 today. It could be changed by the legislature tomorrow,
21 and it wouldn't be open, creating what would be at this
22 point some severe interim storage problems until something
23 else became available.

24 Other sites, yes, there are other sites under
25 development. One can be an optimist or a pessimist about

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1 those sites. Do you have any feeling for that? You
2 certainly have been involved.

3 MR. KNAPP: I can argue very persuasively on
4 either side of the issue. If memory serves, I have.

5 (Laughter.)

6 MR. KNAPP: Some of the things that are
7 different from say a decade ago, we have the experience of
8 I think something in the neighborhood of about five years
9 where the state of Michigan did not have access to
10 disposal facilities. As a result of the various
11 machinations of the act and the compacting process, I was
12 pleased and very relieved to find that we did not have any
13 major disasters as a result. The generators and various
14 brokers in the state of Michigan appeared to be able to
15 deal with their wastes in a satisfactory manner.

16 Unfortunately, that does not cause me to lose
17 -- I don't sleep any better for it. I believe that, and I
18 am not going to go into specifics, but we have had a
19 couple, three cases we have had to cope with in the last
20 few years where a generator or a broker would go belly up.
21 We would then have to scratch with the help of somebody
22 else, to figure out exactly what to do about those wastes.
23 That's a problem in any case, but it's certainly
24 exacerbated if you don't have access to a disposal
25 facility.

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1 I can only say that with as many licensees as
2 there are in this country, the more years we go without
3 decent access, the more likely we are to have that kind of
4 a problem. So I am not saying what about this at all.

5 But we also need to recognize that we have had
6 a number of states store away successfully for some time.
7 At this moment, the Barnwell policy legislation does
8 appear to give relief for some time. I think we need to
9 recognize that under those circumstances, some states
10 which are presently moving in the direction of citing may
11 be less likely to push that at a time with tight state
12 budgets at a time when citing undesirable facilities is an
13 agonizing process for the government.

14 I can understand why states would be motivated
15 to slow down. As that happens of course, demand for our
16 regulatory support would decrease.

17 You know, I do not want to put any of my money
18 down on what is going to happen, except that I think we
19 need to remain vigilant. I would have to tell you that
20 from my perspective, I am very comfortable with the
21 Commission's preliminary decision.

22 MEMBER HINZE: Mal, if I might, please. What
23 is the effect of decommissioning of nuclear reactors on
24 the low level waste facilities?

25 MR. KNAPP: You know I am more inclined to

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1 answer from the perspective of what's the effect of low
2 level facilities on the decommissioning of nuclear
3 reactors.

4 The only real experience I can talk about
5 right away is some of the stuff that's happened with
6 Yankee Rowe, where that decommissioning process as I
7 believe, in part went on hold for a while because of not
8 having access and I believe, and perhaps somebody over
9 there, Tim or Jim can help me out in a moment, but when
10 Barnwell was made available, I think that a number of
11 packages of low level material that were in a sort of a
12 holding pattern at Yankee Rowe immediately were in a
13 position to go to Barnwell.

14 If you are talking about the impact such as is
15 that going to have a large volume impact, again, I don't
16 have a good answer to that. In addition to Jim Kennedy,
17 someone who will be talking or who will be supporting us
18 this morning in decommissioning is Tim Johnson, who is the
19 principle author of that paper.

20 Let me just ask if either Tim or Jim can
21 comment on the impact of reactor decommissioning on low
22 level sites.

23 MEMBER HINZE: Before they do that, perhaps
24 Pathfinder might give us some clue. I am trying to recall
25 just what the impact of Pathfinder was.

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1 MR. JOHNSON: Pathfinder I don't think had
2 much of an impact because there was a relatively small
3 amount of waste that ended up being shipped, but that was
4 because of the nature of the facility. It was not very
5 contaminated.

6 I think that the reactors also have the option
7 of going into SAFSTOR, which can put off waste generation
8 into the future. So I think for most power plants, it's
9 not going to have that much of an effect.

10 MR. KENNEDY: I know a lot of the state
11 organizations are looking at this issue of course with
12 power reactor decommissioning including the effect of
13 utility deregulation on how long plants are going to
14 operate and whether they shutdown prematurely on whether
15 they go for license renewal, as Tim said, whether they
16 SAFSTOR or whether they decommission immediately, so there
17 is quite a few uncertainties.

18 I know I work an awful lot with the low-level
19 waste form and the developers, and this is one of the
20 issues that they're tracking all of the time. And I know
21 they are also interested too in costs and volumes and
22 amounts of low-level waste, and I know NRC has had a
23 couple of studies over the years and continues to have
24 some and they are interested in that and tracking that.

25 MEMBER HINZE: Well, let me ask the question:

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1 is that not included in this list by omission or
2 commission? Is it a key factor, or was it just not
3 considered?

4 MR. KNAPP: At the time that we put it
5 together, I don't think we considered it a key factor.
6 Certainly, that's a comment from ACNW we'd be happy to
7 receive and we will pursue.

8 If I may, I'd just as soon move on to the
9 options. I'd like to note that you see here a broad set
10 of options, and you'll see this in other DSIs discussed
11 this morning. One of the charges was to come up with out-
12 of-the-box thinking, some novel ideas. We tried to do
13 that without going too far out, but nonetheless stretch
14 the hour and the Commission's views as to what we might
15 have.

16 To very briefly skim these, there are a couple
17 of aspects that you might be interested in. Assuming a
18 greater leadership role in the national low-level waste
19 program would be taking a rather proactive stance with
20 respect to Congress and the public, perhaps of the view
21 that the NRC's job is to ensure safe management of nuclear
22 materials, which includes ensuring their safe disposal.

23 And, therefore, we should, one could argue,
24 become more proactive as to the importance of developing
25 disposal sites beyond our current posture, which is as

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1 sites are developed we certainly stand by to provide
2 technical assistance and to regulate. But we have not
3 attempted to proactively endorse development of disposal
4 to the extent that we might if we wish to influence
5 national policy.

6 Assuming a strong regulatory role in the
7 national program is largely to return to the low-level
8 waste program that we had about two years ago. To retain
9 the current program, it is more or less the status quo,
10 although it would be declining if we stayed with our
11 current budget.

12 Option 4, to recognize progress and reduce the
13 program from a resource perspective, is not unlike
14 Option 3. But in the case of Option 4, if we were to say,
15 take the position, progress has been weighed, we do have
16 management disposal facilities available, and our role
17 might become more one of ensuring that the current
18 operation is done safely and less one of supporting those
19 who are developing additional facilities.

20 Option 5, transferring the low-level waste
21 program to EPA. Again, this is out-of-the-box thinking.
22 It recognizes that EPA is regulating WIPP. With the
23 experience that they have there, one could argue that they
24 would be in a position to do this if we simply wish to
25 streamline the national program in that direction.

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1 And finally, excepting assured long-term
2 storage, I suspect the committee is aware of the proposals
3 on the table for long-term storage. I think it's
4 something that we arguably should consider in view of the
5 seriousness with which some folks are taking those
6 proposals.

7 So those were options we provided. I'm not
8 going to tell you they are a complete set. I'm not going
9 to tell you that by themselves they were intended to be
10 orthogonal. We thought perhaps combinations might very
11 well be in order. We simply wanted to give the Commission
12 something to think about.

13 And again, with respect to the general
14 questions that are asked on these papers, if the committee
15 feels that we have missed an important option, or there is
16 some perturbation of the options here that you think would
17 be more appropriate, we'd especially like to hear them.

18 I'd like to just go along, talk about the
19 Commission's preliminary views. They do endorse Option 2,
20 support a strong national regulatory program. They also
21 particularly sought public comment, and we would like very
22 much to hear from the ACNW on ways in which the NRC -- and
23 here are the words. We have tried where we could to
24 repeat the Commission's exact words. They are obviously
25 in the papers -- "should the Commission, or should the

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1 NRC, involve itself to a greater degree, so as to
2 encourage an integrated approach to the regulation of
3 handling processing, recycle, and disposal."

4 Another way to look at that, put it a
5 different way, is given that there may be some folks
6 storing wastes for some time, some folks may be
7 compacting, should we step back and say, okay, what is the
8 best way to minimize risk? To minimize exposure? Looking
9 at the process as a whole, not simply waste disposal or
10 management or compaction, but looking at the whole thing.
11 Should we step back and look for an integrated approach,
12 which might be somewhat different than what we have right
13 now?

14 The second question: how should NRC address
15 unauthorized disposal? To what extent should we be
16 concerned about the potential for what is commonly known
17 as midnight dumping? Should we work harder at it? I
18 think our knowledge of -- or my experience is that we have
19 had very limited problems in that area, but that does not
20 mean that we could not have more problems in the future as
21 access becomes more limited, if that happens.

22 So we'd particularly like comments, or the
23 Commission would particularly like comments on those
24 areas.

25 MEMBER HINZE: Do I have time for a quick

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1 question?

2 CHAIRMAN POMEROY: Please. Go ahead.

3 MEMBER HINZE: Where does mixed waste fall
4 into this?

5 MR. KNAPP: Um --

6 MEMBER HINZE: Thanks a lot.

7 (Laughter.)

8 CHAIRMAN POMEROY: Next question?

9 (Laughter.)

10 MR. KNAPP: That is a good question. At one
11 point we had a direction -- we had an issue paper
12 concerning regulation with other agencies. The concerns
13 about how we might regulate, how we might involve other
14 agencies, have slipped into a couple of other papers. The
15 question of dual regulation appears in the last paper
16 you'll hear about today -- risk-informed performance-
17 based.

18 It also appears in a paper you will not hear
19 about today but you might want to take a quick look at at
20 some point, which is the materials paper -- paper
21 number 7. I think there is a lot of linkage between that
22 paper and some of the waste papers, particularly the low-
23 level decommissioning.

24 Where does it fall out? At this point, it is
25 not explicitly addressed. It is mentioned as an issue two

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1 or three places in the -- in various parts of various
2 issue papers, but we don't have an explicit question about
3 mixed waste. And again, your suggestions, your comments,
4 particularly your suggestions as to how we might do better
5 in that area than we have, would be very much appreciated.

6 I'm ready to head on to high level, if that
7 works.

8 Now, how are we doing? I burned more time
9 than I had anticipated.

10 CHAIRMAN POMEROY: No, we burned more of that
11 time.

12 (Laughter.)

13 We've assisted in that. Now you're doing
14 fine.

15 MR. KNAPP: Okay.

16 CHAIRMAN POMEROY: Just please keep going. I
17 think it is appropriate to go to high level.

18 MR. KNAPP: Fine. Okay. I'd like to note
19 that among the others over at the staff table are John
20 Austin and Meg Lusardi, who are the principal authors of
21 the high-level paper, and they've put in a lot of good
22 work. John brings his experience on high level to bear,
23 and Meg brings her experience on spent fuel management
24 transportation and storage issues.

25 The title I think speaks for itself, and I

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1 don't have to talk to you about in recognition of current
2 uncertainties. We are referring, among other things, to
3 the budget uncertainties and to the potential for
4 legislation in the high-level area.

5 With respect to the subsumed issues, how
6 should we address high-level standards and regulations?
7 We are talking here about concerns with respect to the
8 direction that the National Academy -- or that the
9 Congress gave the Academy to provide ideas, and then EPA
10 to take those, turn them into standards, NRC to turn those
11 into regulations. The question comes: how proactive do
12 we want to be on that working with EPA to try to achieve
13 some sort of a combination? Or should we let them proceed
14 and then implement their standards at a future time?

15 The question of how NRC should position itself
16 to meet its responsibility on disposal of greater than
17 Class C -- so I think you're well aware. It's been more
18 than a decade that DOE has had responsibility for disposal
19 of greater than Class C. I think they have been able to
20 make only limited progress in the area, and a question
21 occurs: should NRC take any proactive steps to encourage
22 or assist DOE to perhaps move forward? Or are we doing
23 about the right thing?

24 As I said, this issue paper also addresses
25 handling and transportation and storage of spent fuel, as

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1 well as high-level waste, and that leads to questions
2 associated with what we should do about spent fuel storage
3 and transportation. Over the next decade, I think we're
4 going to have some interesting issues in this area.

5 You're well aware of the concerns about
6 centralized interim storage, whether such a facility will
7 ever be available under any direction. That means we
8 could very well have tens of sites with dry cask storage.
9 Transportation issues will be involved. What's our best
10 way to try to come up with a safe and cost effective way
11 to both store and transport? How can we go about dealing
12 with that? Do we need to look at our regulations? And
13 should we perhaps heavily involve industry in this to get
14 their suggestions, benefit by the experience which they
15 have so far?

16 With respect to dealing with Part 50 licensees
17 that have terminated their operations, here is a situation
18 where we are looking to what we might best do about
19 greater than Class C in this area. Licensees obviously
20 are in a position to store spent fuel in dry cask storage.
21 But at the time that this paper was written we had limited
22 availability to do exactly what they -- as to what they
23 could do with greater than Class C waste.

24 And so questions become such things as should
25 we be pushing again DOE so that licensees have something

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1 to do with the greater than Class C? Should we be making
2 arrangements so that they might be able to store greater
3 than Class C, perhaps in the same casks or containers that
4 they'd be using for high level?

5 Moving along, I'd like to briefly hit what DOE
6 identified a few years back as the key factors in high-
7 level waste and spent fuel operations. Although these are
8 a few years old, they are I think pretty current today.
9 Maybe it's a statement about how we're doing that problems
10 we had five years ago are --

11 (Laughter.)

12 -- pretty much the same. But again, here is a
13 place where if there are key critical factors, I think in
14 particular here where the ACNW might wish to comment on
15 these or suggest other factors that we should consider --
16 excuse me, the Commission should consider in deciding
17 future policy -- we'd be happy to hear about them.

18 Scanning that very briefly, obviously there
19 is, and I think will be for decades, debates as to the
20 importance and the answers to some of the scientific and
21 technical questions as we cross the technical community,
22 NRC, DOE, and interested parties like the State of Nevada,
23 recognition that geologic disposal for these time periods
24 is unprecedented.

25 A concern that DOE had at the time, which

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1 remains a concern today perhaps in another guise, is the
2 legal relationship between siting and construction of a
3 facility, which for some time made it difficult -- excuse
4 me, I'm speaking too quickly here -- siting a facility and
5 siting and constructing an MRS. Again, there are legal
6 difficulties associated with that, and as the law may or
7 may not change that will continue to be an issue.

8 I think we're well aware of the public
9 resistance to disposal of high-level waste at least in
10 their community, and I think you are well aware from
11 previous briefings of the budgetary constraints that both
12 NRC and DOE are facing today, which are somewhat more than
13 they were a year or two ago. But again, your views on
14 other key issues that should be considered would be of
15 considerable interest I think to the Commissioners.

16 With those factors in mind, we have provided
17 actually a rather large number of options to the
18 Commission, and we initially did that. Upon reviewing the
19 issue paper, we found that we could pretty much cluster
20 those in four principle options. But within each option,
21 there are some different things we could do and your views
22 on those would be of interest.

23 If we were to try to refocus the national
24 program, there is a number of things that could be done.
25 For example, as we say in the paper, would it be

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1 worthwhile recommending that some of the decisions that
2 the NRC would make should perhaps be made by Congress,
3 simply recognizing that there are important national
4 decisions and it may be difficult in our licensing process
5 to achieve timely resolution? Should we take an activist
6 role and make that sort of suggestion?

7 To what extent should we reduce uncertainty by
8 modifying our own program? There are a couple of
9 possibilities. Again, you can see them in the paper, but
10 such things as coming up with some sort of a process to
11 try to procedurally, administratively, resolve some of the
12 issues associated with Yucca Mountain now so we would have
13 them resolved prior to licensing, come up with a process
14 that might work.

15 Another thing we might do because there has
16 been some debate that some of the issues that the NRC
17 brings up may be too broad or too uncertain, should we
18 create something like a CRGR within the NRC applied to
19 high level? To scrub some of the technical issues and
20 ensure that, in fact, they are appropriately focused? And
21 certainly we're making a lot of progress with our work on
22 key technical issues and vertical slices, but that's a
23 possibility. And you can see others in there that because
24 uncertainty is such a concern, perhaps our program could
25 be modified in various ways to reduce it.

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1 Option 3, of course, is to maintain the
2 existing program, with which I think you're all pretty familiar
3 with. And Option 4 would be to take more of a minimal
4 approach. It's simply a candid recognition that over the
5 years this country has spent a great deal of money, the
6 NRC has spent a great deal of money, and progress has been
7 limited. Recognizing that we have limited resources as an
8 agency in the future, is there merit to reducing our
9 activity in high-level waste until such time as we believe
10 that the nation will have more momentum?

11 Those are the sorts of things that we provided
12 for the Commission to consider. Their preliminary view is
13 to keep up the present pace, that we are on about the
14 right track. We would maintain the existing program as
15 described in Option 3.

16 But to a degree, not unlike in low level, the
17 Commission is looking for ways that -- any suggestions as
18 to how we might be I think maybe more proactive might be a
19 good way to describe it. How could we do more to help
20 resolve the issues in the national program yet remain
21 consistent with the NRC's mission? And which, of course,
22 we are not in an advocacy role, nor should we be. And as
23 you can see, we particularly -- the Commissioners
24 particularly seek comment on what we might do.

25 CHAIRMAN POMEROY: Questions on high-level

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1 waste?

2 MEMBER HORNBERGER: I'm just curious what your
3 view is of the level of proactivity, if you will, right
4 now in terms of working with EPA with regard to the
5 regulation.

6 MR. KNAPP: All I can tell you is that both
7 NRC and EPA are working hard. I think that there is, in
8 my view -- because frankly I am very comfortable with my
9 opposite numbers at EPA, I think that we would like very
10 much to resolve the issues. I think that we are working
11 in an atmosphere of considerable goodwill. I think
12 superior to maybe what we had a few years ago.

13 On the other hand, and this -- I could devote
14 the rest of the morning to this, and there are fundamental
15 differences in regulations, in laws, and in regulatory
16 philosophies of the two agencies that are extremely
17 difficult to resolve. So while I believe we are working
18 together, I believe the work we have done on risk
19 harmonization and other areas is a big step forward from
20 where we were a couple of years ago. I think we have a
21 long way to go, and I cannot tell you at this point that I
22 see an immediate resolution of our differences within the
23 next few months. But that's about as close as I can come.

24 CHAIRMAN POMEROY: Mal, at the expense of
25 taking a few more minutes, let me try to follow up on that

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1 just a little bit. One of the concerns that I've had is
2 that if the EPA promulgates 197 at some point, or at least
3 even brings it out for public comment, at some point it is
4 going to be extremely -- it is going to be litigated. I
5 think that's a safe assumption.

6 That litigation may take a considerable amount
7 of time. The NRC's regulation, which has to conform to
8 those standards, probably will be litigated also
9 extensively.

10 It is perfectly possible, then, that DOE may,
11 in fact, submit a license application, which I admit there
12 are lots of ifs to that too, without ever having an in
13 force standard or regulation to work against. Do you
14 foresee that as a problem, as far as the NRC is concerned?
15 Did you discuss that in one of -- in some of the points
16 here, I thought you might have.

17 MR. KNAPP: I don't think we specifically
18 discussed that chain of events. I'm going to give John
19 Austin a chance to say something about it. But before I
20 do -- I guess my answer won't be very satisfying from my
21 perspective -- I can give you a half a dozen scenarios,
22 maybe a dozen, like that, most of which are like going to
23 the air in football when there's only one good thing that
24 can happen and the rest are bad.

25 I guess -- just I'll give you my perspective.

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1 I think the program -- I think there is a good chance that
2 the people who submitted legislation in the past Congress
3 are going to attempt to do so again. I think we'll have a
4 real good idea in about two weeks as to what -- how
5 Congress might deal with that. I guess I am concerned --
6 I think it may be unsettled for a while.

7 Now, for all I know, we may get legislation
8 and it may come through, or they may abandon attempts.
9 But the thing that I see that is the biggest perturbation
10 as to whether or not a smooth application can come in with
11 a sound regulation in place could be the impact of the
12 law. And I think you well know that should legislation
13 comparable to that which has been proposed come out,
14 obviously that will have a significant impact on NRC
15 regs., and in fact could even have an impact on whether
16 EPA participates.

17 But John may want to improve on my answer. He
18 may not have a comment.

19 MR. AUSTIN: John Austin, NRC staff.

20 If I could add to what Mal said, recall that
21 we promulgated Part 60 before EPA promulgated its
22 regulations, and EPA was in court and lost. But that did
23 not get in the way of our Part 60. DOE is modifying its
24 960, which will serve as a basis for viability assessment,
25 site suitability, and part of the application.

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1 It is of concern to DOE and NRC that there not
2 be a regulation in place that they can compare their
3 application to or justify compliance. However, I think
4 our relationships with EPA have been very positive. As
5 Mal mentioned, there are one or two policy areas where
6 there are still differences between EPA and NRC, but these
7 must be resolved. And it's a matter of the will of the
8 agencies to go forward and do what's right and put a
9 regulation in place that DOE can prepare an application to
10 address.

11 And I think with some of the things -- some of
12 the legislation that is being considered on the Hill, it
13 is reflective of the frustration of Congress, that
14 difficulties in establishing standards in Congress may
15 well step in. So we have a few years and I am optimistic
16 that we can get something on the books.

17 CHAIRMAN POMEROY: Fine.

18 MR. AUSTIN: Now, if I could add just one more
19 for the record. We had five options in the paper.

20 MR. KNAPP: My apologies. I'm sorry.

21 MR. AUSTIN: And that fifth option was to take
22 a position on storage of spent fuel. That was developed
23 with the thought that either because of difficulties in
24 the repository program, or if one thought that spent fuel
25 was an asset, not a liability, should there be a

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1 Commission position on the storage of spent fuel, either
2 at reactors, at regional sites, or at some central site.

3 MR. KNAPP: Thank you, John. I am trying to
4 go through these rapidly.

5 MR. AUSTIN: Right.

6 MR. KNAPP: But eliminating options was not
7 one of the --

8 (Laughter.)

9 -- was not one of my strategies there.

10 VICE CHAIRMAN GARRICK: Mal, can I just make a
11 comment, which will turn into a question I believe? I
12 think there is a lot of people that would like to see NRC
13 take a more active role, but it depends upon the context.
14 I think if the role is asking Congress what should be
15 done, there is not much interest in that.

16 On the other hand, if the role, given the
17 expertise that the NRC has, and it has some unique
18 expertise, if the role is one of making very strong
19 recommendations to Congress that have the context of
20 solutions, that that's a very appealing form of being
21 proactive. I assume that's the direction that if this
22 option were exercised that you would be going.

23 MR. KNAPP: That's correct. I don't think we
24 had an interest in sort of asking Congress. We had
25 interest in saying, "Okay. Here is something we think

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1 that would make a very good difference, and here is" -- I
2 think we'd probably accompany that with proposed
3 legislation, should we do so.

4 VICE CHAIRMAN GARRICK: Yes. I think that
5 there's a lot of people who believe that given the
6 expertise that the NRC sits on the side much too much in
7 the solving of these problems, and that maybe there is a
8 real opportunity there being missed.

9 MR. KNAPP: I think that's exactly the
10 question in the Commission's mind, and that's where they
11 would welcome your views as to how we can properly be
12 constructive about solving the problem and recognizing we
13 are not in an advocacy role. But I think I would agree
14 entirely. If we're going to take action, our action
15 should be one of coming up with reasonable solutions that
16 look like they have a chance of being workable and then
17 advocating them.

18 VICE CHAIRMAN GARRICK: Thank you.

19 CHAIRMAN POMEROY: Let's move forward then,
20 Mal.

21 MR. KNAPP: Okay. The next issue paper has to
22 do with decommissioning non-reactor facilities, and
23 largely addresses the site decommissioning management plan
24 concerns because the issues that arise arise from the
25 sites that have proven difficult to decontaminate and

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1 decommission.

2 I would like to scan this very briefly, so
3 that we have time for questions you may have. To sort of
4 perhaps merge the key factors, the options, and the
5 Commission's views, these sites become site
6 decommissioning management plan sites because they are
7 tough to cope with. We may be unable to find a licensee.
8 If we find a licensee they may be financially unable or
9 perhaps unwilling to do what needs to be done. We have a
10 lengthy process at this time for how we ensure that their
11 site characterization plans are proper, that their site
12 remediation plans are proper.

13 We also have limited authority in some cases
14 to impose our will on these folks, because we do not have
15 a serious and immediate impact on public health and
16 safety. Many of these sites, in fact, have rather limited
17 radiological hazards associated with them.

18 Recognizing some of these concerns, and asking
19 whether there are ways that we could clean up these sites
20 that might be less resource intensive for us and for the
21 licensee, and more responsive to the people in the public
22 that would like them cleaned up promptly, we put together
23 -- and I have to give a lot of credit to Tim Johnson, the
24 author of this paper, for identifying a number of the
25 options that you see here. And they included ways that we

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1 could streamline the review process, ways to consider
2 turning over some sites to the Environmental Protection
3 Agency, ways to seek perhaps regulatory change that would
4 put more teeth into our present rules and our ability to
5 deal with licensees, and responsible parties who may not
6 be licensees.

7 The response of the Commission -- I think
8 Claire has probably had a really good time trying to keep
9 up with viewgraphs on this.

10 (Laughter.)

11 The response of the Commission was I think
12 generally stated "go for it." You've got some good ideas
13 here; there are several that you ought to try. And let's
14 -- again, I'm just trying to move rapidly to give you a
15 chance to discuss these things. But if we were to turn to
16 what is probably -- well, let's see, good choice -- the
17 first of the Commission's preliminary views, they are
18 prepared to change the decommissioning review process.

19 In cases where we have confidence that a
20 licensee or a responsible party can do a good job, we
21 would provide them more flexibility to move ahead without
22 a step-wise review. The Commission recognizes that there
23 may be some concerns with this if we had a licensee who
24 was not competent, and so we would be looking very
25 carefully at a pilot program. We would also be looking at

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1 providing workshops or educational opportunities to
2 licensees as to whether or not they would be able to
3 handle these concerns. The Commission is looking for
4 views, comments on that.

5 The Commission also endorses the idea of
6 transferring stalled sites to EPA. As you may be aware,
7 EPA has a lot more legal teeth than we do to find
8 responsible parties to assess triple damages or triple
9 fees for cleanup. And some licensees that might not be
10 too interested in working with us might become a lot more
11 interested when they saw the alternative, recognizing, on
12 the other hand, that EPA has a very long list of things to
13 fix and these would fall where they fell on their priority
14 list.

15 The Commission likes the idea of taking an
16 aggressive position to develop a framework for lowering
17 costs for decommissioning. There is a couple of things we
18 can do. There is a number of these sites that look an
19 awful lot like uranium mill tailing sites. We might be
20 able to handle them the way we handle mill tailing sites,
21 or some of the materials might be readily transferrable to
22 an existing mill tailing site. So these are things where
23 if we had the right regulatory tools we might be able to
24 save some costs, and the Commission endorses that.

25 And they also endorse developing a strong

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1 litigation strategy, where we are more empowered to go
2 after the funds and the responsibilities of the people
3 involved.

4 I don't want to editorialize too much, but I
5 think that their preliminary views here are going to give
6 us some good things we can work with and some
7 opportunities to improve the efficiency and effectiveness
8 of this program.

9 That was very much a thumb-nail sketch, but I
10 was looking at the clock and I wanted to try to get it all
11 in before 10:30.

12 CHAIRMAN POMEROY: Howard, can I ask you to
13 make a call for us and see if we can postpone for about 10
14 minutes or so?

15 MR. LARSON: Okay. I'll see what I can do.

16 CHAIRMAN POMEROY: I think the one nice thing
17 that I see on that is looking at risk of the various
18 sites, and noting that the possibility is if we've got a
19 low risk site that is stalled, it's going to be low on the
20 EPA's list. It's going to be -- it's relatively low on
21 our list as well, in general, and to concentrate on the
22 high risk problem sites certainly is a valuable thing to
23 see if this goes forward.

24 MR. KNAPP: I agree.

25 CHAIRMAN POMEROY: Other comments? Then

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1 let's --

2 MR. KNAPP: Should we take a crack at the
3 last, which is --

4 CHAIRMAN POMEROY: Right.

5 MR. KNAPP: -- issue paper number 12, risk-
6 informed, performance-based regulation. I think that
7 expression is -- I presume that's reasonably well known to
8 the committee. We debated those words a little bit
9 earlier on, but I think those are now pretty well in
10 common usage.

11 Recognizing -- and again, I think I may sort
12 of skim this and give you a sense of it. Recognizing that
13 the Commission already has in place a policy statement
14 where we are going to move towards risk-informed,
15 performance-based regulation, the real question that we
16 have on the table is: exactly what is the best way to
17 proceed? And I am shifting here and focusing pretty much
18 on the materials area. Obviously, we have PRA and, you
19 know, that is a major part of the reactor program. It is
20 not at this point really a major part of the materials
21 program.

22 And questions come up as to, well, exactly
23 what should we be doing about PRA with respect to
24 materials and risk-informed, performance-based regulation
25 in general?

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1 On the viewgraph in front of you there are a
2 couple of points to be made that we do have in the
3 materials program already some initiatives underway, and
4 we also have, considering materials broadly, a number of
5 things that are already what I'd call risk-informed
6 performance-based.

7 I don't have any trouble saying that the
8 performance assessment that goes on in high level, similar
9 work in low level, is very much akin to PRA, and that
10 certainly as we do a total system performance analysis
11 that's the intent of it. The integrated safety
12 assessments that we do at fuel cycle facilities are also
13 very much like risk-informed, performance-based
14 approaches.

15 On the other hand, as we look at materials I
16 think there are some areas where we would question whether
17 it's a real good idea to go too far in terms of risk-
18 informed performance-based. And an example that jumps
19 right out at me is regulation of radiography. That's a
20 very simple operation. Frequently, the people who engage
21 in radiography have limited training, and I think that
22 they would probably be most comfortable and most
23 successful with the continuing approach, which is pretty
24 prescriptive, without their having to carefully understand
25 what risk-informed performance-based means.

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1 If you accept that, then you recognize that
2 depending on who we look at in the broad range of
3 materials licensees, how far we will go with risk-informed
4 performance-based is likely to vary. And so I think a key
5 issue here from a materials viewpoint is: how best do we
6 go about moving towards risk-informed performance-based in
7 recognition of what we already have? And that there may
8 be some areas where we don't want to proceed 100 percent.

9 Moving on with that, I would like to at least
10 put up the list of subsumed issues. I don't know how many
11 that you would be interested in talking about. I think
12 the only one that jumps out at me I'd like to mention a
13 bit is that there's a third subsumed issue. It recognizes
14 that in materials -- in some ways the nuclear materials
15 industry is mature. In some ways there are ongoing
16 changes. I don't want to go too far afield of the
17 committee's interest.

18 But in such things as a gamma knife we have
19 development of pretty advanced technology. And a question
20 that we want to ask is: as technological changes occur or
21 are foreseen, what should we be doing about risk-informed
22 performance-based applications to these areas? How should
23 we posture ourselves to avoid learning the hard way from
24 some of the new technologies?

25 If you don't have any particular comments on

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1 the subsumed issue, I think I'll just flip on to the next
2 slide.

3 CHAIRMAN POMEROY: Why don't we go ahead,
4 then.

5 MR. KNAPP: That shows the options that have
6 been provided to the Commission. The Commission, from
7 their choice, is clearly enthusiastic and intending to go
8 forward with risk-informed performance-based regulation.
9 The first option was continue the current process.

10 The second would move a little more slowly.
11 We would take a hard look at the changes we're going to
12 make in advance.

13 The third one was to move aggressively. Let's
14 take a look now at what all of the opportunities are for
15 risk-informed performance-based and get the show on the
16 road, broadly.

17 The Commission decided that they would
18 continue with the first one, continue the process, but add
19 elements of the third one, a more aggressive approach. So
20 the Commission, at this point, would be moving more
21 broadly to considering risk-informed performance-based and
22 more aggressively than they have in the past.

23 If you go to the last of the slides, I think
24 the -- you do get on the last bullet -- you mentioned
25 mixed waste earlier. This is a little broader than mixed

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1 waste. But in the very last bullet the Commission is
2 particularly interested in public comments about how the
3 NRC should deal with dual regulation.

4 Now, this is in recognition of risk-informed
5 performance-based philosophy, but certainly that question
6 could be addressed as the committee sees fit. It comes in
7 part from a recognition that we have worked, as you know,
8 on risk harmonization with EPA. We are trying to look at
9 risk and dose and their relationship. But to the extent
10 that there may be suggestions as to how we can better cope
11 with dual regulation from that perspective as well as
12 others we are seeking comments.

13 That was pretty quick, but that at least gives
14 you a chance to comment on that one.

15 CHAIRMAN POMEROY: All right. Thank you, Mal.
16 Comments on that one?

17 VICE CHAIRMAN GARRICK: Just a comment. I've
18 got far too many questions to bring up now. But one thing
19 that occurs to me is that while it is true that the waste
20 field is behind the reactor field, in terms of applying
21 and understanding the technology of probabilistic risk
22 assessment, there is an opportunity, it seems to me, for
23 the waste field to take a giant leap forward. Because
24 unlike the reactor field, the waste field is facing a
25 risk-based standard in the high-level waste area, at least

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1 we're anticipating one.

2 And so that fact, together with the transition
3 of the performance assessment activity from basically a
4 deterministic activity to a probabilistic activity, would
5 seem to be a vehicle for rather impressive progress in the
6 waste field if the opportunity is taken advantage of.

7 The reactor field has safety goals, but they
8 have never been implemented in the context of risk
9 standards, at least officially. So it seems to me the
10 stage is set for a rather important and proactive step
11 forward in the use of risk-informed performance-based
12 regulatory thinking at least.

13 MR. KNAPP: Obviously, that's a comment we
14 will be interested in hearing in the process.

15 VICE CHAIRMAN GARRICK: Yes. The performance
16 assessments have not taken the real final leap to being
17 PRA based, because they still present results primarily on
18 a conditional basis rather than an unconditional basis.
19 They still talk in terms of if you take this assumption
20 set this is what you get, and if you take this assumption
21 set this is what you get. Well, somehow we've got to get
22 over that hurdle to really have them accepted as adopting
23 a PRA format. But I think there is progress even in that
24 area.

25 And I guess my question is: would you not

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1 agree? Or is the feeling within the waste field that this
2 is not an opportunity and that there is an interest in
3 going much slower than the combination of the standard
4 that we expect to get and the application of performance
5 assessment is providing us?

6 MR. KNAPP: John Austin is in a particularly
7 good position to comment on this, because he is not only
8 involved in high level, he is also very much involved in
9 the overall PRA group within the NRC.

10 John?

11 MR. AUSTIN: Yes. There is a PRA coordinating
12 committee, which is composed of branch chiefs from NRR,
13 RES, and AEOD, and NMSS. And I am the representative for
14 NMSS, and I am being overexposed to the PRA technologies.

15 (Laughter.)

16 With the thought I think that you are trying
17 -- that you are expressing here is to make sure that the
18 agency is using these techniques where appropriate, where
19 cost effective, where justified, and do it in a consistent
20 manner throughout. And that's one of the functions of the
21 PRA coordinating committee.

22 CHAIRMAN POMEROY: Jim, do you have --

23 MR. MILHOAN: No, that finishes our
24 presentation.

25 CHAIRMAN POMEROY: Jim, I think there are no

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1 further questions from the committee. We certainly your
2 all taking the time -- especially you, of course -- to
3 come down and explain things to us. We are deeply
4 appreciative and particularly for the concentration on the
5 initiatives that we're most concerned about. We certainly
6 have others, and we probably at some time will discuss
7 some of the others. But we do appreciate your taking the
8 time and presenting us an excellent viewpoint.

9 MR. MILHOAN: We appreciate your interest in
10 having us, and we certainly seek your comments, and the
11 Commission does, and we'll certainly give consideration to
12 comments when they go to their final decisions on the
13 issue papers. But we appreciate you having us.

14 CHAIRMAN POMEROY: Thank you very much. I
15 hope we see you down here again sometime.

16 MR. MILHOAN: Okay.

17 CHAIRMAN POMEROY: With that, I'd like to take
18 a half hour recess at this point until 10 minutes after
19 11, and hopefully two of us will make it back by that
20 time. So we'll recess until 10 minutes after 11.

21 (Whereupon, the proceedings in the foregoing
22 matter went off the record at 10:44 a.m. and went back on
23 the record at 11:14 a.m.)

24 CHAIRMAN POMEROY: The meeting will come to
25 order.

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1 We now have the four members of the committee.
2 Mike, as always, it is a pleasure to see you
3 here. I assume you'll introduce that much prettier person
4 to your left at some point.

5 MR. WEBER: Yes.

6 CHAIRMAN POMEROY: So the next item on our
7 agenda, to get the full appreciation of this, is the
8 Branch Technical Position on requirements for radioactive
9 waste land burial sites authorized under former 10 CFR
10 20.304, 20.302, and current 20.2002. It would be nice if
11 I could read that.

12 Anyway, our presenters today are Heather
13 Astwood and Mike Weber. And I presume you are going to
14 start, Mike?

15 MR. WEBER: Yes, if I could.

16 CHAIRMAN POMEROY: Welcome here.

17 MR. WEBER: Well, it's a pleasure to be here.
18 I want to thank the committee for looking at this. We
19 have been over the last several months working on a
20 methodology to help existing licensees determine what
21 future actions are necessary for these former burials.

22 So what I'd like to do is provide you with
23 some background information, provide the regulatory
24 framework, and then turn it over to Heather Astwood, who
25 is the lead technical individual in our branch, for the

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1 development of the methodology. And she'll walk through
2 the methodology in more detail.

3 We're particularly interested in any comments
4 that the committee may have, because we do plan to go out
5 with this position shortly -- like this week -- on an
6 interim use and comment basis. And as Heather will
7 elaborate a little later on, we plan to hold this open for
8 public comment until the end of the year, so that there is
9 an opportunity for the committee to provide its views.

10 By way of background -- could I have the next
11 slide, Heather? Actually, give me slide 3.

12 MS. ASTWOOD: All right.

13 MR. WEBER: As you pointed out, Dr. Pomeroy,
14 the NRC regulations at 10 CFR 20.304 and 302 previously
15 authorized licensees to dispose of limited quantities of
16 radioactive waste at their sites. 20.304 was put into
17 place in 1959 and was ultimately rescinded in 1981 on the
18 basis that the Commission had concerns that in all cases
19 the former burials may not be sufficiently protective of
20 the public. And, therefore, to continue to allow this
21 provision to exist that would authorize these burials
22 would not be a prudent thing to do.

23 20.302 was put into place in 1961. Now,
24 unlike 20.304, 20.302 actually required the Commission to
25 take action and authorize the on-site burial of the waste.

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1 20.304 was tantamount to a general license authorizing
2 people to dispose of waste, provided that their disposal
3 action met certain requirements. And if need be, we can
4 go into those requirements in more detail.

5 20.302 did expire on its own terms in January
6 of 1994 when it was superseded by the current provision in
7 the regulations, 10 CFR 20.2002, which like 20.302
8 requires prior approval by the Commission of the burial.
9 And the way this process worked in the past, and the way
10 it works today under 302 and 2002, is a licensee would
11 submit a variety of information describing the waste,
12 describing what they plan to do with the waste, describing
13 the site characteristics, and addressing the factors
14 listed in the regulation, and would present a case that
15 it's safe to dispose of the waste at their facility and
16 not send it to a commercial burial facility.

17 CHAIRMAN POMEROY: Is this actually being done
18 now, Mike?

19 MR. WEBER: 20.2002 burials?

20 CHAIRMAN POMEROY: Right.

21 MR. WEBER: Yes. Yes. We get on the order of
22 a half a dozen or so requests a year. They come to us
23 from material licensees, primarily through our regional
24 offices. And we have a database of some 30 or 40 past
25 burials that have been authorized that we are aware of.

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1 There are also probably several hundred
2 burials that may have occurred from previous licensees
3 whose licenses have since been terminated. They, of
4 course, are not covered by the regulations that I'm going
5 to be described here.

6 On-site burials are to be considered at the
7 time of decommissioning. The Commission established that
8 view when it promulgated the fundamental decommissioning
9 requirements in 1988. These are the requirements, you may
10 recall, that apply to the procedures for decommissioning,
11 the financial assurance requirements, what information has
12 to be submitted, things of that nature.

13 In the statement of considerations for the
14 1988 rule, the Commission said that it would take a hard
15 look at the extent to which licensed sites have been used
16 for on-site disposal of radioactive waste, and would
17 specifically consider whether additional action, including
18 remediation and removal of the waste, may be required
19 prior to release of those sites for unrestricted release.

20 Now, to add to the regulatory framework, in
21 1994 the Commission promulgated the decommissioning
22 timeliness rule. And the intent of the rule, the
23 timeliness rule, was to specify the timeframes and
24 schedules for materials decommissioning. Before 1994,
25 time requirements had not been included in NRC's

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1 regulations.

2 Specifically, the rule requires that formerly
3 used buildings and formerly used outdoor areas that are no
4 longer in use must be decommissioned in accordance with a
5 specific schedule. And specifically, the reference in the
6 rule to outdoor areas includes these former burial sites
7 that were used for 304 and 302 burials.

8 Licensees are required under the timeliness
9 rule to notify NRC about former burials by October 15,
10 1996, or request an alternate schedule by September 15,
11 1996. Now, of course, these dates have passed, and I am
12 told that we received notifications from several tens of
13 licensees of former burials. However, as you'll see a
14 little later on, in my opening you'll see that there was
15 some concern about the extent to which licensees were
16 aware of this rule, and we've addressed that through
17 another means.

18 There are other scheduler requirements in the
19 timeliness rule, and I by no means intend to give you the
20 full briefing on that, because that would be an entirely
21 different subject. But just to point out some of the
22 other scheduler requirements, if a licensee decides to
23 permanently cease the use of an outdoor area, or a
24 building, an entire building, then the licensee would have
25 to notify NRC within 60 days of the presence of

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1 contamination in the building or in the outdoor area.

2 So I don't want to just focus on the two-year
3 timeframe from the affected date. There are other
4 scheduler requirements that may also come to bear.

5 CHAIRMAN POMEROY: Are these licensees -- is
6 this the order of a few hundred notifications that you
7 might expect, Mike, or is there a clear picture of the
8 magnitude of this problem?

9 MR. WEBER: For on-site burials?

10 CHAIRMAN POMEROY: Right.

11 MR. WEBER: Maybe Heather could address that
12 in more detail. Our guess is that there is probably on
13 the order of a hundred or so licensees that have on-site
14 burials. The figures I mentioned earlier were from
15 formerly terminated licenses, and we have a database which
16 actually tells us that there are at least 200 license
17 facilities with indications that on-site burial was used
18 as a means.

19 One of the limitations of the review of the
20 terminated licenses is that it is based on the record.
21 And if the licensee sought authorization at some point to
22 do on-site burial, but never chose to use it, of course
23 what we would have in the record is some indication that
24 burial was practiced when, in fact, it may not have been.

25 CHAIRMAN POMEROY: But under 302 burials, you

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1 might not have -- would you know in all cases?

2 MR. WEBER: 302 burials we would because --

3 CHAIRMAN POMEROY: I'm sorry.

4 MR. WEBER: -- prior authorization is
5 required.

6 CHAIRMAN POMEROY: But 304 burials. I'm
7 sorry.

8 MR. WEBER: 304s we would not.

9 CHAIRMAN POMEROY: Yes.

10 MR. WEBER: And that's one of the things that
11 we hope to address in the next slide.

12 CHAIRMAN POMEROY: Okay.

13 MR. WEBER: Which is an information notice
14 that the staff recently published back in August. And the
15 intent of the information notice was to clarify exactly
16 how do the timeliness rule requirements apply to materials
17 licensees. And specifically, this information notice
18 focused on on-site burials, and the recordkeeping
19 requirements for on-site burials as well as the timeliness
20 rule requirements. And in that information notice, we
21 provided the hope to licensees that we would come forward
22 with a methodology that they could use to decide which of
23 these previous burials require more additional attention.

24 Keep in mind here we're dealing with an entire
25 range of license facilities, anywhere from a small

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1 academic or an industrial-type operation to a much larger
2 industrial fabrication-type activity. So the burials can
3 span the same gamut in terms of the total amount of
4 activity, the duration of the burial. It could be a one-
5 time event. It could be a sustained effort. So it's a
6 wide population that we deal with.

7 The methodology that Heather is going to
8 describe is intended to screen out those burials that
9 based on the activity that was present and placed in the
10 ground don't warrant additional effort to do site
11 characterization, because with the little information that
12 we know, with the limited records that we have, we're
13 confident that the public will be adequately protected,
14 versus those other burials that might have involved a
15 greater amount of activity, or perhaps the site
16 characteristics are not very favorable to the continuation
17 of that burial at that site that really require additional
18 characterization, and in some cases maybe remediation.

19 And at this point, I will turn it over to
20 Heather, who will lead us through a discussion of the
21 methodology.

22 MS. ASTWOOD: Okay. Can you hear me okay?

23 For my part of the presentation I wanted to
24 walk you first through the methodology and then through an
25 example at the end so that you can see how it applies to

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1 an actual site.

2 As Mike said, we wanted a simple methodology
3 that could be used by a wide variety of licensees to
4 evaluate a wide variety of burials. We also wanted
5 something that was conservative enough that we had
6 confidence in the result. The methodology that I've
7 developed consists of three steps, and I'm going to go
8 into those more in subsequent slides.

9 But just to run you through it here, step 1
10 would be to review the burial records and determine a
11 total inventory, what was the total inventory that had
12 been buried at that site. They would then use that total
13 inventory to calculate a dose from ingestion, simply by
14 the groundwater pathway, and then in step 3 they would
15 calculate a dose to a resident farmer, also using that
16 total inventory.

17 You should note that step 2 is a single
18 pathway, whereas step 3, when you move to step 3, you're
19 looking at a resident farmer scenario. So you're getting
20 a slightly more complex dose assessment, a little bit more
21 site information, and a slightly less conservative
22 scenario. Step 2 is considered more conservative than
23 step 3 and should give you a higher dose than step 3.

24 So in this process what we are trying to do is
25 have people do step 2, and if they pass a screening

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1 criteria that we've set up then they would not have to
2 move on to a more site-specific analysis in step 3. If
3 they do not pass step 2, then they would have to go on to
4 step 3.

5 The methodology is based on a 100 millirem per
6 year screening limit. The purpose of this limit is to
7 compensate for the large conservatisms in the scenarios,
8 but the actual doses produced by these sites would be a
9 small fraction of that 100 millirem -- 10, 15, on that
10 order.

11 If a site passes the 100 millirem per year
12 limit, then we would require no additional work. The site
13 could stay as it is, remain, you know, untouched,
14 unremediated, and NRC would consider it acceptable for
15 unrestricted use. The licensee could remove it from their
16 license at that point if they wanted to.

17 If this site does not pass the screening, then
18 we would require more evaluation of the site, more
19 characterization, better inventory, better trench
20 dimensions, etcetera, in order to do a more detailed dose
21 assessment.

22 MEMBER HINZE: Excuse me.

23 MS. ASTWOOD: Go ahead.

24 MEMBER HINZE: I wanted to catch you before
25 you moved on to the next. Heather, how does that first

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1 bullet there, if it applies to step 2, interact with the
2 EPA standards on four mills?

3 MS. ASTWOOD: It doesn't. This was done
4 independent of that criteria.

5 MEMBER HINZE: Well, what does that mean to
6 one of the people that you're regulating then?

7 MS. ASTWOOD: It's --

8 MEMBER HINZE: I mean, what is the
9 meaningfulness of this if I have to comply with the EPA
10 requirement of four millirem for potable water?

11 MR. WEBER: The four millirem per year maximum
12 contaminant level for beta and gamma emitters doesn't
13 strictly apply to license facilities directly. If it were
14 to apply, it would have to be done through enforcement
15 action by EPA under the substantial endangerment
16 provisions, under the Safe Drinking Water Act.

17 Now, there are cases where EPA has applied the
18 MCLs under the drinking water program under, for example,
19 the CRCLA program, the Superfund remediation program,
20 where they've identified the drinking water standards as
21 an ARAR, an applicable or relevant and appropriate
22 requirement.

23 Our intent -- and it might be opportune here
24 to point out -- the 100 millirem is not a new limit. The
25 100 millirem, of course, is the public dose limit under

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1 Part 20. And as Heather described, the intent is not to
2 use all 100 millirems of the dose for former burials. As
3 she'll go through the methodology, I think you'll see that
4 there is a lot of conservatism built into the assumptions
5 that are made. And because of that, we feel fairly
6 confident that if a site passed at this screening
7 criterion level that there is a reasonable degree of
8 assurance that the actual doses would be expected to be
9 far less than 100 millirem per year.

10 MEMBER HINZE: This either step -- is this --
11 this relates to the three steps of the preceding --

12 MS. ASTWOOD: Right. Either step 2 or step 3,
13 because if you do step 2 and it's less than 100 you're
14 okay. If you do step 3 and you're less than 100, then
15 you're okay.

16 MEMBER HINZE: I guess. Well, okay. Proceed.
17 I would like to consider this in the totality of what
18 you're talking about.

19 MS. ASTWOOD: One note on this slide is that
20 simply because you don't pass a screening, this screening
21 methodology, does not mean that that site would have to be
22 remediated. It simply means that a more detailed analysis
23 has to be performed.

24 To go through the steps now, step 1 is a
25 record review. At the time that 20.304 was in place,

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1 there was a recordkeeping requirement. Licensees were
2 supposed to keep records of what they buried in these
3 trenches. They would then go through those records and
4 estimate a total inventory.

5 Unfortunately, there are some licensees who do
6 not have records because they moved or it was, you know,
7 in the '50s. They changed management, it got lost. If
8 they don't have any records, we're offering them the
9 opportunity to use their license possession limits at the
10 time that the burials would have taken place, and their
11 throughput from their operation, to come up with an
12 estimate for what's in the burial ground.

13 That's probably going to be an overestimate,
14 you know, of what they actually buried. But we felt that
15 we would allow them the opportunity to use that as an
16 estimate.

17 MR. WEBER: And, in fact, that's one of the
18 real difficulties that we have with these past burials.
19 That's also why we would not propose to apply this
20 prospectively to grant approvals for future disposals.
21 The intent of this methodology is to really screen out, in
22 this retrospective look at these past burials, which
23 burials had enough activity to warrant this additional
24 level of scrutiny versus those that based on a very
25 limited amount of activity that they may have had don't

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1 warrant that kind of scrutiny.

2 MS. ASTWOOD: All right. Once the total
3 inventory has been estimated, the licensee would move on
4 to step 2. In this step, we assume that the entire
5 inventory in the burial ground leaches into the
6 groundwater in one year. That volume of water that it
7 leaches into we chose as 91 cubic meters. That's the
8 standard amount of water that is needed to supply a family
9 of four, a resident family of four, for one year. It's
10 also the amount of water that is used in NUREG-5512 and in
11 RESRAD for these types of analyses. That's why we chose
12 that.

13 It is over and above just drinking water. It
14 is wash water, cooking water, and things like that. So
15 that's more than the 760 liters.

16 So we take the entire volume and we place it
17 in this volume of groundwater, and we'll get a
18 concentration -- microcuries per mill -- and that
19 concentration is then compared to 10 CFR 20, Appendix B,
20 Table 2, the effluent release criteria. The reason we do
21 that is simply for them to be able to have an easy way to
22 estimate a dose, because Appendix B was developed with a
23 50 millirem per year limit.

24 So if you take your microcurie per mill for
25 your burial site and compare it to the microcurie in

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1 Appendix B, you can develop a dose.

2 VICE CHAIRMAN GARRICK: So this turns out to
3 be site independent, except for the inventory.

4 MS. ASTWOOD: Except for the inventory.

5 VICE CHAIRMAN GARRICK: Yes.

6 MS. ASTWOOD: And then this calculation is
7 performed for each isotope that's in the burial ground,
8 and their doses are summed at the end.

9 MR. WEBER: You might consider this ultra
10 SPAM.

11 VICE CHAIRMAN GARRICK: Yes.

12 MS. ASTWOOD: Some of the key assumptions in
13 that scenario is that the entire inventory is available at
14 the time that the calculation is performed, that we don't
15 allow for any migration to have occurred even if something
16 was placed in the 1950s. That entire inventory leaches
17 into the groundwater in one year, somebody moves onto the
18 site and drills a well that captures all 91 cubic liters
19 of water, and somebody drinks solely from that well two
20 liters a day for a year.

21 VICE CHAIRMAN GARRICK: Do you have enough
22 experience to indicate whether or not there is a real
23 problem here?

24 MS. ASTWOOD: As far as burial sites?

25 VICE CHAIRMAN GARRICK: Yes.

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1 MS. ASTWOOD: If there are burial sites?
2 There are burial sites out there that do cause a problem
3 that would not pass this screen.

4 VICE CHAIRMAN GARRICK: Is it 10 percent of
5 them? 50 percent of them? 90 percent of them?

6 MS. ASTWOOD: No, it would be a smaller
7 fraction of the total. The ones that I've had experience
8 with that haven't passed are from large fuel fabrication
9 facilities that have large amounts of uranium or thorium
10 in the burials. Those would not pass this methodology.

11 MR. WEBER: Some of those former burial sites
12 are now listed on the site decommissioning management
13 plan.

14 VICE CHAIRMAN GARRICK: Yes.

15 MS. ASTWOOD: So if they pass step 2, if it's
16 less -- if that total dose sum is less than 100, then they
17 would not have to continue on to step 3. If it's over,
18 then they would continue on to this step 3.

19 CHAIRMAN POMEROY: Just so I understand it,
20 though, also they could skip 2 --

21 MS. ASTWOOD: If --

22 CHAIRMAN POMEROY: -- come to step 3 --

23 MS. ASTWOOD: Right.

24 CHAIRMAN POMEROY: -- which is less
25 conservative, and if they -- I think the way it was

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1 stated, if they pass step 3 with less than 100 millirem
2 per year, then --

3 MS. ASTWOOD: Right.

4 CHAIRMAN POMEROY: -- then they're free.

5 MS. ASTWOOD: Right. You wouldn't necessarily
6 need step 2. You could do this using step 3. However, we
7 wanted to give them something that they could do with very
8 little site-specific information. If you know your total
9 inventory, and you've passed this really conservative
10 step, then you're okay and you wouldn't have to go out in
11 the field and figure out how big your trench was, or do
12 any extra work. So yes, you are correct.

13 Step 3 we calculate the exhumation
14 concentration. Either based on the records or on some
15 kind of in-field measurements, the licensee would estimate
16 the volume of the burial trenches, not the burial area
17 itself, but the specific area that the waste was deposited
18 in in the trenches. You would use the total inventory and
19 come up with a concentration picocuries per gram for the
20 concentration in the trench.

21 Also, in this scenario we're assuming that
22 there is a resident farmer who moves on to the site,
23 builds his house right on the trench, has a garden on the
24 contaminated soil, drinks water from the site, all of
25 those things. So in building his house, we are digging

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1 into the trench waste and mixing it in with the clean
2 cover material. Most of these sites have some amount of
3 clean soil cap on top of them. So we're taking the trench
4 concentration and reducing it by a factor of four to
5 account for this mixing during exhumation.

6 The factor of four came from the EIS for
7 Part 61 for low-level waste disposal facilities where they
8 had waste and a soil cover and they estimated the average
9 size of a house and accounted for site stability. So
10 that's the factor.

11 Now that you have a picocurie per gram
12 quantity, we're then using NUREG-5512 and the subsequent
13 tables in NUREG-1500 to calculate a dose the same way we
14 did with Appendix B. NUREG-1500 has tables in it which
15 account for -- which list millirem per year or picocurie
16 per gram, or all of the isotopes based on several
17 scenarios, one of which is a residential scenario. So by
18 comparing your picocurie per gram to that NUREG-1500
19 number, then you can come up with a dose.

20 One note about NUREG-1500 is those tables are
21 in the process of being revised, and there is less
22 confidence in the current numbers for atomic weights of 88
23 or higher -- uraniums, thoriums, radiums. So for step 3
24 we are not allowing licensees that have isotopes of atomic
25 weights of 88 or higher to use step 3, because we don't

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1 have confidence in the NUREG-1500 numbers for those
2 isotopes. So if they get a dose that's higher than 100
3 millirem for step 2, then they must come to us for a site-
4 specific evaluation. They cannot move on to step 3.

5 Okay?

6 Some of the assumptions that we used in this
7 scenario, I think I've mentioned most of these already --
8 total inventory is available. In digging into the house,
9 you are going down -- most of these burials are between
10 four and ten feet. That has pretty much been my
11 experience. You're taking that entire inventory from four
12 to ten feet down and bringing it all to the surface. And
13 since we're using NUREG-5512 scenarios, one of those
14 scenarios is that all of the contamination is in the top
15 15 centimeters of soil.

16 These are some of the -- you can see that this
17 is a little more site specific. You're accounting for all
18 pathways, a little more realistic about how much somebody
19 drinks, but it is still very conservative to have contact
20 with all of the inventory at the surface.

21 Okay. And now we'll go on to an actual
22 example site. This is a real site that has come in for
23 evaluation to NRC. It was a 10-meter cubed trench. It
24 was five meters by two meters by one meter, and it
25 contained cesium-134, iron-55, and cobalt-60. These

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1 numbers that I have calculated here account for decay
2 since the burial was in place. We do allow licensees to
3 account for decay.

4 As you can see, you simply take the microcurie
5 quantities, you divide it by the 91 liters cubed, compare
6 it to the Appendix B limits, and you can see the resulting
7 doses in the far right-hand column. Cesium-134 by itself
8 exceeds the dose limit, so the screening dose, once you
9 sum all of those, is approximately 230 millirem per year.
10 So this site would not pass step 2 of this screening.
11 These licensees would be forced to go on to step 3.

12 If you take step 3, since we do have the
13 trench dimensions, you can calculate a picocurie per gram
14 quantity based on a density of 1.6 for the soils, compare
15 it to the NUREG-1500 numbers, and you can see that the
16 doses come down substantially. The screening dose from
17 this step is 42 millirem per year, so it would pass based
18 on step 3.

19 The process for this would be the licensee
20 would do these calculations, they would send it in to us
21 saying "we did the calculations, we believe we passed,"
22 NRC would review those calculations to assure they didn't
23 make a mistake somewhere along the line, that they felt
24 comfortable with their assumptions, and then we would make
25 the determination whether or not they passed the

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1 screening.

2 An interesting calculation that was done for
3 this, to give you an idea of how conservative these are,
4 since this was a real site, a RESRAD analysis was done for
5 this, which is how we would evaluate these sites. Using
6 site-specific information that I knew, which was it did
7 have a soil cap, it had a half of a meter soil cap, I did
8 not use the exhumation concentrations, the 4.2. I used
9 the actual trench concentrations, so those concentrations
10 went up by a factor of four, because I knew what those
11 were. And I knew the depth of the groundwater, which was
12 eight meters.

13 Just using those site-specific parameters and
14 running RESRAD, I got a dose of one millirem per year.
15 That's what -- if we did not have this screening
16 methodology, that's the type of analysis that would have
17 been done, or was done, for this site. You can see the
18 difference in the dose.

19 CHAIRMAN POMEROY: Could you clarify for me
20 what --

21 MS. ASTWOOD: Sure.

22 CHAIRMAN POMEROY: -- what the advantage of
23 using step 2 would be in this particular example?

24 MS. ASTWOOD: In this example, there wasn't an
25 advantage because they knew the trench size already.

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1 CHAIRMAN POMEROY: Yes.

2 MS. ASTWOOD: It was an advantage to show it
3 to you so that you could see the difference in the dose.

4 CHAIRMAN POMEROY: Wouldn't you do both and
5 submit one to the NRC in this particular instance, if you
6 had the information?

7 MS. ASTWOOD: If they had the information,
8 they would probably go through it, find they didn't pass
9 step 2, and simply give us step 3 information, which would
10 be -- that would be perfectly acceptable.

11 CHAIRMAN POMEROY: Right.

12 MS. ASTWOOD: But for a licensee who does not
13 know what their trench size is, "Well, I think we dumped a
14 goat back there somewhere, you know, but I'm not sure,"
15 then, you know, step 2 is very valuable.

16 Example conclusions -- as I said, if the site
17 passes a screening, we are confident that even though we
18 have 100 millirem screening level that the actual doses
19 represented by these sites are much lower because of the
20 extreme conservative assumptions that we have built into
21 the scenario, and that that site would be releasable for
22 unrestricted use and the licensee could take it off their
23 license at this point if that's something that they desire
24 to do.

25 As far as next steps --

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1 MR. WEBER: Through an amendment process.

2 MS. ASTWOOD: Right. I mean, they -- but they
3 would have to initiate that process.

4 And as far as this methodology and the next
5 steps involved, we want to publish it in the Federal
6 Register to give it to the licensees, allow them to start
7 gathering information and start their calculations. We
8 also are asking for comments from the public for a 90-day
9 period. So by the end of the year we should have comments
10 from the public. We are also sending it to agreement
11 states for their comments at the same time.

12 And since we could receive comments that would
13 show a fatal flaw in this analysis or some revision, we
14 are not going to make any evaluations on whether a site
15 passes or fails this methodology until the end of the year
16 and we've had time to evaluate the comments and assess
17 that the BTP is still valid.

18 That's really the end of my presentation. Do
19 you have any questions?

20 MR. WEBER: One other thing that I'd like to
21 add is that the driver here for the schedule is that once
22 the licensees submit their notifications to the NRC, and
23 if they are required to submit a decommissioning plan,
24 they have one year from the date that notification is
25 received to submit that decommissioning plan. If a

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1 licensee is unsure whether they need to do anything in
2 addition to what they've already done, the more time that
3 they have up front before that deadline for submission of
4 the decommissioning plan, the better they will be able to
5 address the decommissioning requirements.

6 For example, if a licensee finds after running
7 through the screening methodology that additional work
8 will be needed, they have only as much time as what
9 remains in that year to collect the site characterization
10 information and assess that information, and if need be
11 develop a decommissioning plan.

12 And in some cases, particularly for the more
13 complicated sites, larger inventories, that may be quite a
14 challenge. So our interest is to get something out there
15 that at least people can start thinking about and start
16 applying in deciding which sites warrant that additional
17 level of attention.

18 Now, under the timeliness rule, a licensee
19 could come in and request an extension of the schedule on
20 the basis that they simply can't complete the site
21 characterization necessary prior to -- and develop the
22 decommissioning plan, and what have you, to meet that one-
23 year deadline. But in the ideal, we would have had our
24 methodology out earlier, so that even in advance of the
25 notification date the licensees had the benefit of this

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1 information. Business conspired against us, and here we
2 are in October after the date of the notification
3 requirements.

4 Let me also just add that what we've struggled
5 with in developing this methodology is striking a balance
6 between the natural desire for more information, for a
7 more site-specific evaluation, for consideration of where
8 the large uncertainties in these kinds of calculations --
9 what are the likelihoods of the difference scenarios,
10 versus something that could be taken off the shelf and
11 readily applied, given the limited amount of information
12 that most licensees, or a lot of licensees, particularly
13 with the older burials, have. So we have worked on that
14 and through that process developed this methodology, which
15 we hope fulfills the need.

16 CHAIRMAN POMEROY: Questions. George?

17 MEMBER HORNBERGER: Do you have any guess at
18 all as to how many of your sites would pass the site --
19 the step 2 screening?

20 MS. ASTWOOD: I did an evaluation of probably
21 10 of the sites that we've gotten in the past, and with
22 the exception of carbon-14 -- carbon-14 gives you a
23 problem in step 2. But all of those sites did pass
24 step 3. I would say the rest of them that did not have
25 carbon-14 did pass, but I chose only medical isotopes. As

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1 I said, the ones with uranium and thorium didn't --

2 MR. WEBER: What was your population set?

3 MS. ASTWOOD: I had 10. I did 10 of the ones
4 that we have gotten in that I picked because they seemed
5 to be -- fall in the range of what we typically see, which
6 is hundreds of microcuries. That's about the level -- the
7 standard that we see. It's usually in the range of
8 hundreds of microcuries.

9 MEMBER HORNBERGER: So you said a handful of
10 those passed step 2, or none of them did, because of
11 carbon-14? I'm sorry. I missed it.

12 MS. ASTWOOD: Okay. I would say I think it
13 was three of them did not pass step 2 because of carbon-
14 14. But it does not take a lot of carbon-14 not to pass
15 step 2, and all 10 passed step 3.

16 MEMBER HINZE: Do you have any feeling for how
17 many sites are out there where the information is lost,
18 where the companies are bankrupt, where information is
19 just not available?

20 MS. ASTWOOD: No. We really don't have a lot
21 of information about these sites at all. Since they
22 weren't required to notify us, we don't know how many
23 there are, so that we don't know -- we can't look at our
24 list and say, "Well, this many sites have been
25 terminated." That's not information that we have readily

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1 available.

2 MR. WEBER: We know the sites where we have
3 authorized on-site disposal since about 1980, 1981. We
4 have a list of those. That was under 20.302. But the
5 nature of 20.304, of course, allowed licensees to do this,
6 and the only record we may have of that is in a licensing
7 correspondence where they may have mentioned that that's
8 what they plan to do with their waste, or in an inspection
9 report where an inspector noticed that they had disposed
10 of so much of an inventory into this burial pit.

11 So our hope is that -- and what we strongly
12 stressed in the information notice is if you have one of
13 these former burials, tell us about it. It is better that
14 we know that now, and we can work together to ensure that
15 it's decommissioned in a proper manner, than to find it
16 out when they're ready to terminate their license and they
17 may have an economic interest at that point to get rid of
18 the property. This is not something that would be
19 attractive to them to discover at that late stage.

20 MEMBER HINZE: Do you have any field
21 monitoring arrangements with the regions? Is there any
22 field monitoring of this? Is this based simply on the
23 reports that are provided, or what goes on?

24 MS. ASTWOOD: Simply the reports that come in
25 from the inspectors. I mean, inspectors do do some field

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1 inspections, if the people there know they had a burial,
2 and they'll take them out. But --

3 MR. WEBER: We have independent measurement
4 capability, if that's what you're getting to.

5 MEMBER HINZE: Well, that was one of the
6 things, of course. I mean, it was in the inspectors but
7 also the measurement monitoring capability.

8 MR. WEBER: Right. We recently had an
9 instance at a university in the midwest where they
10 inadvertently, or advertently, discovered that they had
11 four burials. And the way they found out about it was a
12 creek was washing the cover off of one of the -- or
13 getting very close to eroding the cover off of a former
14 burial trench.

15 When they went back and checked their records,
16 they find out that they had more of these cases to deal
17 with, including one where the alumni building was
18 constructed on top of the old trench, and it was close to
19 a river. So they've gone back, and in that instance we
20 sent out our inspectors, and they made side-by-side
21 measurements to confirm the legitimacy of the measurements
22 that were being submitted by the licensee.

23 CHAIRMAN POMEROY: We hope that's not Purdue.

24 (Laughter.)

25 MEMBER HINZE: I'm just going to be very

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1 quiet, because I associated with one of these in the
2 midwest. And that is really prompting some of my
3 questions.

4 When there is a situation, do you have any
5 guidance on the site characterization process that they
6 should go through in terms of number of wells or
7 exploratory holes or pumpage rates, etcetera?

8 MS. ASTWOOD: Yes. We have several documents
9 that have guidance for that, one of which is NUREG-1101,
10 which outlines the types of information that you need to
11 do an on-site burial. And we have used that, you know, to
12 look back at the records, and we also have several site
13 characterization guidances for larger decommissioning
14 sites.

15 MR. WEBER: And the characterization guidance,
16 the Branch Technical Position for decommissioning, which
17 is the global document Heather refers to, is really
18 performance driven. So if you have a complicated site,
19 you're going to need more wells, you're going to need
20 perhaps multi-level piezometers, or something, and that's
21 to understand the direction of groundwater flow. And it
22 really then becomes a function of this more detailed
23 review and assessment to figure out what information is
24 needed and what answers are you trying to get to as part
25 of your site characterization and assessment.

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1 MEMBER HINZE: Has this ever gone so far as to
2 remove the material and ship it someplace else? This has
3 gone that far in some of your decommissionings that --

4 VICE CHAIRMAN GARRICK: I always get a little
5 worried on any regulatory practice that is based on a so-
6 called conservative assumption, because of the lessons we
7 learned by the design basis and the beyond Class 9
8 accident experience with reactors.

9 And you used the magic word earlier, Mike.
10 Have you thought about on specific sites actually trying
11 to conceive different scenarios of what might go wrong? I
12 guess my real question is, on a site-specific basis, could
13 a clever risk analyst come up with scenarios that were not
14 to be ignored, that exceeded the conservativeness of your
15 assumptions -- that is, the basis of the whole
16 methodology?

17 MR. WEBER: Do you want to address that?

18 MS. ASTWOOD: You're asking if somebody could
19 come up with a scenario that would exceed this?

20 VICE CHAIRMAN GARRICK: And, of course, it
21 would only be relevant if the likelihood of that scenario
22 represented any real risk.

23 MS. ASTWOOD: Yes, you could. I mean, for
24 example, step 2 with the ingestion scenario, ingestion is
25 not the most restrictive --

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1 VICE CHAIRMAN GARRICK: Right.

2 MS. ASTWOOD: -- pathway. And there were
3 situations in which you could develop a superconservative
4 external pathway scenario and come up with something that
5 is higher than what the ingestion would give you.
6 However, we did not feel that that was necessary because
7 of -- we assessed those other pathways and those other
8 scenarios when you look at the residential farmer scenario
9 in step 3.

10 Since we showed that step 2 is more
11 conservative than step 3, step 3 deals with scenarios
12 involving drinking water, direct exposure, inhalation, all
13 of the different scenarios that are involved with somebody
14 on a site -- planting things, eating cows, things like
15 that -- that those scenarios are evaluated and are covered
16 and we feel that we have captured that in the conservatism
17 in these scenarios.

18 MR. WEBER: But we did look also, I believe,
19 at -- we ran microshield runs --

20 MS. ASTWOOD: That's correct.

21 MR. WEBER: -- to look at direct exposure, and
22 we did inhalation calculations --

23 MS. ASTWOOD: Right.

24 MR. WEBER: -- under step 2 to evaluate what
25 is the potential that a site could pass step 2 as we had

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1 set it out but still conceptually result in the
2 significant dose through some other pathway.

3 VICE CHAIRMAN GARRICK: Yes. Well, in the
4 low-level waste field, there had been some surprises in
5 the inventory in the sense that there has been more
6 uranium contamination than was expected or anticipated.
7 Have you run into any of these kinds of problems in this
8 waste in terms of surprises in the inventory, with respect
9 to specific radionuclides?

10 MR. WEBER: We have had instances, for
11 example, where something like chlorine-36 becomes the
12 dominant radionuclide, even though at the time it was
13 disposed of it was a "no, never mind."

14 VICE CHAIRMAN GARRICK: Right.

15 MR. WEBER: So those kind of surprises exist.

16 I'm not sure how -- what would happen if we
17 applied our methodology in those cases.

18 As Heather pointed out, the typical problem
19 sites that we deal with for past burials are the thorium,
20 uranium, plutonium sources.

21 VICE CHAIRMAN GARRICK: Right.

22 MR. WEBER: And, of course, a number of those
23 are already listed on the site decommissioning management
24 plan, and they're getting the full bore assessment and
25 characterization, and so forth.

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1 CHAIRMAN POMEROY: I guess that's a question I
2 think -- just let me jump in here for a second -- that I
3 had that in -- I was going to ask you whether there were
4 cases that you could even hypothesize where there would be
5 major surprises in the buried inventory, particularly
6 nasty ones. But I guess that most of those probably would
7 be on the SDMP list. Is that --

8 MR. WEBER: Well, if you're talking about
9 nasty surprises --

10 CHAIRMAN POMEROY: That's what I'm talking
11 about.

12 MR. WEBER: -- there is uncertainty in the
13 inventories that would be in these past burials,
14 especially in cases where the records no longer exist and
15 all we have to go on is somebody's recollection of the
16 kind of activities and processing that they may have been
17 involved in at the time.

18 If somebody did something intentionally in
19 conflict with the regulation, that could be a problem, and
20 we wouldn't know that based on the record submitted by the
21 licensees.

22 What we have to balance that off is the
23 additional effort that would be required to go in and
24 exhaustively sample every one of these sites to find that
25 surprise. It's the old "needle in a haystack" syndrome.

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1 We would not, as I said earlier, propose to apply this
2 prospectively, because today if you're doing this you have
3 to keep the records necessary to support decommissioning.
4 But our real problems are those burials that took place in
5 the '60s, and in some cases the '50s, and the '70s, where
6 these kind of records were not retained.

7 CHAIRMAN POMEROY: So there could be a site
8 out there that has 1,000 times the inventory that we're
9 talking about here.

10 Excuse me, John. I didn't mean to interrupt.

11 VICE CHAIRMAN GARRICK: No, that's fine.

12 CHAIRMAN POMEROY: Other questions? Oh, yes,
13 Howard. Go ahead.

14 MR. LARSON: Just a couple to close the loop.

15 When is the BTP going to be out? I mean, I
16 know it's -- is this going to go out this week with
17 everything else, Mike?

18 MR. WEBER: We hope to.

19 MR. LARSON: And, you know, the committee has
20 heard a lot of discussion on subsistence farmers and
21 residence farmers, but the resident farmer is not a
22 subsistence farmer in this case, right? If he isn't
23 getting everything he eats and all of his food --

24 MR. WEBER: No, he's getting --

25 MS. ASTWOOD: Twenty-five percent.

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1 MR. WEBER: -- 25 percent.

2 MR. LARSON: How much?

3 MS. ASTWOOD: Twenty-five percent.

4 MR. LARSON: Okay. That's fine.

5 And is Morrison going to apply to these sites?

6 MR. WEBER: To the extent that a site warrants
7 additional review and radiological measurements are needed
8 in the field, either surveys or actual destructive
9 sampling, it could apply. Yes. Certainly if it went into
10 exhumation and remediation, Morrison would be one approach
11 that could be used to demonstrate compliance with whatever
12 regulations are developed.

13 CHAIRMAN POMEROY: Other questions? If not,
14 certainly one final comment, I personally find something
15 as straightforward as this to be rather nice. It
16 certainly makes it applicable in most cases. So I commend
17 you, certainly, for that.

18 I guess I'd ask either one of you -- Mike,
19 what is your desire here? Are you looking for a letter
20 from the committee?

21 MR. WEBER: Yes, that would be helpful,
22 especially if you see a concern about the technical
23 substance of the methodology, or have another idea that
24 might be useful in terms of applying and screening these
25 former burials. That would be valuable.

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1 As I said earlier, we will be --

2 CHAIRMAN POMEROY: Not this week.

3 (Laughter.)

4 MR. WEBER: No, not this week. We would
5 anticipate that whatever comments would come back to us
6 from the committee would be thoroughly considered as part
7 of our review of the comments that would come back as a
8 broader review. We, of course, would follow the normal
9 protocol of responding to the letter that would go to the
10 Commission, but we think it would be valuable.

11 CHAIRMAN POMEROY: Fine. And we'll probably
12 try to take up the question of what we -- whether we will
13 write a letter and what we will write during this session
14 either this afternoon or tomorrow.

15 MR. WEBER: Okay. Good.

16 MS. ASTWOOD: Great.

17 CHAIRMAN POMEROY: Thank you both for coming
18 down. We really appreciate the time.

19 With that, and seeing that it's three minutes
20 of 12, what I'd like to do is take enough time to get some
21 lunch.

22 (Whereupon, at 12:01, the proceedings in the
23 foregoing matter went off the record.)

24

25

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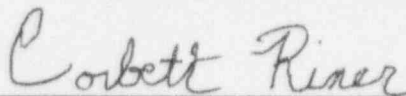
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U.S. Nuclear Regulatory Commission

**STRATEGIC ASSESSMENT
AND REBASELINING INITIATIVE**

OVERVIEW AND STATUS BRIEFING

Advisory Committee on Nuclear Waste

October 22, 1996

AGENDA

INTRODUCTION

OVERVIEW OF STRATEGIC ASSESSMENT AND REBASELINING PHASES

PHASE II STATUS

SUMMARY OF DIRECTION-SETTING ISSUES

STAKEHOLDER MEETINGS

EXPECTATION FOR COMMENTS

REVIEW OF COMMENTS

STRATEGIC PLAN DEVELOPMENT (PHASE III)

NRC'S STRATEGIC PLAN

DISCUSSION OF DSIs 5, 6, 9, AND 12

STRATEGIC ASSESSMENT AND REBASELINING

INTRODUCTION

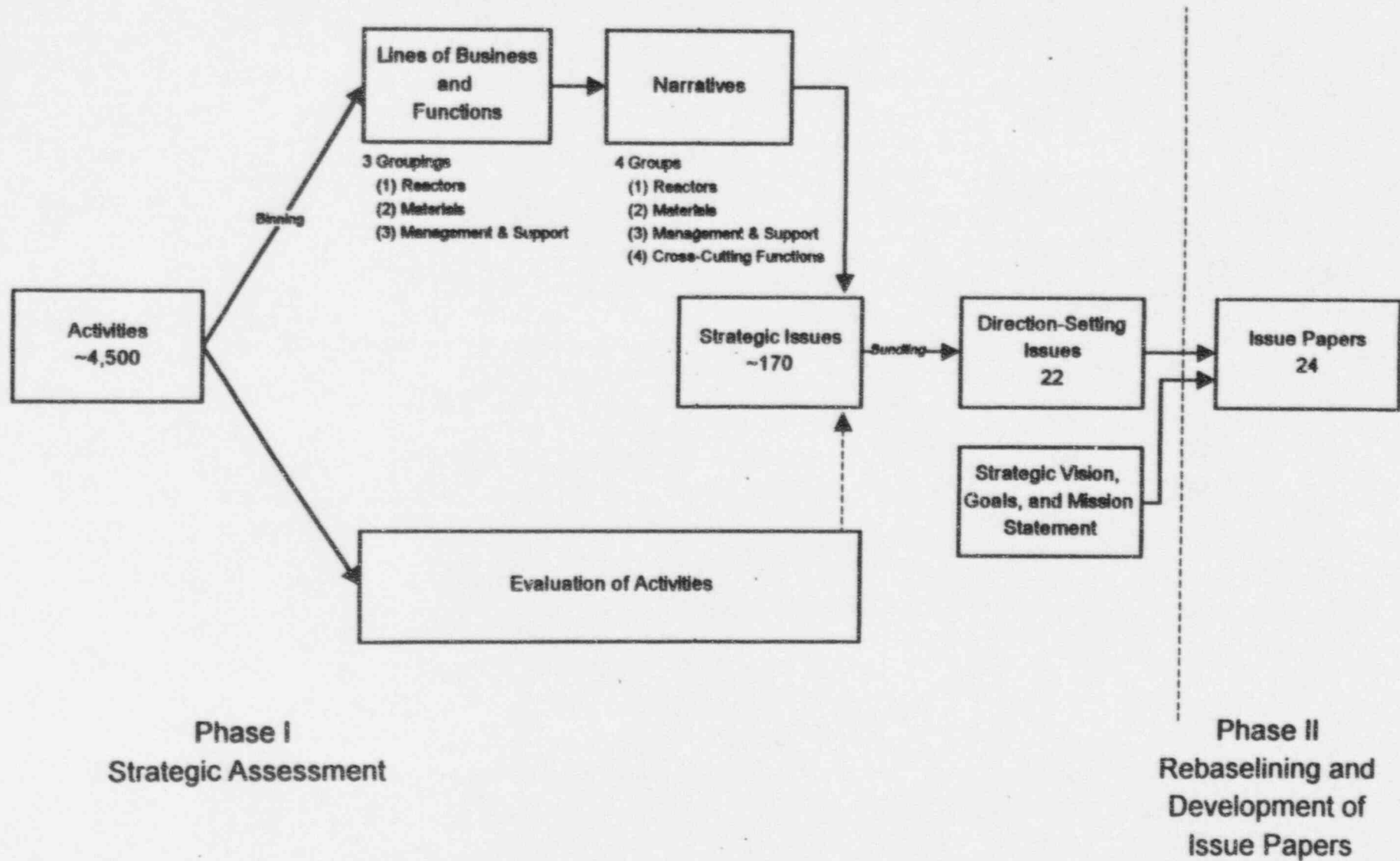
- **Purpose of Strategic Assessment**
- **Organization**
 - **Steering Committee**
 - **Support Group**
 - **Contractor: Public Strategies Group, Inc.**

STRATEGIC ASSESSMENT AND REBASELINING

OVERVIEW OF STRATEGIC ASSESSMENT AND REBASELINING PHASES

- **Phase I - Strategic Assessment**
 - Review of Activities
 - Strategic Issues
 - Direction Setting Issues (DSIs)
- **Phase II - Rebaselining and Development of Decision Papers**
 - Issue Papers (DSIs)
 - Stakeholder Involvement
- **Phase III - Strategic Plan**
 - Commission Decisions on DSIs
 - Strategic Plan
- **Phase IV - Implementation and Budget**
 - Performance Plan/FY 1999 Budget
 - Outyear Plan FY 1999 +
 - Other Implementation Activities

Phase I Terms and Process Flow



PHASE II STATUS

- **Key Documents**
 - **Issue Papers (16)**
 - **Strategic Planning Framework Document**
 - **Stakeholder Involvement Process Paper**

- **Documents Available on AUTOS LAN, Internet, FedWorld, and Public Document Room**
 - **Hard copies available upon request to help minimize need for individual staff members to print their own copies**

ISSUE PAPER SUMMARY

<u>DSI</u>	<u>TITLE</u>
DSI 2	Oversight of the Department of Energy
DSI 4	NRC's Relationship with Agreement States
DSI 5	Low-Level Waste
DSI 6	High-Level Waste and Spent Fuel
DSI 7	Materials/Medical Oversight
DSI 9	Decommissioning - Non Reactor Facilities
DSI 10	Reactor Licensing for Future Applicants
DSI 11	Operating Reactor Program Oversight
DSI 12	Risk-Informed, Performanced-Based Regulation
DSI 13	Role of Industry
DSI 14	Public Communications Initiatives
DSI 20	International Activities
DSI 21	Fees
DSI 22	Research
DSI 23	Enhancing Regulatory Excellence
DSI 24	Power Reactor Decommissioning

STAKEHOLDER MEETINGS

INTERNAL STAKEHOLDER MEETINGS

- Series of Meetings with NRC Staff

EXTERNAL STAKEHOLDER MEETINGS

- Meetings Scheduled To Discuss Issue Papers As Follows:

October 23 (Agreement States)
October 24-25
October 31-November 1
November 7-8

NRC Headquarters (OWFN)
Washington, DC--Washington Hilton
Colorado Springs Sheraton
Chicago, Il--Ramada O'Hare

EXTERNAL STAKEHOLDER MEETINGS

CONFERENCE FORMAT

- **Plenary Session**
 - **Summarize Strategic Assessment and Rebaselining Initiative**
 - **Describe Stakeholder Involvement Process**
 - **Conference Objectives**
- **Issue Paper Discussions by Strategic Arenas**
- **PSG Involvement in Planning and Conducting Conferences & Meetings**
- **Meetings Transcribed**

EXPECTATION FOR COMMENTS

WHAT IS BEING REQUESTED FROM STAKEHOLDERS

- **Soliciting Stakeholder's Views and Comments on:**
 - **Important Considerations That May Have Been Omitted**
 - **NRC's Assumptions and Projections For Internal and External Factors**
 - **Commission's Preliminary Decision**
 - **Specific Questions on Individual Issue Papers Per SRM Direction**
- **Comments May Be Provided by Mail, or Electronically--All Comments Docketed by SECY**
- **Comment Period Closes November 15, 1996**

REVIEW OF COMMENTS

- **Written/Electronic Comment Period Closes November 15, 1996**
- **Sponsors/Lead Writers Collate and Review All Comments (Stakeholders Conferences, Written, and Electronic)**
- **Stakeholder Interactions Report**
 - **Brief Analysis of Comments By Individual Issue Paper**
 - **Identify Substantive Comments That Have Direct Bearing on Commission's Preliminary Decisions**
 - **All Comments will be Provided to Commission in Stakeholder Interactions Report on December 6, 1996 - Report will be Available to All Internal and External Stakeholders (Internet and PDR)**

STRATEGIC PLAN DEVELOPMENT (PHASE III)

- o Phases I and II provide foundation for Strategic Plan.**
- o Strategic Plan**
 - Sets direction for Agency**
 - Meets requirements of Government Performance and Results Act**
 - Periodic Updates will be Made**
- o Implementation (Phase IV)**
 - Budget and performance plan**
 - Other actions**

NRC'S STRATEGIC PLAN

WHAT IS IT?

- o Brief document to guide program and resource decisions at all levels
- o Delineates our important goals and objectives
- o Provides strategies for achieving our important goals
- o Living document subject to periodic change

WHAT IT IS NOT?

- o A budget
- o A detail tactical operating plan
- o An exhaustive listing of Agency work

NRC'S STRATEGIC PLAN



NRC VISION

NRC MISSION



To regulate the Nation's civilian use of byproduct, source, and special nuclear materials to ensure adequate protection of the public health and safety, to promote the common defense and security, and to protect the environment

**NRC
ORGANIZATIONAL
VALUES**



NRC GOALS

**SAFETY
PHILOSOPHY**

MISSION-CRITICAL STRATEGIES



Assuring safe operation of nuclear reactors



Assuring safe use and handling of nuclear materials



Assuring safe management of nuclear waste

**PRINCIPLES
OF GOOD
REGULATION**

MISSION-ENABLING STRATEGIES



Building public trust and confidence



Providing research expertise



Supporting National objectives in the international area



Developing internal support mechanisms that sustain safety activities

CORE RESOURCE STRATEGIES



Managing NRC's human resources



Managing NRC's finances



Managing information

**DSI 5: LOW-LEVEL WASTE
DIRECTION-SETTING ISSUE**

**WHAT SHOULD BE THE ROLE AND SCOPE OF
THE NRC'S LOW-LEVEL RADIOACTIVE WASTE
PROGRAM?**

DSI 5: LOW-LEVEL WASTE SUBSUMED STRATEGIC ISSUES

- **IF NRC CHOOSES TO REDUCE IS LLW PROGRAM, WHAT SHOULD BE NRC'S APPROACH FOR RETAINING TECHNICAL COMPETENCY AND CAPABILITIES TO REVIEW A LICENSE APPLICATION FOR A NEW LOW-LEVEL WASTE DISPOSAL FACILITY FOR A NON-AGREEMENT STATE?**
- **IF NRC CHOOSES TO REDUCE ITS LLW PROGRAM, HOW SHOULD THE NRC POSTURE ITSELF TO ASSURE THAT TECHNICALLY COMPETENT AND KNOWLEDGEABLE STAFF ARE AVAILABLE TO RESPOND TO STATES' REQUESTS FOR TECHNICAL ASSISTANCE ON DIFFICULT AND CONTROVERSIAL LLW DISPOSAL ISSUES?**
- **SHOULD THE NRC PROCEED TO PROMULGATE FINAL GUIDANCE ON PERFORMANCE ASSESSMENT OF LLW DISPOSAL FACILITIES?**

DSI 5: LOW-LEVEL WASTE KEY FACTORS

- **MOST NEW LLW DISPOSAL FACILITIES ARE EXPECTED TO BE LOCATED IN AGREEMENT STATES**
- **NRC DOES NOT EXPECT TO RECEIVE AN APPLICATION FROM A NON-AGREEMENT STATE WITHIN THE NEXT FIVE YEARS**
- **THE LACK OF BROADLY BASED PUBLIC ACCEPTANCE HAS SIGNIFICANTLY AFFECTED THE DEVELOPMENT OF NEW SITES**
- **LLW DISPOSAL AND MANAGEMENT OPTIONS ARE AVAILABLE TODAY FOR WASTE GENERATORS**
- **LLW PROGRAM HAS BEEN REDUCED IN RESPONSE TO GOVERNMENT-WIDE EFFORTS TO STREAMLINE AND REDUCE COSTS**

DSI 5: LOW-LEVEL WASTE OPTIONS

- OPTION 1: ASSUME A GREATER LEADERSHIP ROLE IN THE NATIONAL LLW PROGRAM**
- OPTION 2: ASSUME A STRONG REGULATORY ROLE IN THE NATIONAL LLW PROGRAM**
- OPTION 3: RETAIN CURRENT PROGRAM**
- OPTION 4: RECOGNIZE PROGRESS AND REDUCE PROGRAM**
- OPTION 5: TRANSFER LLW PROGRAM TO EPA**
- OPTION 6: ACCEPT ASSURED LONG-TERM STORAGE**

DSI 5: LOW-LEVEL WASTE COMMISSION'S PRELIMINARY VIEWS

- **ASSUME A STRONG REGULATORY ROLE IN THE NATIONAL PROGRAM (OPTION 2). THIS OPTION WOULD ENCOMPASS ALL OF THE ACTIVITIES THAT WERE PERFORMED BEFORE THE RECENT REDUCTIONS IN THE LOW-LEVEL WASTE PROGRAM.**

- **THE COMMISSION SEEKS PUBLIC COMMENT ON:**
 - **WHETHER NRC SHOULD INVOLVE ITSELF TO A GREATER DEGREE IN IMPLEMENTING THIS OPTION IN SUCH A WAY AS TO ENCOURAGE AN INTEGRATED APPROACH TO THE REGULATION OF LLW HANDLING, PROCESSING, RECYCLE, AND DISPOSAL.**

 - **HOW SHOULD NRC ADDRESS UNAUTHORIZED DISPOSAL?**

**DSI 6: HIGH-LEVEL WASTE AND SPENT FUEL
DIRECTION-SETTING ISSUE**

**IN RECOGNITION OF CURRENT
UNCERTAINTIES, HOW SHOULD NRC
APPROACH THE PRESENT HIGH-LEVEL WASTE
SITUATION?**

**DSI 6: HIGH-LEVEL WASTE AND SPENT FUEL
SUBSUMED STRATEGIC ISSUE**

- **HOW SHOULD NRC ADDRESS HLW STANDARDS AND REGULATIONS?**
- **HOW SHOULD NRC POSITION ITSELF TO MEET ITS RESPONSIBILITY OF LICENSING DOE'S DISPOSAL OF GREATER THAN CLASS C WASTES?**

**DSI 6: HIGH-LEVEL WASTE AND SPENT FUEL
RELATED STRATEGIC ISSUE**

- **HOW CAN THE NRC STAFF ASSURE COMPATIBILITY FOR SPENT FUEL STORAGE AND TRANSPORTATION IN THE REGULATIONS?**
- **WHAT SHOULD NRC DO TO ASSIST PART 50 LICENSEES THAT HAVE TERMINATED THEIR POWER REACTOR OPERATIONS AND ARE PLANNING TO DECOMMISSION THEIR POOLS AND OBTAIN A PART 72 LICENSE AND NEED TO DISPOSE OF THEIR GREATER THAN CLASS C WASTES?**

DSI 6: HIGH-LEVEL WASTE AND SPENT FUEL KEY FACTORS (ACCORDING TO DOE)

- **THE LACK OF CONSENSUS AMONG THE SCIENTIFIC AND TECHNICAL COMMUNITY AND THE MAJOR INTERESTED AND AFFECTED PARTIES ON FUNDAMENTAL ELEMENTS OF THE PROGRAM**
- **THE UNPRECEDENTED NATURE OF GEOLOGIC DISPOSAL**
- **THE LINKAGES IN THE LAW BETWEEN THE SITING AND CONSTRUCTION OF A MONITORED RETRIEVABLE STORAGE (MRS) FACILITY AND THE LICENSING AND CONSTRUCTION OF THE REPOSITORY**
- **STRONG PUBLIC RESISTANCE TO WASTE MANAGEMENT AND OTHER UNDESIRABLE FACILITIES**
- **GENERAL PROGRAM AND BUDGETARY CONSTRAINTS**

DSI 6: HIGH-LEVEL WASTE AND SPENT FUEL OPTIONS

- OPTION 1: APPROACH CONGRESS AND THE ADMINISTRATION TO
REFOCUS THE NATIONAL PROGRAM**

- OPTION 2: REDUCE UNCERTAINTY BY MODIFYING NRC'S PROGRAM**

- OPTION 3: MAINTAIN NRC'S EXISTING HLW REPOSITORY PROGRAM**

- OPTION 4: TAKE A MINIMAL APPROACH TO NRC'S HLW REPOSITORY
PROGRAM**

DSI 6: HIGH-LEVEL WASTE AND SPENT FUEL COMMISSION'S PRELIMINARY VIEWS

- **MAINTAIN NRC'S EXISTING HLW PROGRAM (OPTION 3).**
- **THE COMMISSION WOULD LIKE TO EXPLORE TAKING A MORE ACTIVE ROLE IN RESOLVING ISSUES IN THE NATIONAL HLW PROGRAM, CONSISTENT WITH NRC'S MISSION.**
- **THE COMMISSION PARTICULARLY SEEKS PUBLIC COMMENT ON WHAT ADDITIONAL ACTIVITIES THE NRC MIGHT REASONABLY UNDERTAKE.**

**DSI 9: DECOMMISSIONING NON-REACTOR FACILITIES
DIRECTION-SETTING ISSUE**

**WHAT SHOULD BE NRC'S STRATEGY TO
TAKE ADVANTAGE OF NEW AND DIFFERENT
APPROACHES TO OPTIMIZE SITE
REMEDICATION OF THE SITE
DECOMMISSIONING MANAGEMENT PLAN
AND OTHER PROBLEM SITES?**

DSI 9: DECOMMISSIONING NON-REACTOR FACILITIES SUBSUMED STRATEGIC ISSUE

- **WHAT IS THE OPTIMUM RATE OF REMOVAL OF SITES FROM THE SITE DECOMMISSIONING MANGEMENT PLAN?**
- **WHAT IS THE BEST STRATEGY TO USE TO IMPLEMENT NRC'S NON-REACTOR DECOMMISSIONING REGULATIONS?**
- **WHAT IS THE BEST STRATEGY FOR DEALING WITH UNLICENSED POSSESSORS OF LICENSABLE MATERIAL?**
- **HOW CAN NRC ENSURE THAT BANKRUPT OR NON-VIABLE CORPORATIONS APPROPRIATELY USE THEIR ASSESTS TO COMPLETE SITE REMEDIATION?**
- **HOW MUCH FLEXIBILITY SHOULD BE GIVEN TO LICENSEES WHO WANT TO PROPOSE ALTERNATIVE APPROACHES FOR COMPLYING WITH DECOMMISSIONING REGULATIONS?**

DSI 9: DECOMMISSIONING NON-REACTOR FACILITIES FACTORS

- **SOME LICENSEES OR RESPONSIBLE PARTIES MAY BE UNABLE OR UNWILLING TO DECOMMISSION**
- **THERE ARE LIMITED NRC RESOURCES AVAILABLE TO ADDRESS ALL SITES WITHIN THE TIMEFRAMES DESIRED BY CONGRESS AND THE PUBLIC**
- **LEGAL AUTHORITY IS LIMITED FOR MOST DECOMMISSIONING CASES SINCE CONTAMINATION IS AT RELATIVELY LOW LEVELS**
- **EPA'S PROPOSED GROUNDWATER REQUIREMENTS (4 MREM/YEAR) MAY BE DIFFICULT TO IMPLEMENT**

DSI 9: DECOMMISSIONING NON-REACTOR FACILITIES OPTIONS

- OPTION 1: CONTINUE EXISTING PROGRAM**
- OPTION 2: CHANGE THE DECOMMISSIONING REVIEW PROCESS**
- OPTION 3: CHANGE RESIDUAL CONTAMINATION CRITERIA AND REVIEW STANDARDS**
- OPTION 4: ADOPT THE U.S. ENVIRONMENTAL PROTECTION AGENCY SUPERFUND APPROACH**
- OPTION 5: REGULATE SOURCE MATERIAL CONSISTENTLY WITH NATURALLY OCCURRING AND ACCELERATOR-PRODUCED RADIOACTIVE MATERIALS**

DSI 9: DECOMMISSIONING NON-REACTOR FACILITIES OPTIONS

- OPTION 6: FOCUS ON DECOMMISSIONING CASES IN WHICH PROGRESS CAN BE MADE; TRANSFER STALLED SITES TO THE ENVIRONMENTAL PROTECTION AGENCY'S SUPERFUND PROGRAM**

- OPTION 7: TAKE AN AGGRESSIVE POSITION TO DEVELOP REGULATORY FRAMEWORKS FOR LOWER COST DECOMMISSIONING WASTE DISPOSAL OPTIONS**

- OPTION 8: DEVELOP A STRONG LITIGATIVE STRATEGY**

- OPTION 9: SEEK SUPERFUND AUTHORITY**

DSI 9: DECOMMISSIONING NON-REACTOR FACILITIES COMMISSIONS PRELIMINARY VIEWS

- **A COMBINATION OF OPTIONS SELECTED THAT WOULD PLACE APPROPRIATE RESPONSIBILITY ON LICENSEES TO REMEDIATE THEIR SITES WHILE GIVING NRC APPROPRIATE TOOLS TO DEAL WITH PROBLEM SITES AND LICENSEES.**
 - **CHANGE THE DECOMMISSIONING REVIEW PROCESS (OPTION 2);**
 - **FOCUS ON DECOMMISSIONING CASES IN WHICH PROGRESS CAN BE MADE AND TRANSFER STALLED SITES TO EPA (OPTION 6);**
 - **TAKE AN AGGRESSIVE POSITION TO DEVELOP REGULATORY FRAMEWORKS FOR LOWER COST DECOMMISSIONING WASTE DISPOSAL (OPTION 7) AND,**
 - **DEVELOP A STRONG LITIGATION STRATEGY (OPTION 8)**

DSI 9: DECOMMISSIONING NON-REACTOR FACILITIES COMMISSIONS PRELIMINARY VIEWS

- **OPTION 2 SHOULD BE TESTED ON A PILOT SCALE FOR A FEW SELECTED MATERIALS LICENSEES TO DETERMINE THE POTENTIAL SUCCESS AND EFFECTIVENESS OF THIS OPTION IF IT WERE TO BE ADOPTED ON A BROADER SCALE.**
- **THE PILOT PROGRAM PARTICIPANTS SHOULD BE VOLUNTEERS THAT ARE FOUND TO BE SUITABLE FOR PARTICIPATING IN THE PILOT PROGRAM BY THE NRC.**
- **WITH REGARD TO OPTION 2, THE NRC SPECIFICALLY SEEKS COMMENT ON WHETHER NRC SHOULD HOLD SEMINARS OR WORKSHOPS FOR LICENSEES TO MAKE SURE THAT THEY UNDERSTAND WHAT NRC EXPECTS OF THEM AND WHAT THEY, IN TURN, SHOULD EXPECT OF THEIR CONTRACTORS.**

DSI 9: DECOMMISSIONING NON-REACTOR FACILITIES COMMISSIONS PRELIMINARY VIEWS

- WITH REGARD TO OPTION 6, THE STAFF SHOULD ALSO, CONSISTENT WITH DSI 12, EXAMINE THE LEVEL OF RISK ASSOCIATED WITH EACH SITE. STAFF SHOULD CONSIDER THE FEASIBILITY OF TRANSFERRING THE LOW RISK, STALLED SITES TO THE EPA'S SUPERFUND PROGRAM.
- DETERMINATIONS ON WHETHER TO SEND TO EPA'S SUPERFUND PROGRAM A STALLED, HIGH-RISK SITE OR A LOW RISK SITE WHERE PROGRESS IS BEING MADE, SHOULD BE MADE ON A CASE-BY-CASE BASIS.
- THE IMPLEMENTATION PROCESS FOR OPTION 6 SHOULD NOT PRECLUDE THE COMMISSION FROM REVIEWING A LOW RISK, STALLED SITE IF CONDITIONS WARRANT, NOR SHOULD THE PROCESS AUTOMATICALLY SEND THE SITE TO EPA'S SUPERFUND PROGRAM.

**DSI 12: RISK-INFORMED, PERFORMANCE-BASED
REGULATION
DIRECTION-SETTING ISSUE**

What criteria should NRC use in expanding the scope in applying a risk-informed, performance-based approach to rulemaking, licensing, inspection, and enforcement?

DSI 12: RISK-INFORMED, PERFORMANCE-BASED REGULATION FACTORS

External

- **Executive Branch and Congress**
- **Standards-Setting Organizations**
- **Federal Agencies**
- **Nuclear Industry**
- **Public**

Internal

- **Nuclear Materials Initiatives**
- **Commission's PRA Policy Statement**
- **Defense-in-Depth**
- **Policy and Legal Issues**

DSI 12: RISK-INFORMED, PERFORMANCE-BASED REGULATION SUBSUMED STRATEGIC ISSUES

- What should be NRC's strategy and philosophy with respect to changing NRC's responsibilities and authority in areas of little public risk?
- What approach should NRC take in modifying the materials regulations to move toward risk-informed, performance-based regulation, recognizing the requirements will vary as a result of the range of products and the divergence of the licensees that use or possess byproduct nuclear material?
- Should NRC revise its regulations to address the uses of materials resulting from technological advances and changing human factors? If so, to what extent should NRC articulate objectives to prevent or limit the effects of equipment failures and human factors/human performance?
- What should be the approach for licensing material uses with various levels of inherent risk?
- Given the new Government-wide goals for reducing Federal information collections, how should the agency prepare for possible reductions in its budget ceiling for information collection without compromising public health and safety?
- How should a risk-informed, performance-based philosophy influence NRC's handling of dual regulation?

DSI 12: RISK-INFORMED, PERFORMANCE-BASED REGULATION OPTIONS

- 1. Continue current process**
- 2. More rigorously assess relationship to public health and safety**
- 3. Perform a comprehensive assessment of NRC regulatory approaches**
- 4. Consider risk-informed, performance-based approaches primarily in response to stakeholder initiatives**

DSI 12: RISK-INFORMED, PERFORMANCE-BASED REGULATION COMMISSION'S PRELIMINARY VIEWS

- Higher risk activities should be the primary focus of agency efforts and resources
- Staff should continue current efforts (Option 1) on pilot programs and continue to evaluate performance data as it becomes available
- Staff should proceed in the direction of enhancing the PRA Implementation Plan (some elements of Option 3)
- Staff should perform a thorough review of the basis for nuclear materials regulations and processes to identify and prioritize those areas that may be amenable to a risk-informed, performance-based approach. This assessment should lead to a framework for applying PRA to nuclear material uses
- The Commission is particularly interested in public comments on how NRC should deal with dual regulation when applying a risk-informed, performance-based regulatory philosophy

DSI 2: OVERSIGHT OF THE DEPARTMENT OF ENERGY

Should the NRC seek to expand its regulatory authority and responsibilities to include DOE facilities?

COMMISSION'S PRELIMINARY VIEWS

Staff actions regarding the various options should be held in abeyance pending the Commission's final decision on this issue paper. The Commission's preliminary views are:

The Commission preliminarily favors Option 4. This view would be consistent with the position the Commission has taken on this issue in the past; that is, the NRC has not actively pursued the added responsibilities that would result from regulating DOE activities but, given adequate resources and a reasonable time schedule to develop and initiate a regulatory program, the NRC could provide adequate regulatory oversight of DOE, if asked.

If NRC were to be given added regulatory oversight of DOE facilities, the Commission would prefer that the regulatory responsibilities be placed on the NRC on an incremental basis and that some type of prioritization methodology be used to determine the types of DOE facilities that, if subject to NRC oversight, would provide the greatest potential benefit to public health and safety.

Since the Commission is tentatively accepting the option that the NRC will not take a position on accepting broad responsibility for DOE facilities (Option 4), it would neither encourage nor oppose new legislation giving it broader authority over DOE nuclear facilities.

DSI 4: NRC'S RELATIONSHIP WITH AGREEMENT STATES

What should be NRC's strategy regarding States becoming and remaining Agreement States?

COMMISSION'S PRELIMINARY VIEWS

Staff actions regarding the various options should be held in abeyance pending the Commission's final decision on this issue paper. The Commission's preliminary views are:

The Commission preliminarily favors Option 3 (Continue the Current Agreement States Program, Including Adopting Current Initiatives). At the same time, the Commission is preliminarily in favor of encouraging more States to become Agreement States. However, the Commission believes this should be accomplished primarily through intangible incentives to States as opposed to tangible incentives. While tangible incentives (i.e., funding) would be an effective mechanism for encouraging more States to become Agreement States, the Commission is concerned that the funding constraints imposed by the Omnibus Budget Reconciliation Act of 1990 (OBRA-90) would have an inequitable impact on NRC licensees in States that decide not to become Agreement States. However, the Commission believes that the staff should explore the feasibility and desirability of providing "seed money" and/or financial grants, within the funding constraints of OBRA-90, to encourage States to apply for Agreement State status.

While the Commission has not made a final decision on this matter, a majority of the Commission is preliminarily in favor of a compromise position in which the NRC would provide training to Agreement States without charge on a "space available" basis. Funding for travel and technical assistance would be borne by the Agreement States.

The NRC particularly solicits comments on whether NRC should fund Agreement State training, travel, and technical assistance. Comments are especially sought from Agreement States, non-Agreement States, fee-paying NRC licensees and Agreement State licensees.

DSI 5: LOW-LEVEL WASTE

What should be the role and scope of the NRC's low-level radioactive waste program?

COMMISSION'S PRELIMINARY VIEWS

Staff actions regarding the various options should be held in abeyance pending the Commission's final decision on this issue paper.

The Commission's preliminary view on this issue is that the preferred option is Option 2 (Assume a Strong Regulatory Role in the National Program). This option would encompass all of the activities that were performed before the recent reductions in the low-level waste program.

In addition, the Commission seeks public comment on whether NRC should involve itself to a greater degree in implementing this option in such a way as to encourage an integrated approach to the regulation of LLW handling, processing, recycle, and disposal. For example, should NRC actively participate in the development of new technologies for waste compaction and better waste forms for on-site storage for licensees, to maximize safety and efficiency across the entire waste management and disposal process? Further, how should NRC address unauthorized disposal? Adopting such an approach would, of course, require that the NRC have a strong presence in the National low-level waste program and maintain an appropriate set of core capabilities.

DSI 6: HIGH-LEVEL WASTE AND SPENT FUEL

In recognition of current uncertainties, how should NRC approach the present high-level waste situation?

COMMISSION'S PRELIMINARY VIEWS

Staff actions regarding the various options should be held in abeyance pending the Commission's final decision on this issue paper.

The Commission's preliminary view on this issue is to proceed with Option 3 (Maintain NRC's existing HLW Program). This approach would enable NRC to continue to support the national HLW program at whatever level is appropriate to keep pace with the national program. However, the Commission intends to revisit this issue if, and when, the Congress provides further legislation on this issue.

In addition, the Commission would like to explore taking a more active role in resolving issues in the national HLW program, consistent with NRC's mission. The Commission particularly seeks public comment on what additional activities the NRC might reasonably undertake.

DSI 7: MATERIALS/MEDICAL OVERSIGHT

What should be the role and scope of the NRC's nuclear materials program, and in particular, NRC's regulation of the medical use of nuclear material?

COMMISSION'S PRELIMINARY VIEWS

Staff actions regarding the various options should be held in abeyance pending the Commission's final decision on this issue paper.

The Commission preliminarily favors a combination of Option 2 (Continue the Ongoing Program with Improvements) and Option 3 (Decrease Oversight of Low-Risk Activities with Continued Emphasis of High-Risk Activities). In implementing Option 3, the NRC would utilize the risk-informed performance based approach, as discussed in DSI 12, to determine which activities in the materials area, and specifically in the medical area, are low-risk activities. The general approach described in Option 3 of this DSI appears to be a reasonable starting point for identifying the types of activities that can be affected by this process.

In implementing these options with regard to the NRC's medical program, the NRC would consult with its Advisory Committee on the Medical Uses of Radioisotopes (ACMUI) for guidance on low-risk medical activities, revisions to 10 CFR 35, and possible implementation methods. The NRC would also evaluate the feasibility of using professional medical organizations and societies as a potential source for developing professional standards and guidance that would be adhered to by NRC medical licensees and could be adopted by the NRC as regulatory requirements.

In the public comments on this issue, the NRC particularly solicits the views of other affected organizations such as the Organization of Agreement States and the CRCPD on applying a risk-informed performance based approach to NRC's oversight of medical activities. The NRC also solicits the public's views on the feasibility and desirability of NRC's striving to have the remaining non-Agreement States acquire Agreement State authority for medical-use only. In addition, the Commission solicits the public's views on whether a single agency should regulate radiation safety. Finally, the NRC specifically seeks comments on the Attachment to this issue paper titled "Regulation of Radiation in Medicine - IOM Issues."

DSI 9: DECOMMISSIONING - NON-REACTOR FACILITIES

What should be NRC's strategy to take advantage of new and different approaches to optimize site remediation of the Site Decommissioning Management Plan and other problem sites?

COMMISSION'S PRELIMINARY VIEWS

Staff actions regarding the various options should be held in abeyance pending the Commission's final decision on this issue paper. The Commission's preliminary views are:

The Commission's initial preference on this DSI is a combination of options, subject to the modifications specified below, including Option 2 (Change the Decommissioning Review Process), Option 6 (Focus on Decommissioning Cases in which Progress can be made; Transfer Stalled Sites to EPA), Option 7 (Take an Aggressive Position to Develop Regulatory Frameworks for Lower Cost Decommissioning Waste Disposal Options), and Option 8 (Develop a Strong Litigation Strategy). In combination, these options would place appropriate responsibility on licensees to remediate their sites while giving NRC appropriate tools to deal with problem sites and licensees.

With regard to Option 2, the Commission believes that the option should be tested on a pilot scale for a few selected materials licensees to determine the potential success and effectiveness of this option if it were to be adopted on a broader scale. The pilot program participants should be volunteers that are found to be suitable for participating in the pilot program by the NRC. Based on the results of the pilot program, the NRC could consider, at a later date, whether this option should be adopted on a broader basis.

Full implementation of Option 2 could significantly affect the way NRC licensees carry out their responsibilities for decommissioning and remediating sites. Some licensees might be in a poor position to hire and effectively use the contractors they would need to carry out these responsibilities. Accordingly, the NRC specifically seeks comment on whether NRC should hold seminars or workshops for licensees to make sure that they understand what NRC expects of them and what they, in turn, should expect of their contractors. Such training could help to assure that limited cleanup resources would be effectively applied.

With regard to Option 6, the Commission believes that rather than focussing only on the progress being made on the site review, the staff should also, consistent with DSI 12, examine the level of risk associated with each site. The NRC could focus on both progress and risk in making determinations on the disposition of sites. The NRC could focus on the higher risk sites where progress is being made and place lesser emphasis on the lower risk sites. Staff should consider the feasibility of transferring the low risk, stalled sites to the EPA's Superfund Program. Determinations on whether to send to EPA's Superfund Program a stalled, high-risk site or a low risk site where progress is being made, should be made on a case-by-case basis.

The implementation process for Option 6 should not preclude the Commission from reviewing a low risk, stalled site if conditions warrant, nor should the process automatically send the site to EPA's Superfund Program.

DSI 10: REACTOR LICENSING FOR FUTURE APPLICANTS

Given the current environment, what should the Commission's policy be on future reactors?

PRELIMINARY COMMISSION VIEWS

Staff actions regarding the various options should be held in abeyance pending the Commission's final decision on this issue paper. The Commission's preliminary views are:

The NRC recognizes that fundamental economic decisions by license applicants will determine the level of necessary support. The NRC should continue to give priority for reviewing standard and advanced reactor designs, early site approvals, and licensing for new reactor license applicants (Option 2 with elements of Option 1).

The staff should develop implementation guidance for the following:

- 1) Address maintenance of the Utility Requirements Document and the certified designs through first-of-a-kind engineering. Provide a plan for support of this process to the extent that, as a minimum, significant issues are addressed and resolution paths are provided in order to continue adequate support of the certified designs.
- 2) Address orderly closeout of all activities. Document to the greatest extent practicable the work performed such that its value for future technical and regulatory activities is not lost (e.g. SBWR, MHTGR, etc.).
- 3) Evaluate the design certification process following completion of current applications for lesson learned.

DSI 11: OPERATING REACTOR OVERSIGHT PROGRAM

Given the changes in the external/internal environment, what are the implications for the current strategies for the operating reactor program?

COMMISSION'S PRELIMINARY VIEWS

Staff actions regarding the various options should be held in abeyance pending the Commission's final decision on this issue paper. The Commission's preliminary views are:

The NRC should continue with its ongoing comprehensive review of the areas of licensing, inspection, and performance assessment to identify any areas of needed improvement. This would include development of mechanisms to provide for systematic reexamination of the reactor oversight program to ensure its continued effectiveness and to maximize agency learning in response to emerging issues (Option 1). The thoroughness of ongoing lessons-learned reviews will be key to improvement. The lessons-learned from these reviews must be applied across the industry, where appropriate, and must be verified for effectiveness. The staff should be proactive in ensuring continuing effectiveness of the reactor oversight program by considering in a systematic way how the changes in the regulatory environment might affect future reactor oversight. Currently, the changes in the regulatory environment involve such issues as industry deregulation and component and system aging.

The NRC should pursue several aspects of Option 2. These include encouraging the industry to develop generic guidelines that can be endorsed by the NRC and carried out by the industry, providing increased opportunities for public involvement, expanding the use of technology to improve the efficiency of the licensing and inspection processes where feasible and appropriate, increasing flexibility in staffing multiple-unit sites to enable improved distribution of NRC inspection resources on the basis of licensee performance, and improving the effectiveness and understanding of the performance assessment process.

With regard to performance of a Business Process Redesign of the reactor oversight program (Option 3), the staff should consider lessons learned from the ongoing use of work process re-engineering to establish more efficient and automation-assisted processing of materials license and amendment requests. If successful, the NRC should consider similar methods to improve various aspects of the reactor oversight program. As an initial step, after the consideration of lessons learned, the staff should identify for Commission review and approval which areas, if any, of the reactor oversight program could benefit from work process re-engineering. This could include a review of the consideration of "best-practices" from regulatory agencies (foreign and domestic, nuclear and non-nuclear).

DSI 12: RISK-INFORMED, PERFORMANCE-BASED REGULATION

What criteria should NRC use in expanding the scope in applying a risk-informed, performance-based approach to rulemaking, licensing, inspection, and enforcement?

COMMISSION'S PRELIMINARY VIEWS

Staff actions regarding the various options should be held in abeyance pending the Commission's final decision on this issue paper. The Commission's preliminary views are:

The Commission recognizes that, in order to accomplish the principal mission of the NRC in an efficient and cost effective manner, it will in the future have to focus on those regulatory activities that pose the greatest risk to the public. This can be accomplished by building upon probabilistic risk assessment concepts, where applicable, or other approaches that would allow a risk-graded approach for determining high and low risk activities. In general, those activities that are of a higher risk should be the primary focus of the agency's efforts and resources. The level of staff activity associated with lower risk activities should be determined based on a consideration of the cumulative impacts on safety, stakeholder initiatives and burden reduction, and the effect on agency and licensee efficiency.

The staff should continue with the current efforts, in cooperation with the industry (Option 1), including pilot programs. The objective of this initiative is to obtain additional information regarding the appropriateness of a risk-informed, performance-based approach for the subject activities. These activities and their schedule, are presently captured in the agency's PRA Implementation Plan. As data from performance monitoring of structures, systems and components are accumulated, the staff should evaluate the performance data to determine the effectiveness of the approach on the subject activity.

The staff should proceed in the direction of enhancing the PRA Implementation Plan (i.e., moving towards implementation of elements of Option 3) by building on the Regulatory Review Group's (RRG) results, which were initially focused on reducing the regulatory burden, with a more focused assessment of those regulations which are amenable to a risk-informed, performance-based approach. In determining the priority and scope of regulatory activities to be included in moving in the direction of partial implementation of option 3, the staff should consider the cumulative impacts on safety, stakeholder initiatives and burden reduction, and the effect on NRC and licensee efficiency. This approach should result in a further focusing of resources, on the various areas that the Commission regulates, that is commensurate with its risk significance, potential burden reduction and effect on efficiency.

The staff should evaluate and clarify any technical and/or administrative issues associated with performance-based approaches to regulation (e.g., inspection activities, enforcement, etc.). The staff should also perform a thorough review of the basis for nuclear materials regulations and process, and should identify and prioritize those areas that are either now, or can be made with minimal additional effort/resources, amenable to a risk-informed, performance-based approach. This assessment should eventually lead to the development of a framework for applying PRA to nuclear material uses, similar to the one developed for reactor regulation (SECY-95-280), where appropriate.

In the public comments on this issue, the NRC particularly solicits how NRC should deal with dual regulation when applying a risk-informed, performance-based regulatory philosophy.

DSI 13: THE ROLE OF INDUSTRY

In performing its regulatory responsibilities, what consideration should NRC give to industry activities?

COMMISSION'S PRELIMINARY VIEWS

Staff actions regarding the various options should be held in abeyance pending the Commission's final decision on this issue paper. The Commission's preliminary views are:

The NRC should move as expeditiously as possible, within budget constraints, to evaluate on a case-by-case basis, initiatives proposing further NRC reliance on industry activities as an alternative for NRC regulatory activities. Staff guidance should be developed to describe the process and the general decision criteria NRC would use for evaluating proposals. (Option 1) In addition, the NRC should increase its focus and emphasis on interacting with both industry groups and professional societies and technical institutes to develop new codes, standards, and guides needed to support efficient, effective, and consistent performance of industry activities important to safety. These codes, standards and guides would then be endorsed by the NRC. (Option 4) The NRC's initial activities in pursuing option 4 should focus on standards development in probabilistic risk assessment and the medical use area. Should the final Commission decision include Option 4, it is envisioned that the NRC staff would be requested to identify for the Commission where there are needs for new codes, standards, and guides and provide recommendations for additional areas of emphasis.

Although not a preferred option at this time, the Commission believes that use of a "Designated Industry Representative" (Option 5) may have some potential use in regard to large broad scope materials licensees where NRC oversight through inspection is not frequent. This would, in essence, be a potential method of increasing oversight rather than relying on industry initiatives to reduce NRC oversight.

DSI 14: PUBLIC COMMUNICATION INITIATIVES

What approach should NRC take to optimize its communication with the public?

COMMISSION'S PRELIMINARY VIEWS

Staff actions regarding the various options should be held in abeyance pending the Commission's final decision on this issue paper. The Commission's preliminary views are:

The NRC should place a priority on early identification of public concerns and methods for public interaction in making regulatory decisions that are likely to generate substantial public interest or concern (Option 2). This approach is consistent with NRC's Principles of Good Regulation. The NRC should interpret the term "public" in its broadest sense, understand who our various publics are, and focus on what they need in order to facilitate interaction and dissemination of information. For this purpose, the public includes private citizens, interest groups, licensees, states, media, congress, the executive branch, and the international community. Recognition should be given to both bilateral formal and informal communication, and particular attention should be given to review and improvement of formal communication. The appropriate role of technology as a facilitating/enabling device should be carefully examined within this context (e.g. particular care should be given to considering the forms of information dissemination such that the NRC does not eliminate paper in favor of electronic communication without full consideration of the public's ability to access information electronically). Although there should be centralized planning and coordination of a methodology for anticipating and involving the public in regulatory matters and decisionmaking, responsibility for implementing the methodology should reside with the program offices. The roles of the line organization and the Office of Public Affairs in facilitating public responsiveness should be clearly understood.

In addition, the NRC should focus on maximizing effectiveness and economy in its existing program for public communication (Option 1a), and in anticipating and involving the public (Option 2). As initial steps, the NRC should develop a consistent methodology, and coordinated planning for implementation of this approach, focus on examining the effectiveness and efficiency of activities that are of highest cost, and perform better assessments of proposed improvements to the existing approach. The NRC will consider the effectiveness and efficiency of certain formal forms of communication such as Freedom of Information Act requests in a manner consistent with the law. The Commission would envision establishment of a coordinating group and development of a plan to implement this philosophy.

DSI 20: INTERNATIONAL ACTIVITIES

What is the appropriate role of NRC in the development and implementation of policies on international nuclear matters?

COMMISSION'S PRELIMINARY VIEWS

Staff actions regarding the various options should be held in abeyance pending the Commission's final decision on this issue paper. The Commission's preliminary views are:

The Commission agrees that option 4, which fundamentally allows the Commission to conduct international activities of importance and benefit to NRC's domestic mission or U.S. national interests, is a desirable goal. However, modifications are expected to be required because of expected continued reductions in NRC budgets. Therefore, we need to examine individual international activities with respect to budget and priority to provide the basis for an orderly reduction and/or sunseting of certain activities to meet expected future constraints on the program.

Option 4 reaffirms NRC's current policy basis for participation in international activities. Under option 4, NRC would continue to perform its current statutory role in matters related to export-import licensing and its current and prospective role in treaty implementation and would, in addition, actively participate in international activities that support and benefit NRC domestic safety and security responsibilities or U.S. national interests. Also the NRC would participate in exchange activities of benefit to its domestic responsibilities or U.S. national interests and would provide a wide but carefully selected range of safety and safeguards assistance.

The Commission believes that international activities performed in support of U.S. national interests actually undergird our domestic mission. For example, NRC's nuclear safety cooperative research agreements with other countries allow NRC to obtain valuable information, often at a comparatively small cost, to support our own programmatic needs. Furthermore, NRC's own research program allows it to play a leadership role in such international organizations as the Nuclear Energy Agency and the International Atomic Energy agency, thus providing substantial benefit to the U.S. In addition, NRC's role in export licensing has direct impact on overall U.S. commercial interest.

Recognizing that we must also address the issue of future constraints on the NRC's international program, staff should develop a plan to include criteria which would address the basis for prioritizing NRC's international activities, including research. This will assist the Commission in determining where appropriate programmatic expansion or reductions may be made, depending on future budget constraints. In particular, since NRC is licensee fee based, careful consideration of international programs and their primacy to NRC's mission are important considerations. The plan should also identify areas where efficiencies can be considered and develop criteria for sunseting certain activities.

DSI 21: FEES

In making decisions about what activities the NRC should perform in support of its mission, to what extent should fees be considered?

COMMISSION'S PRELIMINARY VIEWS

Staff actions regarding the various options should be held in abeyance pending the Commission's final decision on this issue paper. The Commission's preliminary views are:

The Commission believes that the NRC's public health and safety mission must be the foundation in making decisions about what activities the agency should perform. In making decisions on the work which the NRC will perform, the Commission does, and will continue to, consider the cost of its activities and consistently examine ways to accomplish its mission within a responsible budget. Whether the NRC's budget is funded by the public through taxes paid to the treasury or by licensees through fees paid to the treasury, the NRC's decisions about its programs should be the same. The Commission believes that fees should not be a primary factor in determining the work to be performed in response to NRC health and safety mission. It is the Commission's position that programmatic decisions should not be fee driven and should be based on their contribution to public health and safety.

The Commission does not believe that it was Congress's intent to limit the NRC's activities to those which are directly attributable to a specific regulatory action for a specific licensee or class of licensees.

In the Omnibus Budget Reconciliation Act of 1990 (PL 101-508), Congress stated that any licensee of the Commission may be required to pay, in addition to the fees for services or thing of value, an annual charge. Congressional history and language in the Conference Report which accompanied PL 101-508 takes notice and allows that 'increasing the amount of recovery to 100 percent of the NRC's budget authority will result in the imposition of fees upon certain licensees for cost that cannot be attributed to those licensees or classes of licensees.'

After review of the policy options, it is the Commission's preliminary view to approve Option 2.

Programmatic decisions in response to NRC mandates will not be driven by fees. Specific activities conducted by the NRC will be evaluated for efficiency and effectiveness.

The NRC performs two primary types of activities. These types of activities are defined as mandated and non-mandated. Mandated activities include statutes, Executive Orders, treaties, Commission decision, etc. Non-mandated activities include those activities which are not required to respond to mandates, but are performed as a 'service' to another organization. This policy option (option 2) approved by the Commission provides for a responsible decision-making process for mandated activities while allowing the NRC to assist other organizations on a reimbursable basis.

In selecting option 2 the Commission will establish a process for making its programmatic decisions based on public health and safety considerations for mandated activities. When the Commission is requested to perform non-mandated activities the requestor will reimburse the NRC for the cost of performing the

requested activities.

In order to implement option 2 the staff will develop, for Commission review and approval, a set of criteria for defining mandated and non-mandated activities. These criteria will allow for a clear framework within which to consistently determine funding of NRC activities.

Two issues raised in SECY 96-019 to the Commission, in addition to the Direction-Setting Issue are also addressed. These two issues address funding mechanisms and personnel full time equivalent (FTE) ceilings.

FUNDING MECHANISM:

It is the Commission's preliminary view to support Funding Mechanism 2 which continues the agency's current approach.

Although the Commission believes that its decisions on activities the NRC should perform in support of its mission and its total budget authority should be independent of fee considerations, the Commission does believe that NRC fees should be assessed in as fair and equitable a manner as practicable.

The Omnibus Budget Reconciliation Act of 1990 (OBRA-90) requires that NRC collect fees equal to approximately 100% of the NRC's budget. The OBRA-90 further states that these fees should be collected from NRC's licensees and applicants. The Commission has sought to comply with OBRA-90 and to distribute fees as fairly and equitably among its licensees and applicants. The NRC has reexamined its fee policy each year, issued draft fee rules for public comment, and made changes to the process to respond to those comments whenever possible within the limits of existing statute. The Commission has also addressed those concerns raised by the public and licensees about the limitations of applying fees within OBRA-90 in its Report to Congress on the U.S. Nuclear Regulatory Commission's Licensee Fee Policy Review issued in February, 1994.

The Commission believes that carrying out the intent of Congress by implementing fee policy within existing law is the most effective and efficient option. The Commission will, however, consider comments and recommendations on specific proposals if they present new approaches to improve the process or to accomplish a more equitable distribution of fees.

FTE CONSIDERATION:

It is the Commission's preliminary view to support the NRC's identification of FTEs associated with reimbursable work as business-like activities.

When the NRC receives a request to conduct an activity which is not necessary for the NRC to meet its mandates, but will provide a "service" to another organization, the NRC must consider the cost of providing the service. This cost consideration includes both dollars and FTE. The requesting organization can enter into a reimbursable agreement with the NRC and reimburse the agency for the dollars expended on providing the assistance. The requesting organization does not, however, provide FTE to the NRC.

The current FTE ceiling constraints may make it difficult, if not impossible, for the NRC to provide assistance for non-mandated activities in response to specific requests. The approach to remove those FTEs used for business-like activities from the NRC ceiling would allow the NRC to provide assistance to other government agencies and organizations which might otherwise be turned down.

DSI 22: RESEARCH

What should be the future role and scope of NRC's research program?

COMMISSION'S PRELIMINARY VIEWS

Staff actions regarding the various options should be held in abeyance pending the Commission's final decision on this issue paper. The Commission's preliminary views are:

The staff should continue with the research program which should include elements of both confirmatory and exploratory research (option 4), balanced in such a way that both current as well as potentially emerging issues are being addressed. This option permits response to programmatic needs as well as anticipation of future needs.

In order to develop the scope of these technical capabilities the Office of Research should develop criteria for determining core research capabilities for Commission approval prior to going forward. Therefore, the Commission also approves option 5 in conjunction with option 4. It is recommended that RES be tasked with developing a set of core research capabilities for the NRC in consultation with the other program offices.

The staff should continue to support the Educational Grant Program (option 6). Universities have and continue to serve the Commission as a significant component of its overall research program. However, this program should be re-evaluated at least every two years to ensure that it continues to meet the Commission's policies and goals.

The staff should continue to support active participation in International Safety Programs (option 7). The staff should ensure that these international activities and the related programs are prioritized and appropriately integrated with other NRC research efforts (option 4), and are also properly considered in the establishment and maintenance of core research capabilities (option 5).

There are many key questions raised in the paper, note in particular pages 12 and 16, that require much thought to resolve, but whose answers will have a strong bearing on how the agency will operate in the future. Implementation of option 4 would include development of an integrated set of recommendations to be provided for Commission consideration.

DSI 23: ENHANCING REGULATORY EXCELLENCE

How can NRC enhance regulatory excellence through maintenance of regulatory standards, rules, and requirements?

COMMISSION PRELIMINARY VIEWS

Staff actions regarding the various options should be held in abeyance pending the Commission's final decision on this issue paper. The Commission's preliminary views are:

The Commission believes that striving for regulatory excellence in all NRC functions is both desirable and necessary to maintain an effective and efficient regulatory framework in today's changing environment. Recent events have shown that we could be more proactive in identifying potential problem areas and responding appropriately. Other DSIs have focused on critical areas that involve how the regulatory process can be improved. This DSI should emphasize how the NRC can implement strategies designed to improve its own internal performance, that is, for the NRC to be proactive in making our own people and processes function with a goal of excellence. Therefore, while the Commission supports taking a proactive approach as described under option 2, including the establishment of an agency-wide senior management review group, it does not support the limited focus of the approach which emphasized making improvements in the regulatory framework such as the SRP and the license amendment process.

The Commission would support an approach under option 2 in which the focus of the effort would be broadened to include addressing how to improve the way the NRC does its job. The Commission envisions development of an implementation plan that includes, but is not necessarily limited to, the following: 1) Identified goals with milestones and clear criteria for judging success; 2) Measures to engage the work force at the grassroots level and to stimulate management and employee communications in problem solving; 3) Improvements that address elements involving all NRC regulatory areas; and 4) Improvements to the NRC's processes and management and support functions so as to enhance the efficiency and performance of the NRC staff.

DSI 24: DECOMMISSIONING - POWER REACTORS

What should be NRC's strategy for regulating decommissioning activities at power reactor sites?

COMMISSION'S PRELIMINARY VIEWS

Staff actions regarding the various options should be held in abeyance pending the Commission's final decision on this issue paper. The Commission's preliminary views are:

From the options presented, Option 1: Continue the current direction and approach, is the recommended option. Implementation guidance in pursuing this option should be expanded to explore more innovative approaches in line with the current Commission strategy in this area.

The paper does provide a good discussion of rulemakings currently underway that outline the current Commission strategy in the power reactor decommissioning area: 1) that there should be assurance that decommissioning will be conducted in a safe and timely manner, 2) that adequate licensee funds will be available for this purpose, and 3) recognition that risks associated with decommissioning reactor facilities are not the same as for operating reactor facilities.

In pursuing the current pace of rulemaking, the staff, as stated above, should consider new and innovative regulatory approaches. Examples of possible approaches that might be considered are:

1. Transfer of nuclear power plants to Agreement State control after fuel has been put into dry storage or has been removed from the Part 50 site.
2. Placing a resident site inspector during all phases of decommissioning, only during specific phases of decommissioning, or not at all.
3. Having NRC take an enhanced performance-oriented approach by reducing oversight and performing a radiological assessment of the site when it is ready to be released.



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**BRANCH TECHNICAL POSITION ON
SCREENING METHODOLOGY FOR
ASSESSING PRIOR LAND BURIALS
OF RADIOACTIVE WASTE
AUTHORIZED UNDER FORMER 10 CFR 20.304,
and 20.302**

**By:
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Division of Waste Management**

October 22, 1996



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Nuclear Regulatory Commission***

OVERVIEW

- **Background**
- **Timeliness Rule**
- **Information Notice 96-47**
- **Screening Methodology**
- **Example Sites**
- **Next Steps**



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BACKGROUND

- **10 CFR 20.304 and 20.302 authorized disposal of low-level radioactive waste on-site.**
- **10 CFR 20.304 was rescinded on January 28, 1981.**
- **10 CFR 20.302 expired on January 1, 1994 (superseded by 20.2002).**



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BACKGROUND (cont)

- **On-site burials considered at the time of decommissioning.**
- **Fundamental policy established in 1988 decommissioning rule.**
- **NRC will take a hard look, including remediation and removal, prior to release of site.**



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TIMELINESS RULE

- **The Final Rule on Timeliness in Decommissioning Nuclear Facilities (Timeliness Rule) became effective August 15, 1994.**
- **Outlines a schedule for performing decommissioning activities.**
- **Contains a schedule for decommissioning contaminated outdoor areas.**



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Timeliness Rule (cont)

- **"Outdoor areas" include former 10 CFR 20.304 and 10 CFR 20.302 burials.**
- **Licensees are required:**
 - **to notify NRC about former burials by October 15, 1996, or;**
 - **request an alternate schedule by September 15, 1996.**
- **Other schedular requirements**



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INFORMATION NOTICE 96-47

- **Published on August 19, 1996.**
- **Reminds licensees of their obligation to notify NRC of "unused areas" and to commit to a schedule for decommissioning.**
- **Not all on-site burials will require remediation.**



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NEED FOR SCREENING METHODOLOGY

- **Potentially hundreds of on-site burials that will require some type of evaluation.**
- **Currently, each site evaluated on a case-by-case basis.**
- **Limited records for past burials.**
- **Characterization of all burials would be costly and unnecessary.**



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SCREENING METHOD

- Simple but conservative method to evaluate the potential risk posed by the former burial.
- Consists of three steps:

Step 1 Review burial records

Step 2 Dose from ingestion of total inventory in groundwater

Step 3 Dose to the resident farmer



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METHODOLOGY (CONT)

- If estimated dose from either step is less than 100 mrem/yr, the site passes the screening.
- If a site passes, no additional site work required - site acceptable for unrestricted use.
- If a site does not pass the screening, the site would require more detailed evaluation.



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STEP 1 RECORDS REVIEW

- **At the time the burials were made, licensees were required to keep burial records.**
- **The licensee should review burial records to determine the total activity in the burial area.**
- **If the licensee has no records, license possession limits and throughput can be used to derive estimate.**



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STEP 2 INGESTION

- **Estimated total activity is assumed to leach into the groundwater in one year.**
- **The volume of groundwater is assumed to be 91 m³.**
- **A screening dose is then estimated using 10 CFR 20 Appendix B.**



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ASSUMPTIONS

- **Entire inventory is available.**
- **Entire inventory leaches into the groundwater in one year.**
- **A well captures all of the contaminated water in one year.**
- **An individual drinks 2 liters/day of the contaminated water.**



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STEP 3 EXHUMATION CONCENTRATION

- **Total trench volume is estimated.**
- **Trench concentration is estimated based on the trench volume and total activity.**
- **Trench concentration is reduced by a factor of 4 to account for mixing during excavation.**
- **Methodology in NUREG-5512, and NUREG-1500 is used to derive a screening dose.**



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ASSUMPTIONS

- **Total inventory is available.**
- **Total inventory is excavated and brought to the surface.**
- **Mixing reduces concentration by factor of 4.**
- **Residential scenario and default assumptions in NUREG-5512.**



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EXAMPLE SITE

A 10 m³ trench contains 270 μ Ci Cs-134, 233 μ Ci Fe-55, and 376 μ Ci Co-60.

Step 2 - Ingestion

Appendix B

Isotope	μCi	μCi/ml	μCi/ml/50mrem/yr	mrem/yr
Cs-134	270	2.9E-6	9E-7	161
Fe-55	233	2.5E-6	1E-4	1
Co-60	376	4.1E-6	3E-6	68

Screening dose is approximately 230 mrem/yr.



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EXAMPLE (cont)

Step 3

		NUREG-1500		
<u>Isotope</u>	<u>pCi</u>	<u>pCi/gram</u>	<u>mrem/yr/pCi/g</u>	<u>mrem/yr</u>
Cs-134	2.7E8	4.2	3.06	13
Fe-55	2.3E8	3.5	1.65E-3	0
Co-60	3.8E8	5.7	5.06	29

Screening dose is approximately 42 mrem/yr.



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EXAMPLE CONCLUSIONS

- **Site passes the screening method.**
- **Over estimates doses because of assumptions**
 - **total inventory**
 - **intruder brings waste to surface**
 - **default scenarios in NUREG-5512**
- **Releasable for unrestricted use and can be removed from license.**



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NEXT STEPS

- **Publish in Federal Register for interim use and comment.**
- **Agreement States to review and comment in parallel.**
- **Collect and evaluate comments until end of year.**
- **No decisions made until finalization of BTP.**