

**UNITED STATES OF AMERICA**  
**NUCLEAR REGULATORY COMMISSION**

**Title:            BRIEFING ON SITE DECOMMISSIONING**  
**MANAGEMENT PLAN (SDMP) PROGRAM AND**  
**POLICY ISSUES - PUBLIC MEETING**

**Location:        Rockville, Maryland**

**Date:            Friday, May 19, 1995**

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2 NUCLEAR REGULATORY COMMISSION  
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6 BRIEFING ON SITE DECOMMISSIONING MANAGEMENT PLAN  
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12 Nuclear Regulatory Commission  
13 One White Flint North  
14 Rockville, Maryland  
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16 Friday, May 19, 1995  
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18 The Commission met in open session, pursuant to  
19 notice, at 9:30 a.m., Ivan Selin, Chairman, presiding.  
20

21 COMMISSIONERS PRESENT:

22 IVAN SELIN, Chairman of the Commission  
23 KENNETH C. ROGERS, Commissioner  
24 SHIRLEY A. JACKSON, Commissioner  
25

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1 STAFF AND PRESENTERS SEATED AT THE COMMISSION TABLE:

2

3 JOHN HOYLE, Secretary of the Commission

4 KAREN CYR, General Counsel

5 JAMES TAYLOR, Executive Director for Operations

6 CARL PAPERIELLO, Director, NMSS

7 JOHN GREEVES, Director, Division of Waste Management, NMSS

8 MICHAEL WEBER, Chief, LLW & Decommissioning Projects Branch,

9 NMSS

10 DAVID FAUVER, Health Physicist, NMSS

11 BERNICE STEINHARDT, Associate Director, GAO

12 GENE ALOISE, Assistant Director, Energy & Science Issue, GAO

13 PHILIP OLSON, Assistant Manager, Energy & Science Issue, GAO

14 ODELL BAILEY, JR., Evaluator-in-Charge, GAO

15 ANTHONY KRUKOWSKI, Region Management Representative, GAO

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

[9:30 a.m.]

CHAIRMAN SELIN: Good morning, ladies and gentlemen.

We are very pleased today to welcome Ms. Bernice Steinhardt, who is the Associate Director for Energy and Science at GAO, and her team, to brief us on the results of their recent report of their review of the site decommissioning management program. This program was started about five years ago to focus attention on those sites where decommissioning would be especially difficult to prolong. In '92, the Commission formulated an action plan to try to carry out some timely cleanup on the sites that were covered by this plan. The plan is fairly complex for a number of reasons. First of all, many of the sites had actually been closed and were without proper review to see if, in fact, there was a problem or not with hot spots or other radioactivity. Second is they offer very low risk level, much lower say than the Superfund sites. Therefore, from a straight risk health and safety point of view, our options are somewhat limited. Third, many of them are owned or in the hands of people who have limited finances. So, the tools available to us are somewhat limited. They're mostly persuasion rather than coercion to try to work out a plan to clean up these sites that would satisfy the owners

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1 and the stakeholders, particularly the neighbors.

2           Nevertheless, in the three years since we started  
3 this plan, action has been disappointing, as the GAO report  
4 lays out quite clearly. So, this is an appropriate time to  
5 step back and assess where we stand, what the effectiveness  
6 is, what the resources are, and what changes might need to  
7 be made. As a preliminary before we hear the NRC staff come  
8 forward with what they propose to do, I thought it would be  
9 very useful as background to have the GAO report briefed to  
10 the general public as well as to the Commissioners.

11           Do you have any remarks?

12           Ms. Steinhardt, thank you for coming.

13           MS. STEINHARDT: Thanks very much for inviting us.

14           I wanted to introduce myself, since I'm relatively  
15 new to this group within GAO. I've been in this position  
16 within the Energy Group for about six months. Vic Rezendes  
17 and I head the group. But before that, I spent some years  
18 at GAO's Environment Group, dealing a lot with cleanup  
19 issues, risk issues, priority issues. So, I feel like I've  
20 just moved to a different place looking at the same kinds of  
21 issues. I know your staff gave us some questions that you  
22 were particularly interested in our responses to, and I'm  
23 really looking forward to talking about some of these  
24 issues. I testified not very long ago before the Senate  
25 Energy Committee on DOE's cleanup program. We did a big

1 review of the whole cleanup effort at DOE and we have some,  
2 I think, insights into how that effort is going and the role  
3 that risk ought to play there. So, I'd like really very  
4 much to talk to you about those kinds of issues.

5 I wanted to introduce the staff here with me  
6 today. Gene Aloise, to my right, who heads our work in  
7 nuclear safety and has been working on this for awhile, and  
8 Odell Bailey, to his right, who is the evaluator-in-charge  
9 on this review. Phil Olson, to my left, who does an awful  
10 lot of work. I guess these are familiar faces to you.

11 CHAIRMAN SELIN: Quite familiar to us.

12 MS. STEINHARDT: Tony Krukowski who is in our  
13 Detroit office, also with Odell and has been involved in  
14 these issues for awhile. So, I'm the new face here.

15 I'd like to ask Gene and Odell to kind of walk  
16 through the review and briefly summarize it just to lay out  
17 our findings and where we wound up and then we can return to  
18 the questions.

19 CHAIRMAN SELIN: Thank you.

20 MR. ALOISE: Thank you.

21 Our history in this area goes back to about 1989  
22 when we first looked at NRC's decommissioning procedures.  
23 In our review in that area, we found that several sites were  
24 -- several licensee sites were terminated and there was  
25 still excess contamination there. This report and the

1 information generated from it sparked some hearings by  
2 Congressman Synar, which you're well aware of, and our  
3 involvement has been in the area ever since.

4 Most recently, we issued two reports prior to the  
5 SDMP report, one looking at cleanup delays in Newburg  
6 Heights, Ohio, and then last summer our report and resulting  
7 testimony on sewage treatment plants, contamination in  
8 several places throughout the country.

9 Following from that report we issued this SDMP  
10 report which we tried to summarize for the Congress the  
11 progress and status of that program and what some of the  
12 problems were and to lay out for them exactly what they  
13 could expect from that program.

14 Odell is going to summarize what we found.

15 MR. BAILEY: Okay. What I'd like to do is talk a  
16 little bit about what we were asked to do, what we did, and  
17 just briefly what we found and then open it up for your  
18 questions.

19 Around April of 1993, we received the request from  
20 Senator John Glenn, the ranking minority member on the  
21 Senate Governmental Affairs Committee, and former Chairman  
22 of the House Environment, Energy and Natural Resources  
23 Subcommittee, Mike Synar. The request was to assess the  
24 effectiveness of NRC's decommissioning program.  
25 Specifically, they were concerned with two areas. The first



1 was whether or not NRC or the progress NRC was making in  
2 identifying all former material licensee sites that required  
3 additional cleanup and also the progress NRC was making in  
4 ensuring that sites on the site decommissioning management  
5 plan list, those facing difficult and prolonged  
6 decommissionings, had been or were being cleaned up in a  
7 timely manner. We also attempted to identify any barriers  
8 or factors that may impede the cleanup of these sites.

9 Basically, what we did to assess the progress in  
10 identifying former sites is, as you know, we interviewed  
11 with several contractor officials responsible for performing  
12 a review and we made a trip down to -- it was the -- not the  
13 Oklahoma trip, but we had a visit down --

14 MR. OLSON: ORI.

15 MR. BAILEY: Formerly ORI and we met with them and  
16 talked about their efforts, how they were scoring the  
17 different files, how they were going about assessing whether  
18 or not these files were adequate to determine whether or not  
19 the sites were properly cleaned up. We also examined  
20 documentation related to the project. To assess NRC's  
21 progress in cleaning up the high priority sites, the SDMP  
22 sites, and to identify factors that were delaying the  
23 cleanup of these sites, we interviewed the manager of the  
24 SDMP Program, several headquarters and regional NRC  
25 officials, including 48 project managers originally assigned

1 to the sites in question, and we also talked to a limited  
2 number, 14 representatives of the SDMP sites.

3 In addition, we reviewed NRC site selection  
4 criteria, the 1992 action plan, annual status reports and  
5 various memorandums and policy papers relating to the  
6 program. To assess or to take a first-hand view, if you  
7 will, of the sites, we also visited a total of eight sites.  
8 Those sites were located in Michigan, Oklahoma and Ohio.

9 What we found through our effort was that NRC had  
10 not completed its ongoing review to identify sites that may  
11 require additional cleanup and the total number of sites  
12 that would require cleanup is still unknown at this point.  
13 Through December 1994, the NRC contractor had reviewed  
14 approximately 75 percent of the 38,500 terminated licensee  
15 files representing about 29,000. At that time, that time  
16 being December 1994, NRC had identified 22 sites from that  
17 effort that were deemed to require some type of further  
18 cleanup action. Documentation for another 895 terminated  
19 licensee files, which represent some number of sites,  
20 approximately 401, and 494 licensees for sealed source  
21 material, were inadequate to determine whether or not the  
22 sites or the sources in this case were actually posing some  
23 problem or exceeded the cleanup criteria. Again, the total  
24 number of sites that may require additional cleanup actions  
25 still won't be known and is not known at this point in time

1 and, according to NRC officials, once the review is  
2 complete, which will probably take another couple of years  
3 is what we were told, once that review is complete and  
4 additional information is obtained, they'd be in a better  
5 position to say how many sites will require cleanup. But  
6 again, we believe the requesters were really concerned about  
7 this point and, quite frankly, we weren't able to give them  
8 a time frame.

9 In addition, NRC has made limited progress in  
10 cleaning up the sites in the SDMP Program. For example, NRC  
11 had estimated that 11 of the 52 sites in the program at that  
12 time will complete their cleanups by April 1994. However,  
13 only three sites were cleaned up by that date.

14 Interim progress at the sites is also behind.  
15 What we attempted to do is measure by major decommissioning  
16 activities how well NRC was -- how well the progress they  
17 were making, because we were told, and we somewhat agree,  
18 that just to look at the outcome measures, that is the sites  
19 that are actually cleaned up and removed from the list, may  
20 not tell full story. So, in looking at that, at that time  
21 there were 50 sites. Understand, of course, the sites  
22 fluctuated anywhere between -- the number of sites, from 40  
23 to 57. But in November of 1994 when there were 50 sites in  
24 the program, only two sites had completed their planned  
25 activity on schedule. Thirty-one of the sites were

1 projected to exceed their cleanup milestones by two to 42  
2 months. Seventeen of these 31 sites would exceed those  
3 milestones by 12 months or more. We could not determine  
4 whether activities at the remaining sites were on schedule  
5 because of change in the decommissioning activity itself.

6 A variety of factors, we found, are responsible  
7 for the problems of delaying cleanup at these sites.  
8 Although there are other ones and some unique to the  
9 individual sites, we thought basically there were three  
10 broad areas and perhaps maybe the most important was the  
11 high cost limited availability of off-site disposal options.  
12 Litigation, coordination and negotiation between affected  
13 parties is also -- we found to be major issues that resulted  
14 in delays at these sites.

15 Then finally, something that we thought NRC had  
16 more control over was the lengthy time frames for NRC's  
17 review and approval of key decommissioning activities or  
18 decommissioning documents. Basically, what we were told  
19 from the 14 site representatives that we spoke with, was  
20 that NRC was not always responsive, that there were times  
21 when they needed input that they didn't feel that NRC was  
22 very open to that type of interaction. So, we felt that  
23 really there was something that could be done in that area,  
24 but we did recognize that some of these may indeed be out of  
25 your control.

1           Now, we received two prepared questions regarding  
2     the relative risk of the SDMP assignments or SDMP sites and  
3     I'll turn it back over to Bernice to address --

4           CHAIRMAN SELIN: Before you go into that question,  
5     your report, not so much the presentation, but your report  
6     went into some considerable and very useful depth on just  
7     management and administration problems. As Mr. Bailey has  
8     made clear, our authority is somewhat limited, but we put a  
9     lot of resources in this and you've pointed out a lot of  
10    places where those resources could have been used more  
11    effectively and I think that's very valuable. That's  
12    basically the bulk of your report.

13           However, people take GAO reports, they don't use  
14    them to mislead but they say, "This is the world's great  
15    priority. We have to pour in resources and solve this  
16    problem and that problem." We end up, as you know from your  
17    other experience, with the government putting resources in  
18    places where the risk just doesn't call for it compared to  
19    some other resources.

20           What I wanted to do in the two questions that I  
21    asked you to address and given your broad experience, Ms.  
22    Steinhardt, perhaps you could relate the types of risks that  
23    are faced by the country at large and the neighbors to these  
24    cleanup sites to the other cleanup sites, both the Superfund  
25    sites, the non-nuclear but still quite toxic sites, and then

1 some of the nuclear sites that you see outside of the NRC  
2 area. We do have a responsibility to use whatever resources  
3 we or the licensees put in efficiently, but we also have a  
4 resource allocation responsibility and I want to make sure  
5 we carry out both of these responsibilities properly.

6 So, the questions did have to do with would you  
7 compare the risk that you see in these sites compared to  
8 some of the other cleanup, and what do you think  
9 implications for resource allocation and priority setting  
10 ought to be given the findings and your views on that first  
11 question?

12 MS. STEINHARDT: Yes. I wanted to say when I saw  
13 the questions I found them really interesting and really  
14 important ones and was really glad that you raised them.

15 Before I get to those though, I want to say one  
16 thing. When I came along and started looking at the program  
17 and the work that we were doing, one of the things that  
18 struck me and I wanted to sort of say this before we went  
19 further was that it was clear that one of the lessons that  
20 you learned in undertaking this program was that there were  
21 things that you could do to avoid the kinds of problems that  
22 you were trying to deal with in the SDMP Program when it  
23 came to future decommissioning and I think the actions that  
24 you took were probably the best things that you've done to  
25 deal with the problem in a broader and probably more

1 meaningful, ultimately more meaningful way.

2 So, I think it's important to establish that  
3 context because it's what you can do from here on that will  
4 probably deal with the problem most effectively.

5 Turning back though to the sites that are still  
6 problem sites that fell under this program and how they  
7 relate to other Superfund kinds of sites, I don't know how  
8 they compare honestly to how these sites would compare to a  
9 site on the NPL because they haven't gone through the same  
10 kind of process. These would be more comparable, say, to  
11 looking at EPA to the kinds of RCRA corrective action sites  
12 where these are still operating facilities, where we know  
13 there are cleanups to be undertaken, where we're afraid that  
14 if the current owner doesn't take some action now that they  
15 could wind up federal liabilities. I think that's the key  
16 here, is that we want to really make sure and the need for  
17 some attention is to make sure that they don't wind up --

18 CHAIRMAN SELIN: For the sites that have not yet  
19 been decommissioned?

20 MS. STEINHARDT: Right, that they don't wind up  
21 ultimately as federal liabilities for Superfund attention.  
22 We don't know really. Until they go through that scoring  
23 process, we don't know how they would compare to the other  
24 kinds of sites that come eventually to EPA's attention. So,  
25 to answer the question directly, I don't know how these

1 compared to other Superfund sites, and frankly I don't think  
2 we want to find out. I think we want to take care of them  
3 before they ever have to get to the point of being evaluated  
4 for possible inclusion.

5 CHAIRMAN SELIN: Mr. Olson, do you want to add  
6 anything to that?

7 MR. OLSON: The only thing I might add to this is  
8 when we talked to the NRC officials, the impression -- I  
9 think the feeling we got is that these were not that  
10 significant and if they did ever get to the list over at  
11 EPA, they probably would be very low on the priority list.

12 MS. STEINHARDT: Well, perhaps today, but if, in  
13 fact, there is some potential for groundwater contamination  
14 and these sites are still lingering for years and years, the  
15 pathway for exposure becomes enlarged. So, we don't know.  
16 But I don't think anybody wants to be in the sort of  
17 situation where these sites just sort of stay around for  
18 years and years where there is potential for contamination  
19 or for exposure to grow or contamination actually to worsen.

20 I have to say that I think we've been very strong  
21 advocates. We certainly recognize the kinds of budget  
22 realities that we have to deal with and there are a host of  
23 very pressing environmental problems that everyone, I think  
24 certainly the public, is committed to dealing with and the  
25 government is responsible for dealing with. I think it is



1 important -- I think we want to be able to deal with all the  
2 problems, but we have to set some priorities and we've been,  
3 I think, very strong advocates for that kind of management  
4 approach, being able to look at the most pressing problems  
5 first. But in this case, I don't think we want to let them  
6 get to be that kind of pressing problem.

7 CHAIRMAN SELIN: The question is not entirely a  
8 debating question. The reason I say that is we look at  
9 these sites and most of them are not in the hands of the  
10 original owners, original licensees. We believe that we  
11 don't have a very strong health and safety mandate to  
12 require extraordinary actions that in many cases we would  
13 not be able to mandate cleanup of the people who are there  
14 now. In many other cases, even if we could, the resources  
15 are very limited. If we ask for too big a program, they'll  
16 just go out of business one way or another and we'll end up  
17 with another set of sites.

18 But behind all that is the feeling that as limited  
19 as our tools are, they're better than having the sites go  
20 over to the Superfund list and then false -- I mean not a  
21 huge number of Superfund sites have been remediated and if  
22 they came on the list at a fairly low priority, they would  
23 never get cleaned up. That's our view. Our view is that as  
24 limited as our tools are that we're still better off trying  
25 to deal with them as NRC licensed sites than turning them

1 over to the Superfunds.

2 But that's just us talking to ourselves. It was  
3 really your impression of whether that is the right  
4 philosophy and is the right strategy or we ought to just be  
5 tougher, if people go bankrupt and turn them over to  
6 Superfund and then say we can wash our hands, which seems to  
7 be the alternative to the current strategy.

8 MS. STEINHARDT: Well, as Odell pointed out when  
9 he was sort of giving the overview, and you might want to  
10 jump in here, Odell, there are a couple of important or  
11 significant factors affecting the rate or the pace of these  
12 decommissionings that are difficult and really not amenable  
13 to you, to your control. The issue of waste disposal sites,  
14 it's a big problem. In fact, we just issued a report on  
15 low-level waste disposal. There's no imminent solution --  
16 there may be. There's some glimmers, but it's not a very  
17 easily dealt with problem.

18 CHAIRMAN SELIN: That's a perfect example. We've  
19 taken the position that we're better off trying to get some  
20 on-site capping of the problem as being feasible instead of  
21 holding for some more, theoretically more attractive off-  
22 site disposal when there is no off-site disposal, in which  
23 case nothing will happen. Is that a sound approach or is  
24 that not a sound approach?

25 MR. BAILEY: Well, I guess I can answer in terms

1 of what we heard when we talked to the site representatives  
2 and I honestly believe that one of the real problems you're  
3 grappling with is the problem of the public's perception of  
4 these sites. What we heard from the site representatives,  
5 I'm sure they would join you in your position that they  
6 didn't feel that the sites for the most part posed any  
7 significant risk in terms of health or safety and generally  
8 thought that they should be allowed to cap the sites right  
9 there.

10           However, the other side is that the public, be it  
11 real or perceived, has a very real concern, in my  
12 estimation. That is that you can talk about things like the  
13 public being concerned about having a site like this in  
14 their neighborhood, but a very real issue is how that may  
15 affect their property values, for example. So, I think the  
16 public perception is something that you have to deal with.  
17 One of the approaches that we've seen that seemed to be  
18 effective was the kind of stakeholder meetings that you  
19 hold, keeping people informed, letting them know even beyond  
20 the licensee, letting them know that we are making progress  
21 here, the site doesn't pose any risk. Nobody is going to  
22 walk on the site and die from exposure to the radiation on  
23 the site.

24           We found that those types of efforts seem to be  
25 very worthwhile, particularly when you can't really say when

1 a site will be cleaned up.

2 COMMISSIONER ROGERS: Mr. Bailey, you mentioned  
3 that licensees had an expectation of more input from the NRC  
4 which was not forthcoming. Could you elaborate on that a  
5 little bit? What are we talking about in the way of input  
6 here?

7 MR. BAILEY: We had a couple examples of that.  
8 One that comes to mind is that one of the licensees told us  
9 that if you contact NRC and request information, they're  
10 very responsive and they'll give you that information. What  
11 they don't do is go beyond that. I get the sense that the  
12 licensees somewhat want more assistance, more guidance.  
13 You're dealing with a hodgepodge of sites here, some of  
14 which were previously terminated many years ago. Different  
15 parties are responsible for that property now. Often times  
16 they just don't have a very good sense of decommissioning,  
17 what's required, what it would take, and I think they need  
18 more guidance and assistance than some of the sites that  
19 have been around for some time.

20 Other things we heard was that NRC was somewhat  
21 insensitive in terms of assigning project managers. What we  
22 heard is there was a continuous turnover of project managers  
23 which from our perspective we didn't get the full gist of  
24 how that affected them, but what we were told was that each  
25 project manager might have a different slant on an approach.

1 They had to reeducate these project managers at a cost,  
2 their own cost. They were very concerned about that.

3 I think what they're looking for is more of a  
4 collegial environment where they can work more with you and  
5 perhaps maybe in that type of environment can move forward  
6 on some of these sites.

7 COMMISSIONER ROGERS: Thank you.

8 CHAIRMAN SELIN: Commissioner Jackson?

9 COMMISSIONER JACKSON: Going back to the question  
10 of guidance, guidance that was looked for from the NRC, did  
11 you mean regulatory guidance or technical?

12 MR. BAILEY: I think they were speaking more of  
13 technical guidance. There are obviously some regulatory  
14 issues that I think they would like more guidance, but I  
15 think NRC is working towards that. But mostly technical  
16 guidance.

17 COMMISSIONER JACKSON: Did you mean to the extent  
18 of telling them how to clean up the site?

19 MR. BAILEY: Yes. I kind of got a sense that some  
20 of them wanted that. I recognize the line between regulator  
21 and regulated, but it may not just be that. It may be more  
22 of a -- for example, the workshops that they've been putting  
23 on on site characterization efforts. Things of that nature  
24 I think were very helpful. We heard some positive comments  
25 about that. But we do realize there's only so far you can

1 go in telling them just what they can do, but they did want  
2 more technical guidance.

3 COMMISSIONER JACKSON: But perhaps clarifying that  
4 that line exists.

5 MR. BAILEY: Right. There was certainly some  
6 concern too that a lot of what's out there is guidance.

7 COMMISSIONER JACKSON: People do understand that  
8 the NRC does not clean up the sites.

9 MR. BAILEY: Right, they do.

10 CHAIRMAN SELIN: They do now.

11 COMMISSIONER JACKSON: My second question was, did  
12 you evaluation look at -- and this somewhat ties into Dr.  
13 Selin's point -- gradation of risk? One could look at the  
14 sites and say there hasn't been much progress, but the  
15 question is does your evaluation look at whether there's  
16 been any increasing risk or not or whether these are just  
17 dormant sites?

18 MR. BAILEY: Well, the scope of our review was not  
19 to determine that. But, in fact, we did find out that there  
20 have been several cases where contamination migration has  
21 occurred, eight sites to be exact, which was a concern  
22 because we felt that the longer these sites were around that  
23 could possibly happen in other cases. We were told by NRC  
24 officials that that may not be the case. But to some  
25 extent, I would think any time you have contamination

1 migrating offsite into the groundwater, you could very well  
2 consider that to be a greater risk. We don't mean to  
3 portray this that the risk of each site is increasing, but  
4 certainly even by NRC's own acknowledgment, the longer these  
5 sites are around the more you're going to encounter things  
6 like groundwater, the spread of groundwater contamination.

7           The other thing that we noticed is that most of  
8 what we were told from NRC officials and site  
9 representatives had to do with that there were limited risk  
10 at these properties because they were adequately protected.  
11 They were fenced. There were danger signs, as the  
12 regulations require, posted, and for the most part a lot of  
13 these were in what they considered to be remote areas and  
14 just not accessible to the public, the general public.  
15 However, in the few sites we visited, one of the sites, I  
16 must admit, it would not be attractive, but it depends on  
17 what your purpose was. For example, in one case we were  
18 told the hunters often access this property and chase game.  
19 No one could say how often that happens, but surely it does  
20 show that controls in place often can break down and do  
21 break down.

22           So, we were somewhat concerned about that, but we  
23 couldn't say whether or not that's consistent in all the  
24 sites. But I think if we're saying that these sites are not  
25 a risk because they're properly or adequately protected,

1     then I think we should be careful and ensure that that is  
2     the case.

3             MS. STEINHARDT: Can I add a point here? These  
4     sites, the roughly 50, floating 50 that have been in this  
5     program, were the ones that NRC itself decided were for a  
6     variety of reasons the ones that deserved the most  
7     attention. They were the most difficult, the most lengthy.  
8     I can't say the extent to which a very strict sort of risk  
9     assessment played a role in this, but they were, I guess, in  
10    a sense kind of high risk in a more broad sense. They were  
11    defined that way by the agency itself.

12            So, these are sites that you yourselves felt, the  
13    agency itself felt were most deserving of attention. Just  
14    to move to the second question that you raised which deals  
15    with the priority or the relative priority of these efforts  
16    or the SDMP Program relative to all the other things that  
17    you do within the NRC. These sites represent difficult  
18    decommissioning activities. If you can't -- and as I said  
19    at the very beginning of my remarks, I think there were some  
20    very good lessons learned that you applied to future  
21    activities, but decommissioning is going to become, I think  
22    everyone recognizes, a really significant part of what this  
23    agency is responsible for. If you're having so many  
24    problems dealing with these sites, then it's really  
25    important to try and make this work as best you can.



1           So, even if you decide that these are now maybe  
2   not so high risk from a strict point of view, there were  
3   some reasons why you focused on these sites at the beginning  
4   and I would urge you not to forget those kinds of risks that  
5   you identified in the first place and think about what they  
6   mean for decommissioning activities that you've got coming  
7   up and not to set these aside. If you've got problems here,  
8   you've got to pay attention to those problems. Whether  
9   they're as consequential for public health reasons as  
10   Hanford, no, probably not. But they're your problems and  
11   they're, I think, related closely to the kinds of problems  
12   that you're going to have elsewhere if you can't solve them  
13   here.

14           CHAIRMAN SELIN: We were not looking for a license  
15   for complacency. I want to make that clear. But the sites  
16   are there mostly not because they're high risk, but because  
17   they're in populated areas, they have --

18           MS. STEINHARDT: Well, that's an element of risk.

19           CHAIRMAN SELIN: Well, not so much the risk. It's  
20   just they are a nuisance to a lot of people as opposed to  
21   remote sites or they have gotten a lot of attention one way  
22   or another. We had the West Chicago, Newburg Heights as  
23   examples of situations we wanted to avoid where there was no  
24   communication to the point where nothing was happening.  
25   Huge amounts of money were being spent and nothing was

1 cleaned up. What we wanted to learn out of this program is  
2 could we decommission sites that have basically been  
3 abandoned at a reasonable cost to the licensees and to us,  
4 and could we do this without a huge amount of management  
5 time.

6 Your report has pointed out that in addition to  
7 the intrinsic problems we've had more than our share of  
8 management problems on this program and that these need  
9 attention. We're not going to walk away from these  
10 projects, but neither can they continue to get the level of  
11 resources that they've gotten through this pilot period.  
12 So, your report is particularly timely as you're trying to  
13 figure out how to put this program on a more sustainable  
14 basis to clean these things up.

15 Your initial remarks are even more appropriate.  
16 We don't believe that most of the agency's decommissioning  
17 problems are going to be with abandoned or terminated sites.  
18 They're with sites that are currently operating and we want  
19 to make sure we have a straight continuum of dealing with  
20 the current licensees, not letting them get off the sites,  
21 not breaking the audit trail and then trying to find out  
22 who's responsible.

23 Thank you very much. This will be very helpful.  
24 You might be interested to hear how the staff is going to  
25 address all these problems in the future and a few others as

1 well.

2 MS. STEINHARDT: Thanks very much.

3 CHAIRMAN SELIN: Mr. Taylor?

4 MR. TAYLOR: Good morning. With me at the table  
5 from the Office of NMSS are Carl Paperiello, Mike Weber,  
6 John Greeves and Dave Fauver.

7 I'd like to make a couple of points on the  
8 briefing. The briefing will place considerable emphasis on  
9 program and policy issues associated with the SDMP as  
10 opposed to detailed discussions of individual sites.

11 Second, the staff believes that the GAO report  
12 does a good job of identifying the major issues impeding  
13 progress toward site decommissioning such as large volumes  
14 of uranium and thorium waste, litigation and problems in  
15 coordination.

16 The staff would like to offer some additional  
17 insights on the GAO finding during the briefing, including  
18 the finding of NRC's lengthy review and approval process for  
19 decommissioning.

20 Third point, with regard to NRC's process, we do  
21 believe and agree that the current decommissioning process  
22 can be improved to be more efficient and to impose less of a  
23 regulatory burden. The steps being taken to streamline the  
24 process will be discussed today in some detail.

25 Finally, last point, we will identify potential

1 policy issues associated with the sites containing large  
2 volumes of waste which is related to the ultimate disposal.

3 The details of the briefing will be given by Mike  
4 Weber.

5 MR. WEBER: John Greeves.

6 MR. TAYLOR: Yes, I'm sorry. John.

7 CHAIRMAN SELIN: If you guys were cool, you would  
8 have just switched name tags.

9 MR. GREEVES: My fault. My fault.

10 MR. TAYLOR: Go ahead, John.

11 MR. GREEVES: Okay. Let's start with chart 2.

12 [Slide.]

13 MR. GREEVES: What we want to do here this morning  
14 is look at three parts. The first part I want to have Dave  
15 Fauver, who is on my right, talk about some progress, recent  
16 progress that we've made in this program area. Dave is kind  
17 of our operations guy. He's responsible for updating the  
18 SDM reports that we submit to the Commission. So, he's in a  
19 good position to fill you in on that background.

20 The second part was we are involved in four  
21 environmental impact statements for some key sites on this  
22 and Mike Weber intends to address that. We've got a short  
23 video, but time constraints being what they are, we're going  
24 to hold that towards the end.

25 The third part, I will be going over the

1 management plan to give you some insights that we see as far  
2 as where we can go from here. As we go through this, I  
3 think we'll all be talking to some of the points that the  
4 GAO mentioned. In fact, there's some points at the end of  
5 the program. So, we'll get a couple of different shots of  
6 that.

7 I'm on chart 3.

8 [Slide.]

9 MR. GREEVES: We've got an overall set of  
10 objectives for our decommissioning activities. This  
11 includes the SDMP sites and all the rest that we in the  
12 regions are working with. Let me just mention, the regions  
13 are on the phone at this point. This is a very important  
14 program area to them also. So, they are dialed in with the  
15 telephone lines. Obviously in this and all program areas,  
16 we are looking for timely and safe decommissioning. Just a  
17 couple of other points on the chart that have been  
18 mentioned. Obviously you need to coordinate these  
19 activities with others, including EPA. It's interesting  
20 that for the past six months or so we've all been addressing  
21 the National Program Review process, trying to be less  
22 intrusive on the licensees, and at the same time how do we  
23 address the kinds of comments we get from the GAO report and  
24 Senator Glenn's letter? It sort of puts the staff in the  
25 position of trying to weigh these options and see what we

1 can come out with.

2 We also are maintaining our capabilities in these  
3 areas and you'll hear more about that. The problem we're  
4 facing and you're facing is an environment with a reduced  
5 budget. How do you maintain effectiveness in spite of  
6 reducing those budgets? So, we think there's some mid-  
7 course corrections that need to be made to measure the risks  
8 and the costs associated with it. So, we'll be talking  
9 about those proposals.

10 At this point, Dave, would you go to chart 4 and  
11 talk through --

12 CHAIRMAN SELIN: At some point, Mr. Greeves, the  
13 GAO report can be summarized in one line and that's weakness  
14 of project management, lack of continuity in project  
15 managers, lack of clear responsibility between the regions  
16 and headquarters, et cetera. So, at that point, apart from  
17 the substantive questions, that point has to really be  
18 addressed specifically.

19 MR. GREEVES: Yes.

20 CHAIRMAN SELIN: I assume you'll do that?

21 MR. GREEVES: Yes. We are going to get to our  
22 management program plan that we're putting in place. We  
23 recognize and agree with those comments and I think  
24 separately we'll talk about the project managers.

25 CHAIRMAN SELIN: Thank you.

1 MR. GREEVES: Dave?

2 MR. FAUVER: On chart 4.

3 [Slide.]

4 MR. FAUVER: This chart basically is a snapshot of  
5 where the effort has been expended. As you can see, the  
6 majority of the effort has been in characterizing the sites  
7 and reviewing and approving the decommissioning plans.  
8 Although on the bottom you see that only five sites have  
9 been released, we think perhaps a more significant milestone  
10 to look at is decommissioning plan approval. In that case  
11 we have 15 plans approved.

12 There are two reasons why we think the focus is  
13 important to have on the decommissioning plan. The first is  
14 that the decommissioning plan approval initiates the  
15 reduction or long-term stabilization of the contamination on  
16 the site and the corresponding reduction in risk to public  
17 health and safety.

18 The second is that the review and approval of  
19 decommissioning plan, including the characterization data,  
20 really poses the greatest technical and policy issues. Once  
21 we're through that step, it's fairly routine and although  
22 there are a number of issues that may come up to delay the  
23 actual site release after the approval, the main issues are  
24 done and resolved.

25 Next chart.

1 [Slide.]

2 MR. FAUVER: What I want to do is briefly go  
3 through the sites where decommissioning plans have been  
4 approved because this is where the progress has been made  
5 from a technical perspective in decommissioning activities.  
6 The policy issues will be talked about later.

7 Three sites have been removed from the list since  
8 our last briefing in November '93. The Commission was  
9 informed of these actions in separate papers and I'm not  
10 going to go into detail on these.

11 For some sites, it is proven to be more efficient  
12 to decommission in stages. For example, at the Cabot site  
13 we remediated the buildings, released the buildings for  
14 unrestricted use, but there remains 20,000 cubic feet of  
15 slag that remained to be resolved and a separate  
16 decommissioning plan to be submitted for that.

17 Next slide, please.

18 COMMISSIONER JACKSON: Could you comment on the  
19 Northeast Ohio?

20 MR. FAUVER: Yes. At the Northeast Ohio Sewer  
21 District, we remediated three lagoons. The lagoons have  
22 been released for unrestricted use. The material was moved  
23 to an on-site ash fill area and the ash fill area needs to  
24 be resolved in a separate decommissioning plan, which  
25 discussions are underway for that.



1 Next slide.

2 [Slide.]

3 MR. FAUVER: Decommissioning is complete at four  
4 sites. They haven't been removed from the SDMP list for a  
5 number of reasons. Basically, three of the sites have very  
6 limited closeout surveys that remain. The majority of the  
7 surveys are done and have included confirmatory work, but  
8 there's just a little bit left. At the UNC site, there is  
9 the administrative issue related to the state and  
10 groundwater has recently been resolved as well and we expect  
11 all four of these sites to be removed from the list in 1995.

12 The last categories where the plan is approved and  
13 remediation is moving forward to a greater and lesser  
14 extent. For example, at the TI site, greater than 100,000  
15 cubic feet of material have been removed to date. At the  
16 Elkem Metals site, the remediation is complete. We just  
17 have a final survey report that's been submitted and there  
18 are various stages at the other four sites.

19 COMMISSIONER ROGERS: Before you leave that slide,  
20 what is the difference between site release category off an  
21 SDMP list and decommissioning complete? What's the  
22 distinction?

23 MR. FAUVER: That's a good point. We have these  
24 four sites that decommissioning actions in accordance with  
25 the plan have been completed. The contamination exceeding

1 the release criteria has been removed. 800,000 cubic feet  
2 of material have been shipped from the B&W Apollo site.  
3 United Technologies has some building contamination it's  
4 resolved. Their limited surveys remain. The licensees in  
5 these cases have submitted their final surveys. The  
6 confirmatory surveys are predominantly completed and there  
7 are just a few closeout surveys and inspections that remain  
8 to be completed at these sites. Then we will inform the  
9 Commission of our action in a paper and then we will notify  
10 the licensee and the states and EPA typically of our  
11 proposed action.

12 COMMISSIONER JACKSON: Could you give any  
13 indication from this list of four when those sites might be  
14 released?

15 MR. GREEVES: Let's talk about, for example,  
16 Apollo. I think the point Dave is making is the real health  
17 and safety work is being completed on these sites.

18 MR. FAUVER: Yes, that's correct.

19 MR. GREEVES: As you know, they're all a little  
20 bit unique. In Apollo, there's a license condition that  
21 says we're going to monitor the groundwater from 12 months  
22 beyond the cleanup date. So, we're in the process of  
23 completing that monitoring time frame. So, the material has  
24 been removed and at this point we can't release that site  
25 until the monitoring and groundwater issue is solved. Each

1 of the sites have a little bit different circumstance like  
2 that. The point Dave was making was the health and safety  
3 issues.

4 MR. FAUVER: That's correct.

5 MR. GREEVES: You drive up there to Apollo, you  
6 drive by it, it starts to look like a park to you and we  
7 have to abide by the license condition and monitor this for  
8 12 months.

9 MR. FAUVER: Yes. The monitoring period at Apollo  
10 ends in November '95. We have a few closeout surveys to  
11 perform there, confirmatory work, and we assume that we will  
12 complete that before the November date and so we'll be ready  
13 to terminate the license in late '95. The ALCOA site, we're  
14 looking at fall '95 to remove the site.

15 Let's see. I'm on the wrong chart here. The  
16 United Technology site, we're looking at fall '95 and UNC  
17 we're looking at summer '95 to release these sites. The  
18 work is done. There's just a few minor details that remain.  
19 The point is here that the work is completed and has been  
20 extended for retracted periods of time before the site is  
21 actually released.

22 COMMISSIONER ROGERS: Thank you.

23 MR. FAUVER: Next slide, please.

24 [Slide.]

25 MR. FAUVER: Over the last couple of years as the

1 program has matured, we've given increased attention to  
2 developing decommissioning guidance. Most recently we  
3 issued a branch technical position on characterization and  
4 also a decommissioning inspection procedure. Following the  
5 completion of issuance of characterization guidance, we  
6 hosted a workshop that was mentioned earlier by GAO. It was  
7 on characterization. It was for the SDMP site owners and  
8 other interested parties. In a similar fashion, after  
9 completing the guidance on termination surveys, we hosted  
10 another workshop on that technical issue. These workshops  
11 were well attended and had representatives from industry,  
12 agreement states, other federal agencies and the public.

13 Based on the feedback from the participants, as  
14 well as our observations, we think the workshops were  
15 successful in broadcasting our expectations in these  
16 technical areas and we think there have been some  
17 improvements in the submittals because of this and a  
18 recognition of what our guidance is and our expectations in  
19 those areas. Also, it's provided the staff with insights  
20 into the issues that are important to the SDMP site owners.  
21 We structured the workshop to specifically provide an  
22 opportunity to get that feedback from them. We had breakout  
23 sessions and that was one of the goals of the workshop.

24 COMMISSIONER ROGERS: I'd like to pursue this  
25 workshop thing just a little bit more.

1 MR. FAUVER: Yes.

2 COMMISSIONER ROGERS: Do you have any information  
3 on who attended the workshops? Did all of the folks on the  
4 50 sites have a presence there?

5 MR. FAUVER: I believe they all did. I wasn't  
6 taking a tally of that, but --

7 COMMISSIONER ROGERS: Well, I think it would be a  
8 useful thing to know. If somebody didn't attend a workshop  
9 and then they come back and say, "We don't know what you  
10 want," we have an answer for that.

11 MR. GREEVES: Good point.

12 COMMISSIONER ROGERS: Maybe they need some special  
13 instruction or something. But the point that Mr. Bailey  
14 raised of some of the licensees feeling that we weren't  
15 giving them enough information to be able to be as much help  
16 to them as they would like us to be, a workshop is one way  
17 of doing that. Do you expect to perhaps do anymore  
18 workshops than these two?

19 MR. FAUVER: There are none planned at this date.  
20 However, we will be talking later in the presentation on a  
21 process we're trying to put in place to get interactions  
22 with the licensee community to resolve some of these issues  
23 in a more formalized way where they'll tell us what the  
24 generic issues are and then we'll get back with them on it.  
25 We'll talk more about that later.

1           MR. GREEVES: Many of the licensees are not  
2 bashful. They're contacting us and setting up meetings with  
3 us and we encourage that. Mike met with a number of them I  
4 think a month ago and discussed future interactions. So,  
5 I'll say a little bit more about that in the management  
6 area.

7           COMMISSIONER ROGERS: All right. Fine. Thank  
8 you.

9           MR. FAUVER: The third bullet, we've also started  
10 tapping into the expertise in the Low-Level Waste  
11 Performance Assessment Branch, in the Waste Management  
12 Division. There's an overlap in the type of analysis at  
13 some of these SDMP sites in the low-level performance  
14 assessment and we think it's efficient to take advantage of  
15 these existing capabilities.

16           I think the message from the past few performance  
17 recent progress charts is that we have the decommissioning  
18 program in place and it can handle the diverse technical  
19 issues associated with decommissioning. The program has  
20 been successful in dealing with sites with building  
21 contamination, sites with soil contamination where  
22 essentially offsite shipment is the decommissioning  
23 alternative selected. As mentioned, we think that this  
24 process we've been using on the sites that we have  
25 remediated can be improved and we're going to talk about our

1 streamlining efforts in that area.

2 But as has been mentioned, we continue to have  
3 difficulty with the 20 or so sites with large volumes of  
4 thorium and uranium contamination or on-site burials. We're  
5 exploring several options for resolving this problem. We  
6 will discuss that later as well. One approach has been to  
7 initiate site specific environmental impact statements as  
8 way to determine or evaluate acceptable decommissioning  
9 alternatives in a process that encourages stakeholder  
10 participation. As we mentioned, that will be discussed --

11 Are we going to do that now, Mike?

12 MR. GREEVES: Actually, let's turn to chart 8.

13 [Slide.]

14 COMMISSIONER ROGERS: Are we going to come back to  
15 this one or are we leaving it?

16 MR. FAUVER: That was all I had on this chart.

17 COMMISSIONER ROGERS: Well, I'm interested in the  
18 staff development question. Can you say something on that?  
19 That was perhaps part of the GAO criticism of staff  
20 turnover. What are your comments with respect to the  
21 turnover question, whether you feel that it has been  
22 unusually high, what the reasons for it are, are we losing  
23 people or are we just moving them from one responsibility to  
24 another? What are we doing to make sure that we maintain  
25 our expertise in this area as we shrink down. All these

1 relate to staff development questions.

2 MR. GREEVES: Let me ask Mike Weber to address  
3 that. He's the manager in charge of this particular program  
4 and has the experience. In fact, we sort of prepared a  
5 little bit for that type of question.

6 Mike?

7 MR. WEBER: Thanks.

8 A lot of what we've seen in the way of staff  
9 turnover is not unexpected and is consistent with what we've  
10 had elsewhere in the agency. In many cases, project  
11 managers are promoted or they may move on. One project  
12 manager, for example, for a number of the sites, was  
13 selected to be the on-site representative at the Yucca  
14 Mountain site for the NRC. As you're well aware, if a  
15 person is selected for a promotion, little if anything we  
16 can do. In fact, this individual was qualified for that new  
17 position. So, we were happy to see him move on.  
18 Unfortunately, that means that some licensees are now going  
19 to have a new project manager. We try to mitigate any  
20 adverse impacts from that by once we know an individual is  
21 going to move on, if they're going to return or if they're  
22 going to be transferred to another position, that we have  
23 them work together with a new project manager so that we can  
24 minimize any gap, if you will, loss of information, get the  
25 people familiar with what the history has been at the site,



1 what some of the issues are and what the current plan is to  
2 resolve those issues. We do what we can to minimize any  
3 kind of adverse impacts. But I know we've dealt with this  
4 not just in our program but in other programs. I know EPA  
5 has had similar difficulties in the Superfund Program, in  
6 some cases worse than we've had because there they have a  
7 salary differential that's in some cases worse than we have.

8 We have, along the lines of staff development,  
9 been trying to provide the necessary training and work  
10 experiences for the project managers because the project  
11 manager position is a very diverse area. They not only have  
12 to be familiar with the health physics aspects of the  
13 decommissioning, but also decommissioning technologies, the  
14 survey techniques that are relied on heavily to confirm, in  
15 fact, that these sites are suitable for release. So, we've  
16 been sending people to health physics training. We've been  
17 giving them developmental assignments so that they can come  
18 up on the learning curve and really be prepared to grapple  
19 with the kind of issues that come up in every one of these  
20 cases.

21 There are unique issues that come up from time to  
22 time, a lot of financial assurance issues that may come up  
23 and those are hard to predict who is going to fall into that  
24 mode, who is going to require that kind of training. But we  
25 have contractor support on hand to provide that kind of

1 assistance, as well as staff experts.

2 COMMISSIONER ROGERS: Well, you know, at the  
3 highest level or high level of staff management, in the  
4 reactor area people do exchange information on a regular  
5 basis about the status of virtually all the plants in the  
6 country so that there is no -- at least the higher levels  
7 there is no great mystery about where any one plant stands,  
8 although a real detailed knowledge will be possessed by some  
9 people more than others.

10 Is there any way that you could employ some kind  
11 of mechanism to see that all the project managers have some  
12 knowledge of all the projects without necessarily being  
13 expert on every one except the ones that they have direct  
14 responsibility for so that if somebody leaves they're not  
15 carrying all the knowledge away with them, but that someone  
16 who might come in would know not just the general problems  
17 that have to be dealt with, but have some familiarity with  
18 the site specific problems of individual sites?

19 I take it there's such a diversity here in these  
20 individual sites that many of the things that are holding  
21 them up are very local to that particular site. It might be  
22 possible to share that, some flavor of that, some inkling of  
23 it more broadly so that when you are faced with a need to  
24 put a new person as a project manager in, that they're not  
25 just totally cold on those particular aspects of that site.

1           MR. WEBER: A couple things to address there. One  
2   is we have maintained a routine quarterly report which goes  
3   out to the managers in the program and they're certainly  
4   encouraged to pass it onto to the staff. That goes through  
5   each site, lists where they are in the process and flags any  
6   issues or concerns. One of the objectives of that process  
7   is so that we have the communications of are there generic  
8   issues here that need to be dealt with across the board that  
9   would really help speed up the process.

10           We also, of course, have included site  
11   descriptions in the NUREG-1444, the Site Decommissioning  
12   Management Plan. Staff are encouraged to read that. We  
13   have gone through and update that on an annual basis. This  
14   year, in fact, we'll issue a supplement to that NUREG.

15           We recently initiated decommissioning counterpart  
16   calls. The intent of those is to make certain that there's  
17   a free sharing of communication. There's a lot of stuff  
18   going on in headquarters that the regions need to know about  
19   and similarly there's regional issues that headquarters  
20   needs to know about. We have tried to provide people  
21   opportunities, even though they may be managing their own  
22   sites, to participate in providing technical support on  
23   other sites. That not only keeps their technical skills  
24   sharp, but it also helps out in ensuring that the right  
25   people are focusing on the right issues.

1           We've had counterpart meetings. We, in fact, have  
2 another counterpart meeting coming up in July. We had one  
3 in February where we specifically focused on decommissioning  
4 of military sites. So, we're doing a variety of things to  
5 share the information. But as you point out, a number of  
6 these issues are unique to individual sites. So, there's  
7 limitations, the depth of which we can develop people as far  
8 as how they understand what the other issues are.

9           COMMISSIONER ROGERS: Yes. Well, sometimes a show  
10 stopper is very specific to one site. Our general approach  
11 is to try to make sure we understand everything as  
12 generically as possible. But then there are these other  
13 special features that wouldn't necessarily be shared with  
14 people because they are very site specific. It's just the  
15 other side of that coin, taking everything from the  
16 individual sites and reducing those as much as possible to  
17 generic approaches which is a very useful way to go. But  
18 then there's the other side, the little special features  
19 that perhaps in some way might usefully be shared more  
20 broadly.

21           MR. GREEVES: We're mindful of this and I'm going  
22 to address a database approach that the staff is working on  
23 for Mike that I think will get at it a little bit and I'll  
24 discuss that in detail when I get to it.

25           The other thing is when we have these workshops,

1 many of the licensees come and make presentations. It's an  
2 interactive session. Our staff, almost the entire staff,  
3 the regions and, in fact, the agreement states show up to  
4 these meetings and they present the problems that they've  
5 run into. So, I think it's happening and the approach we're  
6 taking with the slides that follow I think will ensure that  
7 we are more effective in how we deal with that in the  
8 future.

9 CHAIRMAN SELIN: I've heard a lot about how we're  
10 going to assuage the lack of continuity in the project  
11 management, but we've got to do something about just fixing  
12 the lack of continuing, not making up for it by better  
13 sharing. I went through the slides before and I think  
14 you've got a better story than you're telling, to tell the  
15 truth. We can't keep going on the star system where each  
16 site is treated as sui generis. We need to put this more in  
17 an overall management plan which would mean that there would  
18 be positions for more senior people to oversee the work in a  
19 lot of sites rather than a large number of relatively  
20 unsupervised project managers on site by site. It would  
21 also allow the continuity if not at the individual site at  
22 the collection of sites because people wouldn't keep -- I  
23 mean these are not good jobs. They're things that people  
24 are trying to get promoted out of, not to stay in for  
25 awhile. It can't happen. If we're going to run the

1 program, there has to be continuity and the structure has to  
2 be such that people can spend three or four years in the  
3 program without losing career opportunities and they can't  
4 do that at each of 50 or 100 or 200 sites. They have to be  
5 aggregated into larger sets so that there are career  
6 opportunities.

7 MR. GREEVES: We're trying to nail Dave down.  
8 He's sitting at the table for a reason. He's kind of our  
9 chief operations guy here. I'll talk to you later about  
10 ways we can get him nailed down.

11 COMMISSIONER JACKSON: Before you move on, is your  
12 low-level waste performance assessment approach used in  
13 developing disposal alternatives for all the sites?

14 MR. GREEVES: It's a tool that we are working and  
15 it's mostly applied to the difficult ones. For example, the  
16 ones that have groundwater problems. Really, you don't need  
17 it for some of the simpler sites where it's simply setting  
18 the limit that's in one of our documents like 30 picocuries.

19 COMMISSIONER JACKSON: That's fine. I just wanted  
20 to know how pervasive and how --

21 MR. GREEVES: It's an expensive --

22 COMMISSIONER JACKSON: The second question, is it  
23 then used in helping you develop your environmental impact  
24 statements?

25 MR. GREEVES: Yes.

1 COMMISSIONER JACKSON: Okay.

2 MR. GREEVES: Okay. I think I'm up to chart 8.

3 [Slide.]

4 MR. GREEVES: At this point we were going to show  
5 a video and have Mike walk through that. I think we'll hold  
6 that to the end and see if there's time permitting. But the  
7 point is we've got these four major sites that we're working  
8 on an environmental impact statement and they typically have  
9 high volumes of contaminated material measuring millions of  
10 cubic feet. They're either uranium, thorium or a mixture.  
11 Some of them, for example Jefferson Proving Ground, contains  
12 unexploded ordnance, which is a kind of unique problem to  
13 deal with. They also raise questions about institutional  
14 control and that's the ones you'll see on the policy issues  
15 at the end. So, we'll hold the video to the end and see  
16 what progress we'll make.

17 So, Dave and the questions and answers we've gone  
18 through have given us a background of where we are. So,  
19 what are going to do about this is the \$64,000 question.  
20 Obviously there are delays here. There are things that we  
21 cannot control, litigation, access to disposal sites. So,  
22 we've looked at the program and what can we tune? So, we've  
23 come up with a management plan. We're sensitive to the  
24 points that the GAO has identified. So, we've looked at  
25 this in three parts. We've got some initiative we want to

1 make. We see two areas where we think we can considerably  
2 streamline what we've done in the past and we know there are  
3 some policy issues out there in front of us that we think we  
4 can bring back to the Commission and help us expedite some  
5 of these reviews.

6 So, with that, let's turn to chart 10.

7 [Slide.]

8 MR. GREEVES: Over the last five years, we  
9 believe this program area has matured. We've got rules in  
10 place now that we didn't have in place before. We've  
11 covered the financial assurance topic. We've got rules  
12 regarding records retention. We have rules in place about  
13 timeliness of decommissioning. We also, as you're all  
14 aware, have the decommissioning criteria on the table, a  
15 proposed rule to set the standards for unrestricted release  
16 and also look at restricted release. So, some of these  
17 sites do get into that category.

18 So, to be responsive to this need, we have been  
19 developing a comprehensive manual chapter. Carl has urged  
20 us to work on this and Mike and company have, I think, done  
21 a good job. We've learned a number of lessons over the last  
22 five years for putting in place a set of protocol. How does  
23 a licensee get into decommissioning? How does he get out?  
24 What are the inspection routines that are expected depending  
25 on what level the decommissioning is at, whether it's a



1 sealed source site, whether it's no loose contamination  
2 expected or a fuel cycle facility where the experience is  
3 there's a lot of loose material that's left?

4 We're putting together this manual chapter and  
5 it's essentially meant to be a road map. It will show you  
6 when to do an EIS, how to do -- whether you should do an EA  
7 or and EIS. It's also directed to show this to the regions  
8 and all the project managers to try and have them work on a  
9 consistent level. The IG briefed you a number of months ago  
10 about our program area and one of the comments that he made  
11 was that there's a lack of procedures. We think that this  
12 will resolve that type of approach. Many of the others  
13 we've been listening to today. This is the place where  
14 we'll put together a comprehensive approach to  
15 decommissioning that all the players can read. Licensees  
16 are going to be interested in this also.

17 COMMISSIONER ROGERS: Is it going to be written in  
18 plain English or is it going to be written in regulatory  
19 language?

20 MR. GREEVES: It needs to be written in plain  
21 English. We have a draft. It's a rather thick document at  
22 the present time and it's a first draft, so we're still  
23 working it. But I've read through most of it and I think  
24 it's pretty plain English. But I would take it we're going  
25 to end up sitting down with the regions, the other players

1 in the process eventually and going over this. Before it's  
2 finalized, we will get it to the point where it can be read.  
3 It's an imposing document though. It has charts in it,  
4 checklists as to what you as an inspector should be paying  
5 attention to as you go out and look at these sites. So,  
6 certainly our goal is make sure it's easily understood.

7 The next item on this initiative is to revise  
8 these performance measures. It seems that people, some,  
9 have been focusing on this administrative procedure of  
10 releasing the site. We spoke earlier about the hang-ups on  
11 groundwater monitoring. The actual cleanup is already  
12 completed say at the Apollo site. So, we would direct  
13 performance measures at the effectiveness of the programs in  
14 terms of where the rubber meets the road is to remove  
15 remediation or remove radioactive material from the site.  
16 In other words, focus the performance measures where the  
17 results are important. The National Program Review urges us  
18 to do that. So, we'll be developing these and identifying  
19 these in the next SDMP update. We'll provide that to the  
20 Commission and Senator Glenn also asked for a copy of that.

21 COMMISSIONER ROGERS: I didn't understand quite  
22 what you meant by recognized performance beyond site  
23 release. This beyond is on what kind of a scale? Is this  
24 time scale, in addition to, prior to?

25 MR. GREEVES: It's really prior to. The focus of

1 the attention sometimes when you read reports looking at  
2 this is the NRC has only released three sites. Well, the  
3 safety payoff as Dave identified was when you review that  
4 decommissioning plan, that's the key that allows the  
5 licensee to start marching, picking up contaminated  
6 material, putting it in the trainloads or truckloads and  
7 getting it offsite. If you only focused on the last item,  
8 which could be hung up for a groundwater monitoring issue  
9 for a year, the real measure in worth of the staff's  
10 activities and license activities doesn't get recognized.

11 MR. TAYLOR: Yes. This is an example of not clear  
12 English. What we're doing is recognizing these very key  
13 things which come before site release as really points of  
14 considerable achievement. That's the plan.

15 COMMISSIONER ROGERS: Does it make any sense to  
16 develop certain categories of status? Do you have those  
17 now?

18 MR. WEBER: No, that's what we're working on.

19 COMMISSIONER ROGERS: It might be that if you had  
20 clear sort of like an incident scale, have a status scale so  
21 that one could point to it and say, "Well, that's where we  
22 are now," and what the significance of that is from a public  
23 health and safety point.

24 MR. TAYLOR: When we started and we were looking  
25 at the ultimate victory, so to speak, but I think there are

1 some very key interim points which this program will be  
2 setting up. Those are very important.

3 COMMISSIONER ROGERS: And make it very clear what  
4 the public health and safety issues are or status is with  
5 each of those stages of development.

6 MR. WEBER: We do have stages of the process and  
7 they'll be discussed on chart 12. But what we're trying to  
8 develop are outcome oriented performance measures. Clearly  
9 getting the site off the SDMP is a very distinct outcome  
10 that we would appeal to. But we want to recognize that  
11 there are other ways to measure progress, to evaluate how  
12 well we're doing.

13 MR. GREEVES: Okay. Let's move to chart 11.

14 [Slide.]

15 MR. GREEVES: Again, here are four additional  
16 initiatives that we think would improve efficiency, the  
17 first of which there was some discussion about interacting  
18 with others. NEI, the industry groups, are working with us.  
19 In fact, as I said, Mike met with them a month ago and  
20 they've suggested an additional meeting. They want to go  
21 over some of these guidance documents during the development  
22 process. Maybe these big workshops -- obviously they are  
23 quite expensive. We can't do but so many of those, but if  
24 NEI wants to meet with us, we'll have an open meeting with  
25 them and can go over questions and do some give and take on

1 that front. This would include the states and other parties  
2 to go over the status of, for example, the decommissioning  
3 rule that we've been working on.

4 The second item is we want to look at a  
5 preliminary hazard analysis. These terminated files are  
6 identifying some number of sites that GAO mentioned earlier.  
7 Well, how do we rank those things? Do we want to do a  
8 preliminary hazard analysis? For example, we'd look at the  
9 groundwater issues, are there groundwater issues at this  
10 site. That way we'd be able to set some priorities to  
11 decide which could be backlogged for the time being.

12 The third item is what I mentioned earlier, is a  
13 tool to manage the database. Mike has the staff working on  
14 a tool that we hope to get up on the LAN system that will  
15 have all the sites listed in it, show you what the  
16 concentrations are at the particular site, volumes, the  
17 status of that site. It could be a tool that could be used  
18 to make management reports. It would be available at the PC  
19 screen of the staff, the PMs, people in the region and  
20 managers. If we get a question from a congressman on how  
21 many sites are in a certain category, you can pull it up and  
22 develop a management report.

23 I'm excited about it. I don't want to tout it too  
24 high because in the past we've been a little optimistic on  
25 how we bring these things forward, but we have that under

1 development.

2 The last item is deferring to EPA. There are a  
3 number of these sites that there are overlapping  
4 jurisdictions. The National Program Review urges us to  
5 eliminate these duplications and two examples where you have  
6 helped us out recently are the Dupont Delaware site and the  
7 West Lake Landfill. You approved deferring to EPA on those  
8 and that cleared the decks for us on two sites. There may  
9 be others in the process and we will bring those forward to  
10 you.

11 [Slide.]

12 MR. GREEVES: Let me transition to chart 12. I  
13 don't want to spend a lot of time on this, but this is the  
14 current process. This is the typical series of steps that  
15 we go through. We can't afford to do this anymore. We need  
16 to develop a wholesale approach to try and speed up this  
17 process. You'll see there's eight steps here. We'd like to  
18 cut this down to four.

19 Let's go to page 13.

20 [Slide.]

21 MR. GREEVES: So, to do this, we've come up with a  
22 couple of approaches to do what we call streamlining. What  
23 we would propose is for good performers we would reduce the  
24 first set of steps. We would not look at the site  
25 characterization plan. We would not look at the site

1     characterization report. A significant amount of energy is  
2     invested in the staff review of those reports. So, what we  
3     would do is we would focus our first review for good  
4     performers on the decommissioning plan. At that point,  
5     that's the first time that the site characterization data  
6     and the decision alternatives come together. You can  
7     rationally decide is that the right amount of data for that  
8     selected decision process? It will get us in a position of  
9     doing these reviews in parallel as opposed to series, as you  
10    saw in the earlier charts.

11           COMMISSIONER JACKSON: How do you go about  
12    defining good performers? Suppose you have a company that's  
13    bankrupt, out of business, and you talked about shell  
14    companies that --

15           MR. GREEVES: It's certainly something we're going  
16    to have to struggle with, but the things that we would look  
17    at is where you have a license, what's the violations that  
18    have been associated with that site, if any, how is the  
19    radioactive material being controlled? Are they doing a  
20    good job of it?

21           COMMISSIONER JACKSON: Excuse me. You don't have  
22    to spell it out for me. I'm more interested in that you  
23    have mechanisms in place for identifying what you call good  
24    performers and that those mechanisms take account of or have  
25    a consistent way of dealing with bankrupt companies, people

1 where the culprits can no longer be found, et cetera.

2 You're assuring me that --

3 MR. GREEVES: We've been thinking about that and  
4 Mike has developed a list of items. Again, these are new  
5 proposals for us and we can share that with you when you'd  
6 like.

7 COMMISSIONER JACKSON: Okay. I guess I'm saying  
8 that if you have a streamline approach that's based on  
9 identifying good performers, you have to understand what you  
10 mean by it.

11 MR. GREEVES: What the definition is, yes.

12 Okay. So, this approach of cutting out the first  
13 series of steps in the current process is consistent with  
14 the timeliness rule that was put in place. This would  
15 reduce our costs of these reviews. It would reduce the  
16 costs to the licensees and it would focus our resources on  
17 what we've called the real payoff, as Dave mentioned, at the  
18 decommissioning plan.

19 There are some risks associated with this. We  
20 have caught in the past some early instances where the  
21 characterization should have done a little better job. You  
22 might have to remobilize somebody to go out and do  
23 additional characterization. We think that risk is actually  
24 pretty low because we have invested heavily in the technical  
25 position on site characterization. There was a detailed



1 workshop on that and I think the licensees have good  
2 information on that topic and they ought to be able to get  
3 it right the first time.

4 The second area as far as streamlining is the  
5 confirmatory survey. Typically at the present time at the  
6 end of the process we do a detailed confirmatory survey.  
7 This is really providing too much of a QA/QC check at the  
8 end and it's quite expensive. In an environment of  
9 declining budgets, we think that needs to be turned around.  
10 We want to inject within the licensees during the  
11 decommissioning portion of this that they will be providing  
12 the QA/QC when they're actually doing the work in the field.

13 To help in this area, we have been working on a  
14 guidance document and it's got a long name, Multi-agency  
15 Radiation Site Investigation Manual. This is a  
16 comprehensive document that was initiated by EPA. We are  
17 working with EPA, principally our Office of Research. Dave  
18 is our point of contact on that review group. It includes  
19 DOE and DOD. It's a comprehensive document addressing  
20 survey techniques and it will basically be much more  
21 comprehensive than the document we have out there now,  
22 NUREG-5849.

23 The other thing that we're proposing is that as  
24 our inspectors go out and do inspections while the licensee  
25 has a survey in progress, that we maybe take split samples

1 at that point in time instead of relying on the confirmation  
2 survey at the end. The last item, all sites would receive  
3 some limited closeout survey, a scan of the affected areas.

4  
5 So, with this approach again, there is some risk  
6 that you might have some hot spots and also there's some  
7 potential for criticism from the public regarding the  
8 confidence of releasing these sites. But we think that with  
9 this emphasis working on the licensee, putting the burden on  
10 him during the decommissioning, that the actual risk may be,  
11 in fact, lower with this approach. We think it's a better  
12 approach. It will be less time consuming and it will be  
13 less expensive both for us and the licensees.

14 COMMISSIONER JACKSON: Why wouldn't the approach  
15 be risk based to start with, which then would in principle  
16 allow you to make some assessment of the potential for hot  
17 spots?

18 MR. GREEVES: Mike, could you help me on that?

19 MR. WEBER: Yes. One of the things that we have  
20 under consideration is moving more in the direction of a  
21 dose based hot spot criterion, something that would in fact  
22 be more responsive to your question. At the present, we  
23 have some arbitrary criteria that we use to define what a  
24 hot spot is and how hot can a hot spot be. But people have  
25 pointed out numerous occasions, "Well, that's fine but it's

1 not necessarily correlated to risk." Therefore, we would  
2 like to go in the direction where in evaluating whether  
3 something is indeed a hot spot, whether additional  
4 remediation is necessary, that there be some risk relevancy  
5 to that approach.

6 COMMISSIONER JACKSON: When you say you would like  
7 to go in that direction, does that mean that you are  
8 definitely going to consider a risk-based approach?

9 MR. WEBER: It's being considered now. The  
10 question is whether we can put it together in a way that  
11 everybody can agree, yes, this is the appropriate approach.

12 Dave, I don't know if you are --

13 MR. FAUVER: It's being looked into as a part of  
14 the multi-agency manual. We're developing right now a  
15 strategy for doing that. The idea is to keep the risk or  
16 dose equivalent to or less than it would be if you have  
17 uniform contamination over the entire site. Then we'll  
18 design our survey to be able to detect with a given  
19 confidence a spot that's of concern. Once we have that in  
20 place, I think that the hot spot issue will diminish in  
21 concern to those involved and I think it will be more  
22 structured. We'll have a method of justifying if there is a  
23 spot that's a little bit over our limit, then we can go to  
24 the public who tend to be very concerned if there's just one  
25 spot above our limit when the average may be significantly

1 lower. So, I think it's going to help in many ways.

2 DR. PAPERIELLO: The current decommissioning rule  
3 will make a big step toward that. Once you have a dose  
4 there are a lot of models which will then allow you to  
5 calculate compliance with that dose standard. There has  
6 been developed over the years a lot of this Multi-agency  
7 Radiation Site Investigation Manual. We, the EPA, DOE, a  
8 lot of people have developed very elaborate protocols for  
9 doing surveys to demonstrate compliance with a dose. You  
10 need a dose and you build a survey to demonstrate compliance  
11 with the dose and then we make sure the licensee meets those  
12 sampling techniques and the analytical techniques and then  
13 we would have assurance that the results are correct rather  
14 than we let the licensee do all their sampling and  
15 analytical work, then we go and reduplicate the whole thing  
16 or duplicate a large set of it at great expense to ensure we  
17 get the same result.

18 Actually, this is not very different than how we  
19 would regulate nuclear power plants where the licensee does  
20 enormous amounts of surveillances that we don't do  
21 independently, but we ensure they do them according to  
22 reliable standards that are accepted by the engineering  
23 community.

24 MR. GREEVES: Okay. Up on chart 15.

25 [Slide.]

1           MR. GREEVES: Obviously with these streamlined  
2 approaches, there are some risks. To try and manage those  
3 risks, we would be adjusting the level of our review based  
4 on experience with these licensees. You raise a good  
5 question of how would you rate that performance and part of  
6 what I mentioned earlier. We would be looking at things  
7 like the violation of history, principally how they're  
8 controlling that radioactive material. Is it funding its  
9 way offsite? Obviously that would be a problem. We would  
10 consult with the inspector in the region and the project  
11 manager associated with it and also look at are there any  
12 groundwater conditions associated with the site. So, those  
13 are principally the items that we're looking at so far and  
14 considering the rating of performance.

15           If we found poor performers, we would do a full  
16 compliment of reviews and thoroughly review any of the data  
17 generated by that particular licensee.

18           MR. WEBER: I would just add there's a potential  
19 that some licensees that are good performers may, in fact,  
20 seek review of those early documents or may desire, for  
21 whatever reason, NRC to do a more complete confirmatory  
22 survey. We'll entertain those requests to the extent that  
23 we've got the resources to do it, but clearly we're going in  
24 a more streamlined approach. So, we have to use what we  
25 have.

1 COMMISSIONER JACKSON: I just would like to  
2 reiterate that risk is important.

3 [Slide.]

4 MR. GREEVES: All right. On chart 16 we've  
5 identified six potential policy issues that we wanted to  
6 flag for your attention at the present time. So, I'll walk  
7 through these. The first of which is concentrating  
8 averaging. This is a question of will we allow blending.  
9 It was, in fact, discussed at the last briefing we had. Is  
10 there a way to come up with a dose based criteria? At the  
11 present time, we set a limit, a certain picocuries per gram.  
12 Anything above that, the idea is to move that offsite.  
13 Well, by the time you get that material up and in a railroad  
14 car, it's down below the criteria frequently. So, the  
15 question is, is it worth the cost of shipping that kind of  
16 material? Before you even get it off the site it, in fact,  
17 by nature of lifting it, you're back to what the criteria  
18 was.

19 There's a problem with comfort level here. A lot  
20 of the public is concerned about this sort of a topic. It's  
21 an issue that's raised at every meeting we have. There are  
22 a number of sensitivities associated with it. So, obviously  
23 we're going to have to think this through and give you some  
24 alternatives, but it's on our mind and I just wanted to  
25 share that with you.

1           The second one is one there's been a lot of  
2 discussion about already. That's limited site access. What  
3 this does is put you in a position where some licensees are  
4 just forced to store. They have no place they can send this  
5 material. We've got the timeliness rule which requires  
6 within two years we need to get into decommissioning. So,  
7 for certain licensees in that category, we may have to  
8 entertain an exemption to defer activities on that site. If  
9 there is material that has to be boxed up and containerized,  
10 we can deal with that. But if they don't have a place to  
11 send it, you're between a rock and a hard place.

12           The third item is exposure assessment scenarios.  
13 Frequently what we use are screening techniques and when you  
14 get to some of these more complicated SDMP sites the  
15 screening techniques show you you've got a problem. Then we  
16 go on to another technique in employing, for example, these  
17 performance assessment techniques for low level waste. If  
18 you use an unrealistic scenario like a former sinking a  
19 shallow well in the exact worst spot, you still end up with  
20 a problem.

21           So, we think that there is a possibility of  
22 developing a realistic set of scenarios and we propose  
23 running those by the new committee. It's, again, a long  
24 one, the Interagency Steering Committee on Radiation  
25 Standards. This replaced the CIRRPC Committee. Mal Knapp

1 is our representative on what we call ISCORS Committee.

2 The next item is coordination. We think we've  
3 done a better job in recent times on this, coordinating with  
4 others. An example we have up to the Commission, a paper  
5 with an MOU in Pennsylvania, the Pennsylvania Department of  
6 Environmental Resources. We, in fact, are working on those  
7 types of elements in that MOU at the present time. We think  
8 it's helped the work coordination issues. For example, the  
9 Parks Township site. We're considering also conducting  
10 information meetings. We had information meetings at Parks.  
11 We're considering doing the same sort of thing for the  
12 Sequoyah Fuels site. It's our experience that -- and I  
13 think the GAO mentioned this. There's payoff when you get  
14 out and talk to the people involved who live near these  
15 facilities. So, Mike and staff have done a good job on this  
16 one. We hope to continue this.

17 COMMISSIONER JACKSON: Mr. Greeves, do you think  
18 that the state level MOUs can be developed in a way so as to  
19 minimize the need for additional site specific MOUs?

20 MR. GREEVES: That's effectively what we're trying  
21 to do in Pennsylvania. That's a state level MOU.

22 We have how many sites in Pennsylvania, Mike?

23 MR. WEBER: I don't recall offhand, but it's quite  
24 a number, 13 or so.

25 MR. GREEVES: And we were running into the things



1 that you saw pop out on the table here. A project manager  
2 in one area working things a certain way and maybe the State  
3 of Pennsylvania has the same situation. We wanted to make  
4 sure that there was an MOU that covered the whole state that  
5 things like open meetings that we would coordinate in  
6 advance, these are the kinds of things you'll see in the MOU  
7 document. I think it's helped us in Pennsylvania. We've  
8 had some bad experiences and they seem to be getting better  
9 now that we're communicating at the right level.

10 MR. WEBER: Thirteen sites in Pennsylvania.

11 MR. GREEVES: The next to the last item was the  
12 thorium and uranium waste disposal. It's been on the table  
13 here a couple of times already. There are a couple of tens  
14 of these sites, as Dave mentioned, and we are working the  
15 four EISs. So, we expect to gain some generic experience  
16 from that. As Commissioner Rogers mentions, what are these  
17 generic things that are going to pop out on the table that  
18 you can take advantage of because there's a whole set of  
19 uranium/thorium sites following these four and we'd like to  
20 take advantage of that experience.

21 The last item is institutional control. If any of  
22 these large sites with long-lived materials on them in fact  
23 stay where they're located, they will need institutional  
24 control for a long period of time. We're looking into the  
25 possibility under the Nuclear Waste Policy Act, there's a

1 provision, specifically 151(b), where the Department of  
2 Energy could take title to these types of sites as long as  
3 they meet NRC requirements and also adequate funds are  
4 provided for maintenance and care of such sites.

5 For example, the Amax site in West Virginia, which  
6 is off the list, the Commission approved that one. That  
7 fell under 151(c), a similar provision. Where the  
8 Department of Energy did take that over, the licensee  
9 provided a funding mechanism so that keeping up defenses and  
10 inspections as necessary were available. If we find any  
11 barriers to this type of an approach, we might consider  
12 recommending legislation to help us look into this.

13 At this point, it may be good for Mike to walk  
14 through his short video of a couple of the EIS sites before  
15 we do the GAO findings, our preliminary response. It's your  
16 pleasure.

17 COMMISSIONER ROGERS: Well, the Chairman has had  
18 to leave, so we're the two. We're focusing on you right  
19 now.

20 The question I had is have you considered running  
21 your streamlined approach through our Advisory Committee on  
22 Nuclear Waste?

23 MR. GREEVES: We haven't at the present time.  
24 This is something that we really developed in the recent  
25 times, but no. That's something we certainly will --

1 COMMISSIONER ROGERS: I think you might find some  
2 useful comments from --

3 MR. GREEVES: We'll do that. I think it's a good  
4 suggestion.

5 COMMISSIONER ROGERS: Yes.

6 MR. GREEVES: Anything else? Should we go through  
7 the video at this point?

8 COMMISSIONER JACKSON: How long is the video?

9 MR. GREEVES: It's a six minute video.

10 COMMISSIONER ROGERS: Okay. Let's go.

11 MR. WEBER: If we could go back to slide 8 before  
12 we actually run the video, you'll see the facilities that  
13 we're preparing these site-specific environmental impact  
14 statements for. Of those facilities, we're going to show  
15 you brief clips for two of those facilities.

16 The first one will be at the B&W Parks Township  
17 shallow land disposal area. That's the SLDA. That's  
18 located about 35 miles northwest of Pittsburgh,  
19 Pennsylvania. The waste at that site originated from the  
20 Apollo fuel facility in nearby Apollo, Pennsylvania.

21 If we want to start the video.

22 [Video shown.]

23 While that's coming up, about 600,000 cubic feet  
24 of uranium contaminated, thorium contaminated waste were  
25 disposed in near-surface disposal trenches at the site,

1 principally in the 1960s. This was done by the NUMEC  
2 Corporation.

3           What we're looking at here is the site. You can  
4 see it's a grassy area, several acres in size. You don't  
5 see anything and I think that's important. What you see  
6 sticking out of the ground are wells and piezometers and  
7 various sampling ports. In the distance are the trenches.  
8 The area in the immediate foreground here is not  
9 contaminated. There's not surface contamination. We're  
10 going to pan around the site so you can see the proximity to  
11 Kiskavere, which is a local residential community just  
12 beyond those trailers. You can see a house there in the  
13 background.

14           Then as we continue to go around, we'll look down  
15 towards trench 10, which was a trench that was located  
16 closer to the operating facility at the Parks Township site.  
17 It's not a lot to get excited about, but it's interesting to  
18 note that there is 600,000 cubic feet of contamination,  
19 waste in the soil there, and also that this was the location  
20 where the trenches were exhumed back in the mid-1960s to  
21 identify the presence of the missing uranium as a safeguards  
22 issue.

23           The next site is the Jefferson Proving Ground  
24 site, which is several miles north of Madison, Indiana. It  
25 was used by the Army to test new production testing of

1 depleted uranium penetrators, 120 millimeter tank rounds  
2 that were used, for example, in the Gulf War. The Army has  
3 proposed to release that site, about 70 tons of depleted  
4 uranium penetrators. This is the firing position at the  
5 site, looking down the line of fire. Those poles are about  
6 a kilometer from the firing location. As we pull back, you  
7 can see a better perspective.

8           Most of the depleted uranium rounds were fired  
9 along this line. What we're looking at here in the  
10 immediate foreground is a trench that's exhumed as these  
11 penetrators first struck the land surface. We'll look more  
12 toward the north now and you'll see the trench because  
13 there's water lying in it.

14           This is one of the most heavily contaminated  
15 portions of the site. The uranium is present in terms of  
16 metal fragments, as contamination of the soil. In fact, in  
17 some cases you can see intact penetrators.

18           What we're looking at here is part of what John  
19 mentioned, the unexploded ordnance. Those flags each  
20 indicate where there's a mortar round or some other munition  
21 that was fired because prior to using this area for depleted  
22 uranium testing, the area had been used for about 40 years  
23 for regular ordnance testing. So, in addition -- there, you  
24 can see some of the rounds. Those are not depleted uranium,  
25 those are the conventional weapons.

1           Now, that is one of the depleted uranium  
2 penetrators. It's a sensitive micro R meter essentially, a  
3 simulation counter. So, you're seeing an exposure rate in  
4 the near proximity to the penetrator of about 400 or some  
5 micro R per hour. That's the penetrator sticking out of the  
6 ground. You can see the area is vegetated. There's a lot  
7 of leaf clutter. These rounds are either on the surface or  
8 within ten meters or so of the land surface. So, they'd be  
9 difficult to find each round. In addition, if they were to  
10 remediate the area by picking up the depleted uranium  
11 penetrators, they'd have to then deal somehow with the  
12 unexploded ordnance.

13           The remedial approach that the Army believes is  
14 appropriate in light of the unexploded ordnance could cause  
15 such environmental damage that it would render the area less  
16 environmentally beneficial. The Fish & Wildlife Service  
17 would like to use this area as a wildlife refuge.

18           That is one of the rounds stuck in a tree. You  
19 can see that throughout the area. It just goes to show you  
20 that the rounds are not entirely within the soil. There are  
21 some in the stream sediments as well as in the vegetation of  
22 the site.

23           The concern would be after the site is released  
24 for the refuge purpose what potential is there that somebody  
25 using the area for some limited way could come in contact

1 with the depleted uranium. Another concern is the long-  
2 term migration potential of the uranium contamination to  
3 groundwater. The Army was nice enough to flag these so that  
4 we could go out and find them readily when we visited the  
5 site last month.

6 You see the area is underlain by carbonated  
7 bedrock. So, the people around the Jefferson Proving Ground  
8 area use groundwater for drinking water purposes. So, there  
9 is quite a concern we heard in the scoping meeting about the  
10 long-term potential for migration of the uranium both  
11 through the surface water pathways or through the  
12 groundwater.

13 Now this is the area where most of the  
14 depleted rounds eventually come to rest. There is one of  
15 the penetrators on the land surface. The green coloration  
16 you see there is the oxidation, weathering on the surface of  
17 the depleted uranium. It's not often that we have a  
18 contaminated site that you can physically go out and look at  
19 the radioactive material. Typically the radioactive  
20 materials are dispersed within soil or waste. Here you can  
21 actually go out and pick up the contamination.

22 Now just a final shot looking at the round.

23 So these brief clips are only intended to give you  
24 some perspective as to what kind of issues are at these  
25 sites and why these environmental impact statements are

1 being developed.

2 In both cases and in the other cases of the sites  
3 listed on the chart, the licensee would prefer to seek a  
4 restricted termination. Because that's a departure from our  
5 conventional approach in decommissioning, the environmental  
6 impact statement is being developed to look at the  
7 alternatives to assess the long-term fate and transport of  
8 the contaminated materials as well as to really provide an  
9 opportunity for the communities and other affected  
10 interests, the state and local government and other federal  
11 agencies, to participate in that process in comparing the  
12 alternatives and ultimately deciding what is the best course  
13 of action at the sites. NRC retains that responsibility, of  
14 course, but we want to solicit the involvement of these  
15 other interests, make certain that when there is a decision  
16 made that it is, in fact, the final decision and that we can  
17 move on and not have to come back and revisit these sites  
18 ten years into the future.

19 MR. TAYLOR: All right. Can you continue then and  
20 we'll finish?

21 MR. GREEVES: Yes. Page 17.

22 [Slide.]

23 MR. GREEVES: What I want to do now is go through  
24 our preliminary response to some of the GAO findings.  
25 You've heard about a number of these already, the first of



1     which is this unknown number of contaminated sites. We  
2     agree, however we think the situation is bounded and  
3     significant progress has been made in going through these  
4     files. As the GAO mentioned, there's about 28,000 of these  
5     files that have been reviewed to date. They go up through  
6     about 1985. There are some 600 files of licensees that were  
7     identified that needed additional review based on that paper  
8     review. A couple of hundred of those have been eliminated  
9     by further review at the region level and there's 23 sites  
10    that have been identified as requiring additional  
11    remediation. Just to give a perspective, four of these have  
12    already been dealt with and released so quickly. Six have  
13    been added to the SDMP program.

14           What we're going to do with the license files that  
15    post date about 1985 is with budget constraints we're going  
16    to have the staff work on those. Essentially that's the ten  
17    years between '85 up to the present, is what it amounts to.  
18    To set some priorities, we will focus on the Part 40 and the  
19    Part 70 licenses contained in those files because our  
20    experience has been that's where the loose contamination,  
21    the type of materials we've had in the past are. So, we  
22    will use that as a mechanism to focus our resources.

23           The next finding was slow progress --

24           COMMISSIONER ROGERS: Excuse me. On this unknown  
25    number of contaminated sites, you're agreeing but you say

1     it's bounded. Can you make anything more than a qualitative  
2     statement there about it being bounded, the number being  
3     bounded?

4             MR. GREEVES: We can look at the numbers. I think  
5     Mike has a little bit more data on it. The point is I think  
6     we've got about another 10,000 files out there, license  
7     files to look at. The question is how many would you expect  
8     to pop out of that?

9             Mike, do you have the percentage? For example, if  
10    we looked at the 28,000, how many of those popped out to be  
11    a problem?

12            MR. WEBER: Yes. About 96 percent of the 28,000  
13    looked at so far were, in fact -- we found adequate  
14    documentation to conclude that there was not a problem at  
15    those sites. Of the 632 sites that had loose contamination  
16    that might ultimately become SDMP sites because of the  
17    contamination, about 34 percent of those sites after  
18    additional review by the NRC staff, they were determined to  
19    not pose significant concerns in terms of residual  
20    contamination.

21            So, we're really working down to roughly 400 sites  
22    that remain. Of the 400, as John mentioned, 23 were indeed  
23    found to have contamination and four have been remediated  
24    and released and the others have been added to the site  
25    decommissioning management plan. There are about 13 or so

1 sites that are going to be remediated, but they've not been  
2 listed in the SDMP because we think that they will be  
3 remediated in a two year time frame and they don't really  
4 pose the same kind of risks that we see at the other sites  
5 that warrant additional attention.

6 I should point out that it's part of the 28,000  
7 licenses that were reviewed. About 500 of those licenses  
8 had sealed sources that could not be accounted for and the  
9 staff is also reviewing those to make certain that the  
10 sources were properly dispositioned.

11 COMMISSIONER JACKSON: So your bounding is really  
12 the 23 minus the ones that have some resolution plus the 10K  
13 that haven't reviewed. Is that correct?

14 MR. WEBER: More or less. If you take the  
15 expectations or what we've seen to date, we find -- in this  
16 case the 23 represents less than a tenth of a percent of all  
17 those licenses that have been reviewed. Now, there may be  
18 additional sites that would come out of the remaining 400  
19 that have loose material. So, that may add to the total  
20 number of sites that may ultimately have soil contamination,  
21 building contamination, things like that.

22 COMMISSIONER JACKSON: But you have these '85 to  
23 '95 time frame, correct?

24 MR. WEBER: Right.

25 DR. PAPERIELLO: But in recent years we've done a

1 better job because we've known from the '80s we've had  
2 problems. Of course in 1981, the disposal by burial has  
3 been banned. So, licensees just can't bury material on  
4 their own property, which they could up until '81. So, for  
5 licensees that have been terminated in more recent years, we  
6 believe we clearly did a better job on ensuring we didn't  
7 have residual contamination. I can say that personally from  
8 having managed that program, at least in our region managing  
9 the program, but we're still going to check.

10 Two, the uses are different. There were a lot of  
11 uses in the '50s and '60s of source material for non-  
12 nuclear things, catalyst, metal hardeners and a lot of  
13 things that just are not being done anymore. So, therefore,  
14 we believe that in recent years we just aren't creating the  
15 problems that used to occur, but we're going to check. It  
16 is bounded because over 27,000 were okay. We scored the --  
17 when a contractor did the review, they scored them. We had  
18 the regions first look at those with the highest scores. So  
19 the 23 that we found came out of the group with the highest  
20 scores.

21 I expect as we go to the lower scores we're going  
22 to find fewer and I've directed the staff -- I want a plot  
23 of the number we're hitting as the scores go lower, number  
24 one, and number two, we need an as-found hazard review,  
25 which you mentioned because these 13 sites are not under

1 non-SDMP remediation. I can only give you anecdotal. I  
2 don't have the data in front of me. But I know at least one  
3 was uranium crystals in a crack in a concrete floor. That  
4 represents almost no risk, but it's going to be cleaned up.  
5 But that's just an anecdote. That's not a good, hard -- and  
6 that's what I think we're going to be finding. But we'll  
7 know better in probably six months to a year.

8 MR. GREEVES: The second finding on page 17 was  
9 the issue of the litigation, coordination and negotiation.  
10 These are issues that we don't control in many aspects, but  
11 where we can we've worked, for example, at the Pennsylvania  
12 MOU, which is up to the Commission. So, we're trying to do  
13 what we can there.

14 COMMISSIONER JACKSON: And that addresses the  
15 coordination issue?

16 MR. GREEVES: Yes. That's an example.

17 [Slide.]

18 MR. GREEVES: Okay. On page 18, the GAO finding  
19 about slow progress with large volumes of uranium and  
20 thorium, that's been repeated a number of times in this  
21 presentation. We obviously agree with that. We're taking  
22 the four cases that Mike talked about earlier through the  
23 EIS process and in the future we expect to be able to better  
24 focus our resources from the things that we learned from  
25 those particular cases and we would be bringing policy

1 issues back to the Commission or assisting the staff in that  
2 effort.

3 The second finding on that page is sites obviously  
4 have difficulties with disposal requirements. There are  
5 states that look at these facilities as a landfill of their  
6 own. They have certain restrictions on it. So, that's  
7 obviously something that is a problem that both we and  
8 actually the three parties, the state, the licensee and the  
9 NRC have to deal with. We are able to, as identified  
10 earlier, defer to EPA on occasion and the simple fact that  
11 there is limited access for these types of materials. So,  
12 that's the reasons we agree with it.

13 COMMISSIONER JACKSON: So there's nothing else you  
14 feel that NRC can do?

15 MR. GREEVES: What we can do is effectively on the  
16 next finding.

17 [Slide.]

18 MR. GREEVES: Slow progress due to the lengthy NRC  
19 reviews, we agree with that and this is the one we're  
20 attacking with the two streamlining efforts and the  
21 initiatives that were made in the briefing earlier. We can  
22 do things, we feel, to speed the process up, to make our  
23 resources more effective and at the same time lessen the  
24 burden on the licensees and we think it would be more  
25 effective.

1           COMMISSIONER ROGERS: Just on the streamlining, we  
2     have been concerned and we've been talking and heard a  
3     briefing from the staff on other ways to streamline our  
4     processes, not just in this particular area in reducing the  
5     number of hand-offs. We heard about that a week or so ago.  
6     Is that also some way that you can help to speed up the  
7     review time?

8           MR. GREEVES: I think that's something that we  
9     need to look at. We've worked with the ones that we've  
10    presented to you today and I talked to Mike about the  
11    business process reengineering aspects that Carl gave you a  
12    briefing on. That is an area that we do need to look at and  
13    see what the benefits are in this area.

14           Okay. The second finding on this page is delays  
15    increase the risk of intrusion. We agree. There's a "but"  
16    here. The but is we think between the licensees and the NRC  
17    that we are vigilant at these sites. We do have documented  
18    in our inspection procedures that when the inspectors go out  
19    there they're to look at the control mechanisms, the fences.  
20    They're to make sure that they're in place. There was an IG  
21    report on this that we responded to and we think we have  
22    more effective procedures in place at this time. We also,  
23    as Mike has told you, have counterpart meetings and this is  
24    emphasized at a number of those meetings and I've personally  
25    spoken to Mike and his staff about it.

1           We think with these controls that the risk is low.  
2           Somebody would have to spend hundreds of hours in these  
3           areas to come up with a dose. So, we agree, but at this  
4           point we think the controls we have are adequate.

5           COMMISSIONER JACKSON: Could you speak more into  
6           the microphone?

7           MR. GREEVES: Thank you.

8           [Slide.]

9           MR. GREEVES: The last GAO finding is about delays  
10          in risk to the groundwater. We agree that this is an issue.  
11          I'd point out that most of the sites we're working with, the  
12          groundwater contamination occurred during the operational  
13          period, not necessarily at the end, once they've finished  
14          and shut down the project. However, we and the licensee  
15          need to be vigilant about that and the responsible party  
16          during his assessment of characterizing these sites should  
17          be doing that analysis. We think that cleanup delays in  
18          most cases are unlikely to cause any significant additional  
19          groundwater contamination. However, as I said, we're  
20          vigilant to this. If we see a significant hazard, we're  
21          going to act on it.

22          [Slide.]

23          MR. GREEVES: At that point it pretty much comes  
24          to the summary and conclusion. We think we have made  
25          considerable progress. As Dave pointed out, we have



1 approved 15 decommissioning plans. That's sort of where the  
2 rubber meets the road and the licensee can start removing  
3 materials. We've also conducted nine confirmatory surveys.  
4 This is where the site is cleaned up. We just need to take  
5 care of some license conditions before it's released. So,  
6 this is the area where the health and safety benefits  
7 result.

8 We also think the measures that we're taking to  
9 streamline would improve the cost effectiveness of both our  
10 activities and the licensee activities. We see this as an  
11 appropriate mid-course correction in this program area. As  
12 I said, there's a number of policy issues out there that as  
13 they crystalize we will bring them back to the Commission  
14 for approval.

15 So, that ends the briefing. I thank you for your  
16 attention and I'm happy to address additional questions.

17 COMMISSIONER JACKSON: Not quite done yet. You  
18 seemed somewhat equivocal. Do you intend to apply a  
19 business process reengineering approach to this area?

20 MR. TAYLOR: I think we'd probably have to look at  
21 it a little closer and have to come back in, don't you,  
22 Carl?

23 DR. PAPERIELLO: Yes. There are criteria for  
24 using business process reengineering. The materials  
25 licensing process, which was a large volume, it was ideal to

1     apply it, I don't know whether this program would be  
2     appropriate, but I intend to look at all the areas in NMSS  
3     to see what would be appropriate.

4             COMMISSIONER ROGERS: The Chairman, before he left  
5     earlier on, had suggested that perhaps you ought to look at  
6     how you're organizing your project managers. I just would  
7     want to refresh your memory that he did raise that issue  
8     with you. I don't know how you feel about it. We haven't  
9     heard anything about the organizational structure that  
10    you're using here and I'm not asking to hear that, but I  
11    just want to leave that with you. He did suggest that you  
12    might want to look at some way of having perhaps a higher  
13    level of managerial responsibility brought to play here.  
14    But since I don't know exactly how you're organized to do  
15    this anyhow, I'm not prepared to comment on it or even ask  
16    you to comment on it. But I just want to remind you that he  
17    did raise that issue.

18            I'd like to take this opportunity to thank the  
19    General Accounting Office for its report. It certainly has  
20    been helpful in focusing our attention on the managerial  
21    aspects of this and certainly gives us a further impetus to  
22    move ahead. These things are always helpful.

23            I think the staff briefing was excellent. I found  
24    it very helpful and I'd like to thank you very much for your  
25    thoughts and progress to date. We'd like to hear another

1 report on how you stand at an appropriate time. I think  
2 some of the ideas that were discussed here a little bit  
3 about how to convey information to the public, where the  
4 overall program stands from a public health and safety point  
5 of view is something I think the Commission would like to  
6 receive some regular information on without necessarily  
7 asking for a formal reporting schedule. I would leave it to  
8 you myself to take an initiative to see that on some fairly  
9 regular basis we know exactly how to be able to respond to  
10 any questions about where this program stands, wherever they  
11 might come from.

12 With that, I thank you all very much.

13 [Whereupon, at 11:19 a.m., the meeting was  
14 concluded.]

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CERTIFICATE

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

TITLE OF MEETING: BRIEFING ON SITE DECOMMISSIONING  
MANAGEMENT PLAN (SDMP) PROGRAM AND  
POLICY ISSUES - PUBLIC MEETING

PLACE OF MEETING: Rockville, Maryland

DATE OF MEETING: Friday, May 19, 1995

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

Transcriber: Carol Lynch

Reporter: Peter Lynch



*United States  
Nuclear Regulatory Commission*

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## **SDMP Policy and Program Issues**

**May 19, 1995**

*Division of Waste Management  
Office of Nuclear Material Safety and Safeguards*

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## **Overview**

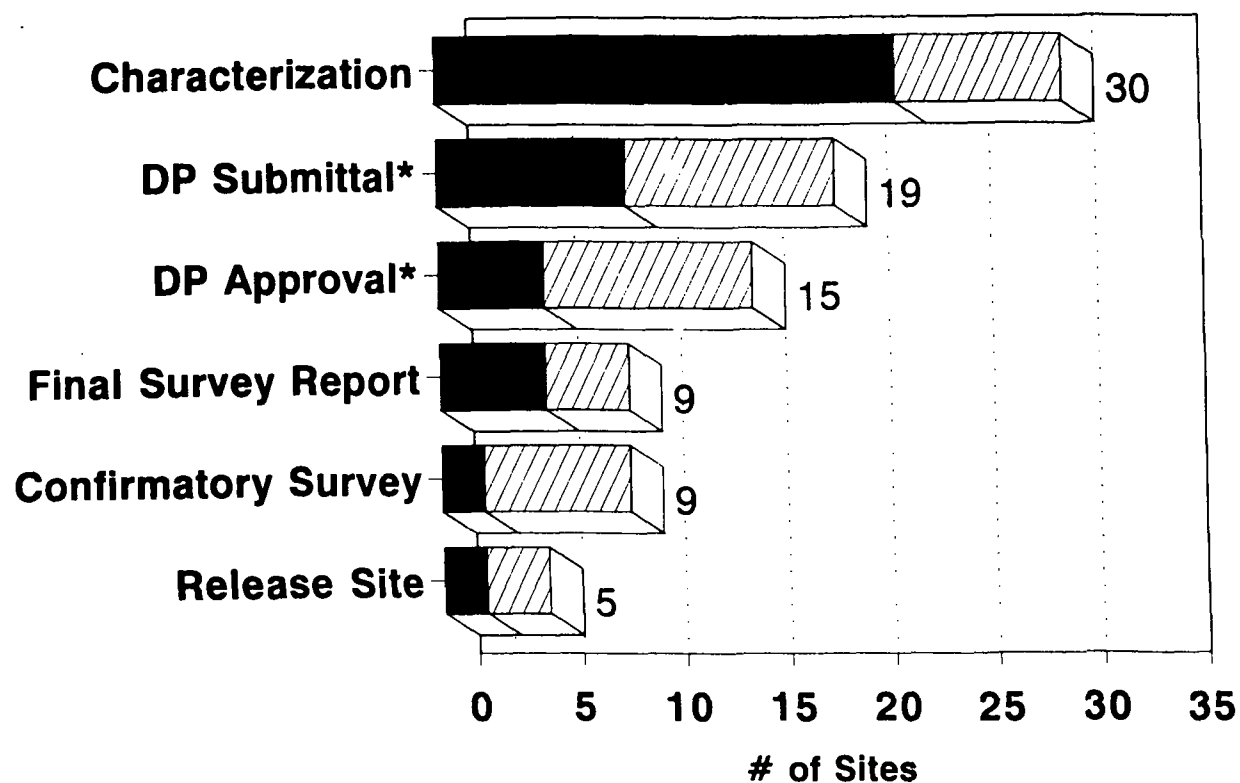
- ***Decommissioning Program Objectives***
- ***Recent Progress***
- ***Site-Specific Environmental Impact Statements***
- ***Management Plan***
- ***GAO Report***
- ***Summary***

## **Program Objectives**

- ***Ensure timely and safe decommissioning***
- ***Document actions thoroughly***
- ***Coordinate with regulators and public***
- ***Minimize regulatory burden***
- ***Develop and maintain review capabilities***

## Recent Progress Overview

### Activities Completed by April 1995



■ Before 4/1/93    ▨ 4/1/93-4/1/95

\*DP = Decommissioning plan for partial or entire site



## **Recent Progress Site Specific**

- ***Site Release - Off SDMP list***
  - ✓ ***Amax, Parkersburg, WV***
  - ✓ ***Chevron, Pawling, NY***
  - ✓ ***Old Vic, Cleveland, OH***
  
- ***Partial Site Release***
  - ✓ ***Cabot Buildings, Reading, PA***
  - ✓ ***Northeast Ohio Sewer District Lagoons, Cleveland, OH***

**Recent Progress  
Site Specific (cont.)**

- ***Decommissioning Complete***
  - ✓ ***UNC Recovery Systems, Wood River Junction, RI***
  - ✓ ***United Technologies/Pratt and Whitney, Middletown, CT***
  - ✓ ***B&W Apollo, PA***
  - ✓ ***ALCOA, Cleveland, OH***
  
- ***Decommissioning Plan Approved - Remediation Ongoing***
  - ✓ ***Elkem Metals Inc., Marietta, OH***
  - ✓ ***Anne Arundel County/Curtis Bay, Baltimore, MD***
  - ✓ ***Watertown Arsenal/Mall, Watertown, MA***
  - ✓ ***Texas Instruments, Inc., Attleboro, MA***

## **Recent Progress *Programmatic***

- ***Developed guidance***
- ***Conducted two workshops***
- ***Evaluated disposal alternatives using low-level waste performance assessment approach***
- ***Continued staff development***
- ***Initiated four Environmental Impact Statements***

## **Site-Specific Environmental Impact Statements**

***Environmental Impact Statements in progress for the following sites:***

- ***Shieldalloy - Cambridge, OH and Newfield, NJ***
- ***B&W Parks Township SLDA - Leechburg, PA***
- ***Jefferson Proving Ground - Madison, IN***
- ***Sequoyah Fuels Corporation - Gore, OK***

***(Video)***

## **Management Plan**

- ***Program Initiatives***
  - ✓ ***Develop procedures***
  - ✓ ***Revise performance measures***
  - ✓ ***Improve efficiency***
- ***Streamlined Approach***
- ***Potential Policy Issues***

## **Program Initiatives**

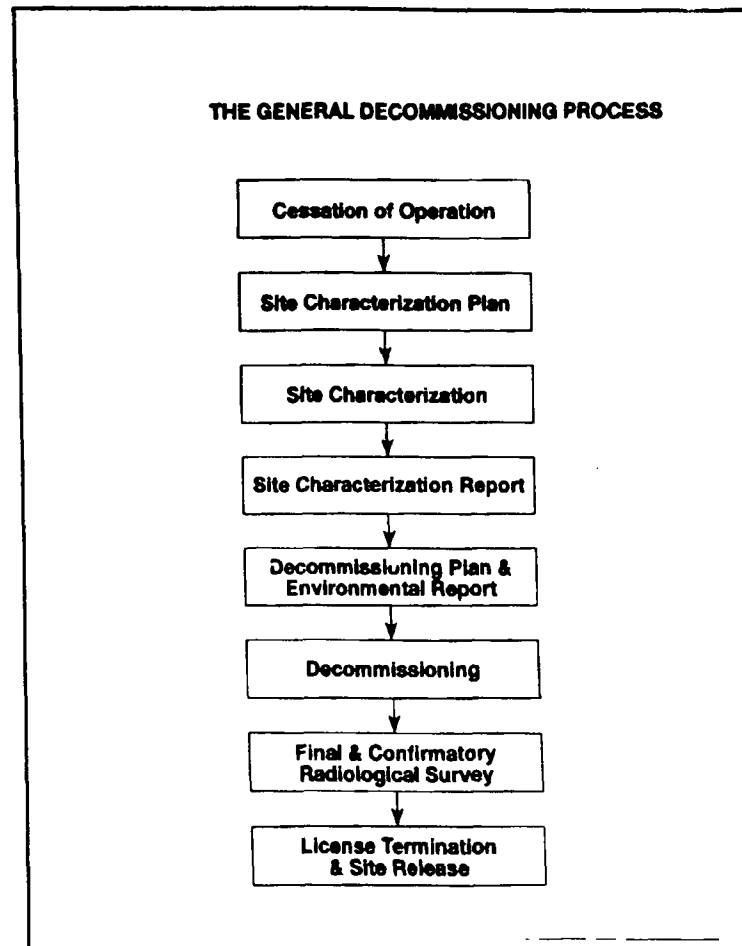
- ***Develop comprehensive Manual Chapter on Decommissioning***
  - ✓ ***Promote consistent and streamlined regulatory reviews***
  - ✓ ***Transfer experiences from SDMP to other decommissioning actions***
  - ✓ ***Resolve deficiencies identified by OIG special evaluation***
- ***Revise performance measures***
  - ✓ ***Recognize performance beyond site release***
  - ✓ ***Evaluate program effectiveness over both short- and long-term***
  - ✓ ***Address deficiencies identified in GAO review***

## **Program Initiatives**

### ***Improve Efficiency***

- ***Conduct interactive resolution process***
- ***Conduct preliminary hazards analysis for new SDMP sites***
- ***Develop SDMP data base***
- ***Defer to EPA on certain sites***

## Current Review Process





## **Streamlined Approach**

### ***Reduce review of characterization plans and reports***

<b><i>Current Approach</i></b>	<b><i>Streamlined Approach</i></b>
<b><i>Site characterization plans and reports reviewed prior to decommissioning plan submittal</i></b>	<b><i>Reduce prior review for good performers</i></b>

- ***Characterization data submitted with decommissioning plan***
- ***Approach implements Timeliness Rule***
- ***Reviewer and licensee efficiency should increase***

***Risk: Approach reduces opportunities for early identification of characterization issues***

## **Streamlined Approach (cont.)**

### ***Reduce scope of NRC confirmatory survey***

<b><i>Current Approach</i></b>	<b><i>Streamlined Approach</i></b>
<b><i>Extensive NRC confirmatory survey conducted at each site</i></b>	<b><i>Increased reliance on licensee QA/QC - reduced scope of NRC confirmatory survey</i></b>

- ***Guidance on data quality objectives being developed in Multi-Agency Radiation Site Investigation Manual***
- ***NRC inspection of survey in-progress could substitute for post-survey confirmation***
- ***All sites would receive at least limited NRC closeout survey***

***Risk: Increases potential for releasing sites with hot-spots and could incur criticism from public***

## **Streamlined Approach Managing the Risks**

- ***Adjust level of regulatory review based on licensee performance***
- ***Rate licensee performance based on technical capabilities and overall performance***
- ***Conduct full complement of reviews for poor performers***
  - ✓ ***Site characterization plans***
  - ✓ ***Site characterization reports***
  - ✓ ***Decommissioning plan***
  - ✓ ***Termination surveys***
  - ✓ ***Confirmatory surveys***

## Potential Policy Issues

- ***Concentration averaging - conduct policy and radiological dose assessments***
- ***Limited disposal site access - defer certain decommissioning actions***
- ***Exposure assessment scenarios- employ more realistic assumptions and resolve through coordination with Interagency Steering Committee on Radiation Standards***
- ***Coordination - conduct local information meetings and develop MOUs with States and others, as appropriate***
- ***Thorium and Uranium waste disposal - consider generic conclusions based on specific EISs***
- ***Institutional Control - consider existing legislation or develop legislative proposal***

## **GAO Report**

- **GAO Finding:**     *Unknown Number of Contaminated Sites*

**Staff Response:** *Agree, but bounded and significant progress achieved*

- ✓    *~ 28,000 terminated licenses reviewed to date*
- ✓    *632 licenses identified for further review*
- ✓    *216 eliminated based on further review*
- ✓    *23 sites identified to date as requiring remediation*

- **GAO Finding:**     *Slow Progress due to Litigation, Coordination, and Negotiation*

**Staff Response:** *Agree*

## **GAO Report (cont.)**

- ***GAO Finding: Slow Progress on Sites with Large Volumes of Uranium and Thorium Waste***

***Staff Response: Agree***

- ✓ ***economic disposal alternative not available***
- ✓ ***site specific EIS's being developed***
- ✓ ***policy issues under consideration***

- ***GAO Finding: Sites Face Difficulties Meeting Regulatory Disposal Requirements***

***Staff Response: Agree***

## **GAO Report (cont.)**

- ***GAO Finding: Slow Progress due to Lengthy NRC Review Time***

***Staff Response: Agree***

- ✓ ***streamline review process***
- ✓ ***improve efficiency***
- ✓ ***manage competing priorities***

- ***GAO Finding: Cleanup Delays Increase Risk of Human Intrusion***

***Staff Response: Agree***

- ✓ ***proactive staff effort to ensure site control***
- ✓ ***low radiological risk to infrequent intruders on SDMP sites***

## **GAO Report (cont.)**

- ***GAO Finding: Cleanup Delays Pose Risk to Groundwater***

***Staff Response: Agree***

- ✓ ***most groundwater contamination from operations***
- ✓ ***groundwater assessment by responsible party during characterization***
- ✓ ***cleanup delays at existing SDMP sites unlikely to cause significant additional groundwater contamination***



## Summary

- *Progress continues in overseeing the remediation of the SDMP sites*
- *Staff is implementing measures to improve the cost-effectiveness of NRC's regulatory program*
- *Policy issues under consideration*