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NUCLEAR REGULATORY COMMISSION

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FUEL CYCLE FACILITIES

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NUCLEAR REGULATORY COMMISSION

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BRIEFING ON STATUS OF ACTION PLAN FOR
FUEL CYCLE FACILITIES

- - - -

PUBLIC MEETING

Nuclear Regulatory Commission
One White Flint North
Rockville, Maryland

Tuesday, May 18, 1993

The Commission met in open session,
pursuant to notice, at 9:00 a.m., Ivan Selin,
Chairman, presiding.

COMMISSIONERS PRESENT:

IVAN SELIN, Chairman of the Commission
KENNETH C. ROGERS, Commissioner
JAMES R. CURTISS, Commissioner
FORREST J. REMICK, Commissioner
E. GAIL de PLANQUE, Commissioner

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STAFF SEATED AT THE COMMISSION TABLE:

SAMUEL J. CHILK, Secretary

WILLIAM C. PARLER, General Counsel

JAMES TAYLOR, Executive Director for Operations

ROBERT BERNERO, Director, NMSS

ELIZABETH TEN EYCK, Deputy Director for Operations,
Division of Fuel Cycle Safety and Safeguards, NMSS

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

9:00 a.m.

CHAIRMAN SELIN: Good morning, ladies and gentlemen.

The Commission is now meeting to receive a briefing from the staff on the progress and plans for carrying out the staff action plan for upgrading the regulatory framework for fuel cycle facilities. This effort is a result of the near criticality incident that occurred at the General Electric Fuel Fabrication facility in Wilmington, North Carolina May 29th, 1991.

Following that accident, an incident investigation team made several highly critical findings concerning our licensing and inspection programs. Subsequently, a task force was assembled to review the current regulatory framework from top to bottom and to make recommendations on improvements. These recommendations were issued in February 1992 in NUREG-1324 for the proposed method for regulating major material licensees. Collectively, their recommendations called for significant reforms of NRC's regulatory system.

The action plan was first discussed with the Commission on November 13th of last year, at which

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1 time the staff provided its analysis of what should be
2 done and what could be done given existing resource
3 constraints. Since then there have been some
4 important changes. The Office of Nuclear Material
5 Safety and Safeguards has been reorganized and
6 competing demands for available resources have
7 increased in other areas, notably in the regulation of
8 medical uses of byproduct material and also in the
9 NRC's perspective oversight of the Department of
10 Energy's gaseous diffusion plants. In other words,
11 there's more and more to do in NMSS and there are not
12 more and more resources to do it. But Mr. Bernero,
13 I'm sure, will tell us how he's going to solve this
14 problem today.

15 Commissioners, do you have any opening
16 remarks?

17 Mr. Taylor?

18 MR. TAYLOR: Good morning. With me at the
19 table are Bob Bernero and Liz Ten Eyck.

20 Mr. Chairman, this is a status update of
21 where we are. I'm generally pleased with the planning
22 and work that has gone on to date, but I think you did
23 hit a key point and one that I'll mention at the very
24 outset. The amount of work that's been going on with
25 our potential oversight of the gaseous diffusion

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1 plants, that work has basically been done by people
2 who are in the group who are responsible for this
3 program. So, it has had some impacts. Of course, the
4 potential for our not taking that responsibility until
5 our own rules are in place, I think some of the
6 pressure will be off in that activity and we can
7 continue then to work this area. As the Commission is
8 aware, we have budgeted in our '94 budget the
9 additional staffing to prepare the rulemaking and
10 other activities to ultimately take over the gaseous
11 diffusion work.

12 With those opening thoughts, I'll ask Bob
13 Bernero to continue.

14 Bob?

15 MR. BERNERO: Yes. I wish I could tell
16 you glibly that we have a solution of how to handle
17 the resource problem, but we don't. We are doing the
18 best we can having taken quite a bit of resources out
19 of this effort, but this is very important and we are
20 being responsive to the Commission's desire and
21 direction that we get the regulatory basis clear and
22 be very careful about implementing first and then
23 developing a regulatory basis later.

24 I'd like to have Elizabeth Ten Eyck, who
25 is part of the new reorganization, do this briefing.

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1 She has the responsibility, among other things, of
2 developing this regulatory basis in the new division
3 of Fuel Cycle Safety and Safeguards.

4 So, Elizabeth, would you please lead off?

5 MS. TEN EYCK: Thank you.

6 Good morning.

7 We would like to discuss today our plan of
8 action for correcting deficiencies that have been
9 identified in the Fuel Cycle Safety Program that will
10 give us the greatest near-term safety benefit. We
11 have directed our high priority attention into five
12 areas which we will discuss in greater detail through
13 our briefing today. They are regulatory development,
14 licensing, inspection, staff training, a licensee
15 self-assessment program, and we also will address, as
16 was previously mentioned, considerations with regard
17 to resources needed to implement the action plan.

18 Next slide, please.

19 (Slide) Previously, the same staff within
20 a single branch were responsible for implementing all
21 the measures with regard to the fuel cycle safety
22 program.

23 (Slide) Next slide.

24 In February of 1993, a reorganization
25 within the Office of NMSS did a number of things. It

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1 combined the safety and safeguards resources within a
2 single division for fuel cycle facility activities.
3 It also gave management an opportunity to reorganize
4 the division to focus on weaknesses that had been
5 identified in the Fuel Cycle Safety Program.

6 As you can see, we divided the
7 responsibility for these major weaknesses through
8 three branches which would allow increased management
9 attention and staff focus. We have a branch that
10 focuses on licensing issues and particularly licensing
11 renewal at this time. Another branch, our Operations
12 Branch, will focus on supporting inspections in areas
13 where we have identified resource limitations of
14 nuclear criticality and chemical processing, and also
15 allow us to have focus on our fire drill type of
16 activities with regard to responding to incidents that
17 occur at the fuel facilities. And finally we have the
18 Regulatory and International Branch which focuses on
19 improving weaknesses that have been identified in both
20 the rules and the guidance.

21 (Slide) Return to slide 3, please.

22 This new reorganization allowed new
23 management to take a fresh look at the weaknesses in
24 the Fuel Cycle Regulatory Program. We looked at
25 NUREG-1324 to see what had been identified there. We

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1 also took into consideration Commission guidance that
2 had been provided and the SRM dated January 15th as a
3 result of the previous Commission meeting on this
4 topic, and lessons learned from the regulatory impact
5 survey that was just recently completed.

6 As a result, we have a new action plan
7 that has deleted some items from the previous plan and
8 has added some new ones.

9 (Slide) Next slide, please.

10 Staff shares the Commission's concerns
11 with regard to weaknesses in the present regulatory
12 base and our primary focus has been on revising and
13 updating both the rules associated with the Fuel Cycle
14 Safety Program and in improving guidance, particularly
15 in regard to guidance for licensees in the integrated
16 safety analysis process and for a standard format and
17 content guide for their licensee submittals. And also
18 to direct focus for staff guidance in developing a
19 standard review plan for evaluating the proposed
20 licenses.

21 (Slide) Next slide, please.

22 Priority focus in the rulemaking area will
23 be directed primarily initially at Part 70. Once we
24 have addressed the regulatory and technical issues
25 with regard to Part 70, we then will move on to revise

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1 Part 30 and Part 40, which we feel will be fairly easy
2 after we have done the initial work required for Part
3 70.

4 We plan to pursue a performance-oriented
5 rule. However, in reviewing documents concerning the
6 weaknesses, it has been highlighted that some of the
7 problems with our present rule is that they are too
8 performance oriented and that we basically say,
9 "Operate safely," and it lacks specificity in
10 particular areas. So, through improved guidance and
11 requiring more specificity in the licensing
12 application, we plan to address that weakness.

13 We plan to work closely with the Office of
14 Research to develop the technical basis and to proceed
15 in a single rulemaking towards improving Part 70. We
16 plan to issue a user need letter in June of this year
17 to proceed in asking the EDO for permission to proceed
18 with rulemaking. So, we are now currently working on
19 this area and are proceeding very well in this area,
20 we think.

21 (Slide) Next slide.

22 Staff has identified the integrated safety
23 analysis process as the new foundation for our
24 licensing and inspection program. We expect that
25 licensees, by performing an integrated safety analysis

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1 to analyze their unique facility processes and to
2 identify potential vulnerabilities, particularly in
3 the nuclear criticality and chemical process area and
4 then to develop protective measures to address these
5 vulnerabilities.

6 There are various ways to conduct an ISA.
7 We have let a contract to provide support in
8 developing a methodology and a guidance document to be
9 used by licensees for the conduct of an ISA. We also
10 plan to have a workshop with the industry who have
11 expressed an interest in being very involved in the
12 developing rules and guidance that we are pursuing.
13 As soon as a draft outline for the guidance document
14 is completed, we plan to have a workshop to discuss
15 our proposed approach with licensees and to also
16 solicit their comments.

17 In the meantime, licensees who have
18 expressed an interest in being involved more and
19 earlier in our regulatory process have formed a
20 facility operations committee under the auspices of
21 the U.S. Council for Energy Awareness. Through
22 meetings with that group, we have found that they, on
23 their own, are proceeding to define what they feel
24 should be in an ISA. They have made comments and
25 these are reflected in the regulatory impact survey

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1 that our approach may be too technical and analytical.
2 We are conscious of that and in working with our
3 contractor will take into consideration a methodology
4 that will not be overly dependent upon resources and
5 personnel to complete.

6 So, we plan to meet with them to better
7 understand their concerns with regard to the ISA
8 approach.

9 MR. BERNERO: Elizabeth, if i could
10 interrupt for a moment, I'd like to make as a matter
11 of emphasis some comments on the integrated safety
12 analysis.

13 Basically, we're dealing with chemical
14 plants here, with sequential processes and especially
15 the Part 70 facilities that have fissile material
16 really need an integrated safety analysis for the
17 various steps of the process where that can be passed
18 through or feedback of important flows, concentrations
19 and whatever.

20 CHAIRMAN SELIN: Not just radiological
21 safety, but the whole --

22 MR. BERNERO: Well, chemical safety as
23 well. You may recall the last incident at Sequoyah
24 Fuels with a digester runaway. That is a classic case
25 that could be revealed by an integrated safety

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1 analysis strictly on the chemical safety and process
2 control. Our focus here is on the methodology for the
3 fissile material chemical plants, but it's quite
4 applicable to the general chemical plants, conversion
5 facilities and the like. This is the heart of the
6 safety analysis for these facilities. Very important
7 to us.

8 CHAIRMAN SELIN: Could you stop for a
9 second? There are two questions I want to ask you.

10 First of all, do chemical plants that are
11 handling highly toxic or explosive or volatile
12 chemicals which don't happen to be radiological, do
13 they do such safety analyses? Is this customary
14 within the industry or is it something that --

15 MR. BERNERO: Well, that's part of -- they
16 do something that one can call an integrated safety
17 analysis, but how thorough, how integrated is it, how
18 thorough is it in looking at failure modes and effects
19 such as that digester runaway at Sequoyah Fuels where
20 a gate valve was stuck open and a conveyer fed back
21 the wrong way, that is a matter of debate. It varies
22 from plant to plant.

23 CHAIRMAN SELIN: Well, are we trying to
24 teach an industry how to do something or are we trying
25 to get them to do something that they already know how

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1 to do in order contexts and focus it on radiological
2 questions?

3 MR. BERNERO: I would say it's closer to
4 the latter and we're trying to get them to do
5 something that they, the broad industry, probably know
6 how to do and focus it on both the radiological and
7 general chemical because they are so closely linked.

8 CHAIRMAN SELIN: The second question I had
9 for any of you, in reading the regulatory impact
10 review, there was -- apart from the ISA itself there
11 was a lot of adverse comment about the amount of ad
12 hoc reporting that we've imposed on them, not through
13 rule but through the bulletin. Are you going to
14 discuss that today also? Is that tied in with the ISA
15 or is that a separate topic?

16 MS. TEN EYCK: No. That's a separate
17 topic.

18 MR. BERNERO: Yes. That's the bulletin on
19 criticality reporting which has been a matter of real
20 debate with the industry. Right after the GE
21 Wilmington event, we put that requirement out and it
22 has been burdensome and we're learning a lot as we
23 proceed. During the regulatory impact survey, from
24 all of the people involved in fissile material, that
25 was probably the strongest single comment we got.

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1 CHAIRMAN SELIN: Do you prefer to discuss
2 that later on in your --

3 MS. TEN EYCK: Yes.

4 MR. BERNERO: Yes.

5 COMMISSIONER ROGERS: Just before we leave
6 this -- I mean we could come back to it later, but
7 we're right on the ISA. A couple of points. One is
8 the SRM of January 15th or whenever it was asked the
9 staff to look into the possibility of whether
10 quantitative estimates could be made of risks. I
11 didn't really see any reference to a quantitative
12 approach to analyses in the ISA and I wondered if
13 you're going to say anything about that.

14 MS. TEN EYCK: Well, actually we were
15 planning to wait until we work with our contractor in
16 developing a methodology. At this point it looks like
17 a qualitative approach may be more desirable in
18 applying it to the fuel cycle safety industry, but we
19 are waiting until further developments with the
20 contractor take place.

21 COMMISSIONER ROGERS: All right. Fine.

22 MR. BERNERO: I might add, Commissioner
23 Rogers, we have had what I would consider something
24 more along the lines of regulatory experimentation and
25 attempting a quantitative analysis of some systems.

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1 That is likelihood of criticality upset or likelihood
2 of criticality accident. The experience hasn't been
3 very encouraging so far. It becomes very complicated
4 and quite uncertain.

5 COMMISSIONER ROGERS: Just a little
6 question about whether words mean the same in this
7 area as they do in others. What do you really mean by
8 vulnerability? My recollection is that in the IPE
9 program for nuclear power plants a vulnerability is
10 really a fault in a certain sense that has to be
11 corrected. My sense is here that you're using the
12 word "vulnerability" in a little bit different sense,
13 that it's not something that has to be corrected
14 necessarily but something that has to be paid
15 attention to. Is that correct or not?

16 MR. BERNERO: I think that's probably a
17 good observation. In general, vulnerability, in my
18 experience with the reactor analysis, is the pathway
19 to the top event on the tree, which is the core melt,
20 whereas here we're talking about vulnerability in the
21 sense of process control where you have to have
22 measurements or constraints or interlocks or something
23 to deal with it. But it remains. It remains a
24 vulnerability. It's just adequately guarded against.

25 COMMISSIONER ROGERS: Okay. Thank you.

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1 CHAIRMAN SELIN: If there's a pause, you
2 should continue.

3 MS. TEN EYCK: Okay. I'll jump right in
4 there.

5 COMMISSIONER ROGERS: Use your
6 opportunities.

7 MS. TEN EYCK: We have made a major
8 modification to the original action plan and that
9 includes the development of a standard review plan.
10 In looking at our ad hoc licensing process we felt
11 that it was fraught with potential problems and we
12 felt that it was imperative as an initial step to
13 develop a standardized consistent documented approach
14 that would be used by license reviewers in the
15 licensing process.

16 To accomplish that we formed a task force
17 with representatives from Headquarters and the region
18 that were experienced in licensing review and we then
19 asked them to develop a draft standard review plan.
20 We now have a copy of that review plan which was just
21 completed last week and we plan to revise this
22 document through staff use and contractor support,
23 particularly in the areas of ISA and chemical process
24 safety.

25 We have divided the SRP into topical areas

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1 which we feel should receive specific focus and should
2 be contained in a license application.

3 (Slide) The next slide shows the topical
4 areas that we feel should be specifically addressed in
5 the licensing submittal.

6 MR. BERNERO: Excuse me, Elizabeth. I
7 just wanted to make the point for the Commission. I
8 have here the copy of the current draft of the
9 standard review plan. One of the more difficult
10 aspects of having it is once again we're in an area
11 where the regulatory basis does not fully exist.
12 There are things in here that we desire to do but our
13 regulations don't call for them. So, what we're
14 trying to do is work on a parallel work path where the
15 rulemaking development and the implementation of such
16 rules via standard format and content and standard
17 review plan are all developed together for greater
18 clarity and greater effectiveness when the time comes.

19 COMMISSIONER REMICK: You're touching on
20 a point -- a question that I had. I'm not sure
21 whether the horse comes before the cart or not. But
22 one of the problems I have, if your licensing process
23 has been ad hoc in the past and looking at some of the
24 comments you received on the regulatory impact survey,
25 a lot of things have been put in at the licensing

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1 stage is conditions by individuals at the time thought
2 they were important. Are you going to be reviewing
3 whether the result of that ad hoc process makes sense
4 or are you just going to take what has been in kind of
5 the accumulation of the ad hoc process and make a
6 rule. I mean that all those things are good things
7 that have been put in through the years by
8 individuals.

9 MR. BERNERO: No. I'd like to offer an
10 example. In fact, I think it helps illuminate this.
11 We're trying to examine whether these things are right
12 that were put in. Let's take the example of quality
13 assurance. I think I've told the Commission before
14 our Part 70 does not have explicit requirements for
15 quality assurance and yet we have piecemeal applied it
16 as if it did have a clear regulatory basis. By
17 developing a standard review plan and the content and
18 guide, we are evaluating what would one really want or
19 expect to see as a proper safety proportional quality
20 assurance program and reconsider at that point and get
21 that into the regulatory basis and into practice as
22 effectively as possible. But not to just simply
23 enshrine what's been there. No. We're really trying
24 to extricate ourselves from that, but unfortunately
25 these plants all exist. They are operating and we're

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1 in the license renewal process simultaneous with all
2 this work.

3 COMMISSIONER REMICK: Well, I would hope
4 a very careful analysis of those things that are
5 currently there, and I'm sure some of them are very
6 good, but there presumably are some that perhaps were
7 put in and don't make too much sense. They might have
8 at the time and they might not now.

9 COMMISSIONER ROGERS: Before we leave
10 this, this whole review was prompted by the GE event,
11 as we remember, and one of the big problems there was
12 a lack of configuration management. In your standard
13 review plan, where does one find configuration
14 management? Is it woven throughout these? Is it
15 specifically addressed in any one of them? It seems
16 to me that is really, and has been, one of the big
17 problems with these licensees. I don't automatically
18 see it here.

19 MR. BERNERO: Well, I myself haven't yet
20 read the draft. I just got this copy this morning.
21 But I would expect to see it in Chapter 2, in Chapter
22 4 and in the quality assurance Chapter 3. The
23 integrated safety analysis is critically dependent on
24 configuration management because one is basically
25 looking at the process and for things to come true.

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1 Going back to the question of vulnerabilities, if the
2 proper safeguards against various vulnerabilities are
3 necessary and are installed, it's crucial to maintain
4 them. That was, as you recall, a very distinct
5 problem in GE Wilmington.

6 COMMISSIONER ROGERS: Yes.

7 MR. TAYLOR: Do you have anything you want
8 to add?

9 MS. TEN EYCK: No.

10 COMMISSIONER ROGERS: Well, the key word
11 there, it seems to me, is management.

12 MR. BERNERO: Yes.

13 MS. TEN EYCK: Okay. As Mr. Bernero
14 mentioned --

15 COMMISSIONER CURTISS: Liz, before you go
16 on, let me follow-up on a couple of points here. The
17 schedule that you've set out in SECY-93-128 only has
18 one bullet for the SRP. That is to say to complete
19 the rough draft, which I guess has now been submitted
20 and will be evaluated. I have two or three questions
21 in that regard. Is it your intention to solicit
22 public comment in the context of reviewing individual
23 license renewals or how will the SRP be put to public
24 comment?

25 MS. TEN EYCK: Well, actually, we just

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1 planned to revise our SRP through staff use until we
2 published the proposed draft with the proposed rule.
3 When the rule is published, and our schedule in August
4 of '94, we plan to have the standard review plan and
5 the standard format and content guide and the guidance
6 for completing an ISA available to publish it.

7 (Slide) Now, if you would display the
8 background slide, please.

9 Maybe in our Commission paper we did not
10 include this, but under the item of guidance we have
11 published the SRP and standard format and content
12 guide in August of '94.

13 COMMISSIONER CURTISS: Yes, I see that
14 here.

15 MS. TEN EYCK: And if you will note, that
16 corresponds with our date to publish the proposed
17 rule.

18 COMMISSIONER CURTISS: Okay. Going back
19 to the point that Bob made earlier, one of the key
20 points that I think you've emphasized here is that the
21 SRP and the rule will proceed in parallel, that those
22 are essential efforts that have to be done at the same
23 time because much of what you have in there as you've
24 described it doesn't have in turn a regulatory basis
25 in Part 70 or 30 or 40 or wherever. It's really that

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1 point that I think the SRM sought to emphasize from
2 the previous briefing, that there needs to be a firm
3 regulatory basis upon which to inspect and to renew
4 licenses and so forth.

5 Picking up on the renewal of licenses,
6 without jumping ahead here, would it be your intention
7 for those license renewal activities that are
8 proceeding right now to use the rough draft SRP as the
9 basis for reviewing those licenses and imposing
10 license conditions?

11 MS. TEN EYCK: In essence, yes, because we
12 feel those are the important things that should be
13 included in the rule, but there may be some
14 exceptions. But those were the areas where in
15 development of the SRP we will highlight where --
16 these are items that are not currently addressed in
17 the rules so that the license reviewer realizes that
18 when they reviewed the license and also our regulatory
19 development group can proceed in addressing those
20 particular areas that aren't currently in the rule.

21 MR. BERNERO: Yes, the license reviewers
22 have to be very conscious of the fact that many of the
23 things in the SRP are not in the existing regulatory
24 base. They're only being developed and that makes it
25 all the more a very delicate balance.

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1 The pieces or parts of the SRP are also
2 deeply involved with the actual development in that
3 action plan, the very last page of the SECY paper,
4 notice for integrated safety analysis, that portion of
5 the SRP carries on with the development of the
6 integrated safety analysis. It's basically similar in
7 concept to what we do with a more straightforward
8 regulation and a regulatory guide being developed
9 together so that it is very clear when the regulation
10 is promulgated that this is the way the NRC recognizes
11 one can adequately fulfill or satisfy that regulation.

12 COMMISSIONER CURTISS: Right. Right.

13 MR. BERNERO: So, we're trying to strike
14 that balance, but at the same time we have license
15 renewal cases before us and we've got to walk the
16 tightrope.

17 COMMISSIONER CURTISS: And it seems to me
18 that's the challenge. I was impressed with how far
19 you've come since the last briefing in focusing in on
20 an integrated approach here to bring together, for
21 example, the SRP, the ISA, the development of the rule
22 change to Part 70, the guidance and the timely renewal
23 process. You properly point out that we've got
24 renewal applications pending and you can't just stop
25 the earth while you continue with the rulemaking

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1 process.

2 So, I was impressed with the effort to
3 bring all these together in an approach that, in my
4 view, really does properly emphasize that these things
5 need to go together at the same time, that we ought
6 not to be proceeding with license renewal activities
7 and with, in turn, the imposition of requirements, as
8 Forrest has alluded to, that are really drawn out of
9 the air or out of a reviewer's mind, but not with a
10 regulatory basis if we're not at the same time
11 proceeding with the SRP in the development of the
12 rule.

13 So, I guess I'd commend you for the steps
14 that you've taken to emphasize the importance in what
15 you've got here of developing the regulatory basis.
16 Having said that and we can return to the question in
17 a minute, my biggest concern here is the point that
18 Mr. Taylor emphasized at the outset, and that is that
19 you've got limited resources here and some of this may
20 need to suffer in a recommendation or an approach
21 whose principal benefit is integrating all these
22 things to move forward. When we get to the resources
23 question, I'd like to discuss if you have limited
24 resources in this area, what suffers here? Do you
25 proceed with license renewals but not the finalization

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1 of the SRP? Do you hold in abeyance Part 70? Just
2 where are we on that? We can return to that when you
3 get to the resources question.

4 MR. BERNERO: Well, okay, let's do it that
5 way.

6 MS. TEN EYCK: Okay.

7 (Slide) If we could move to slide 10.

8 We are also focusing on improvements in
9 the licensing program, as we've been discussing. We
10 have already discussed our standard review plan and
11 our activities with regard to that.

12 (Slide) If you could move to the next
13 slide, we would also like to address a very important
14 area and that is focusing on improving the timely
15 renewal of our license applications that are presently
16 in-house.

17 We presently have seven major fuel
18 facility licenses in-house for timely renewal. As you
19 can see from our schedule here, we have proposed to
20 complete the ones that are in-house before the end of
21 FY-'96. This is an improvement over the schedule that
22 had been in place before we reorganized, which was
23 with the expected completion by the year 2003. So, we
24 feel that we have made improvements in this area. I
25 think it's also important to note that we plan to move

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1 ahead with the licensing renewal process before the
2 rule is actually in place, but we will condition the
3 license so that it can be modified by amendment to
4 incorporate items that will be in the rule process,
5 such as the 50.59 type of a capability where the
6 licensee can make changes to its operation without
7 prior NRC approval if it doesn't involve an unreviewed
8 safety question. So, we are addressing that concern.

9 (Slide) If you'll return back to slide
10 10, please, the staff's objective in the renewal
11 process is to reconfirm that licensee's operations are
12 in sufficient conformance with our requirements to
13 permit a ten year renewal cycle. However, shorter
14 periods may be necessary when the licensee's process
15 is not sufficiently robust to allow that, or in areas
16 where we might need for staff's consideration to time
17 the licensing renewals so that they do not all expire
18 and come back to the NRC for renewal at the same time
19 period. So, we are focusing on that.

20 CHAIRMAN SELIN: How many facilities are
21 we talking about altogether that will be covered by
22 this rule?

23 MS. TEN EYCK: We have approximately 12
24 fuel cycle facilities.

25 CHAIRMAN SELIN: Okay. And at least five

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1 of them will be renewed for ten years before all the
2 documents are done?

3 MS. TEN EYCK: There's that possibility,
4 but with the condition to allow modification to
5 address the changes in the rule.

6 CHAIRMAN SELIN: Following up on
7 Commissioner Curtiss' comments, you're in a box, we're
8 in a box because we don't want to stop all work while
9 we get our paperwork in order. On the other hand, to
10 get too far ahead of the paperwork leads to the
11 possibility that we have licensing people operating
12 from a non-review basis and imposing conditions. The
13 key question is what kind of atmosphere are we working
14 in? We're working in a cooperative atmosphere where
15 both the licensees and in some cases these are -- not
16 many, but in some of the cases there's an active
17 public interest community also.

18 Is there sort of general agreements on all
19 sides that says, what we're trying to do in an ad hoc
20 basis while you're regularizing all this is a step
21 forward or is this a highly contentious set of
22 provisions that are going in at this point?

23 MS. TEN EYCK: I'm not sure that we could
24 say that we're perfectly in step. I think that the
25 regulatory impact survey indicated that the licensees

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1 feel that we may be over reacting to the GE event and
2 we may be imposing requirements on them that aren't
3 necessary just as they have complained about the event
4 reporting that was put on by bulletin. But I think
5 that we are very dedicated to working in a very open
6 manner with the licensees. We're planning to have
7 workshops all along the way to let them be part of our
8 process on identifying what should be needed or the
9 direction that we're moving so that by the time that
10 the rule is published, there really shouldn't be any
11 surprises for them. We would hope that with our
12 working with them that they can be working in the
13 areas once the guidance for the ISAs is published that
14 is out and we will be working closely with them on
15 that, that they will know that they will have to do an
16 ISA and that they can move ahead in that area.

17 MR. BERNERO: Let me speak to that a
18 little bit. We have had some rather favorable
19 experience so far. Going back just a couple of years,
20 the organization of the subject facilities into a --
21 I'll call it an owners group or collective group, was
22 not very clear. They have coalesced fairly well into
23 a facility operations committee that can coordinate
24 their efforts and you can get something useful in the
25 way of collective response, even though these

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1 facilities don't have many similarities in many cases
2 and the ones that do have proprietary interests to
3 serve because they are competing in the same market.

4 But nevertheless, we have had very
5 successful public workshop experience and we have been
6 able to put on the table -- for instance in the
7 critical area of integrated safety analysis, we have
8 been able to put on the table, "Here are concepts,
9 here are objectives, here are the desires that we see
10 that we'd like to codify." We are getting very
11 constructive reaction to that.

12 Now, it is -- you know, maybe that's
13 overkill --

14 CHAIRMAN SELIN: That's understandable.
15 Other than the Sequoyah General Atomics, none of these
16 is a highly contested renewal or are there any other
17 renewal applications in which there are opinions that
18 are very different from those of the licensees?

19 MR. BERNERO: I can't recall any that are
20 in contest now.

21 CHAIRMAN SELIN: I'd just like to stress
22 that we're on -- you know, you're doing very sensible
23 things. We're on very shaky grounds in the way we're
24 doing it. You've got to make sure that if we're going
25 to rely on the appearance of a consensus through

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1 public meetings or workshops that all interested
2 parties are invited or all come. If, in fact, we run
3 into people who seriously believe that there are
4 opportunities to comment on these procedures, be they
5 from the industry or the other side or are being
6 compromised by the fact that we're developing both the
7 guidelines and the application of guidelines, I'm
8 going to have to take a deep breath and see where we
9 stand.

10 My own opinion is you're following a very
11 sensible approach, but it's not that easy to defend it
12 if it's in a highly controversial situation. So, the
13 sense of consensus is really a very important
14 prerequisite to continuing on this path, at least from
15 where I sit.

16 MR. TAYLOR: We agree.

17 COMMISSIONER CURTISS: Could I follow-up
18 on that point because the Chairman is touching on what
19 I consider to be a key point. If we had a consensus
20 on all the requirements that should be adopted,
21 irrespective of whether they were in our regulations
22 or not, we'd be moving forward much more expeditiously
23 on renewed licenses. We wouldn't have the backlog
24 that we have, we wouldn't have these pending in timely
25 renewal for as long as they have been.

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1 My own experience in having visited every
2 one of these facilities is that there isn't a
3 consensus yet, although your efforts to move in that
4 direction through the use of workshops, through your
5 decision to discontinue the team assessment program
6 and get down to the kinds of activities that you've
7 described here are all commendable, in my view, and
8 hopefully will bring that consensus.

9 The reason the regulatory basis is so
10 critical in my view is that the process as we've seen
11 it operate in the past, and particularly in the timely
12 renewal context, licensee comes in for renewal of an
13 application, we've got a series of things that we'd
14 like to discuss with them as a result of experience
15 either at that particular facility or, as has been
16 discussed earlier, because of events at other
17 facilities. They may not have been in for now up to
18 ten years under the tenure policy and in the past may
19 not have been in for up to five years. So, we have a
20 whole list of things that a reviewer has jotted down
21 over the years on issues that ought to be addressed
22 based upon inspections and events and the activities
23 during the interregnum from the last renewal.

24 What typically happens, and this is my own
25 view, is that where you've got a sharp disagreement

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1 about a particular requirement where we feel strongly
2 that something needs to be done and the licensee in
3 turn feels strongly that that's not a wise thing to do
4 because it costs a lot of money or what have you, what
5 happens is that we get at loggerheads with the
6 licensees and as a consequence, because of timely
7 renewal, the licensee continues to operate, we
8 continue to jawbone with the licensee and we don't
9 resolve the issue in that context.

10 It's, in my view, essential to address
11 that kind of question, that we be able to point to a
12 regulatory basis that has been developed with the kind
13 of public comment that the Chairman has alluded to and
14 I think your overall plan will move us in that
15 direction. It will not be sufficient in my view to
16 simply point to a rough draft SRP as a basis for a
17 requirement or a contractor's report on an ISA. In
18 order for this process to work effectively in the
19 future, for future renewals and to a degree with the
20 ones that are pending, it's essential in my view that
21 we develop that regulatory basis so that there's the
22 public comment that goes along with it and so that
23 there's a consensus that the Agency is behind and the
24 requirements that we believe need to be imposed on a
25 generic basis.

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1 Now, having said that, that won't solve
2 all the problems. I had a chance to take a look at
3 the NFS renewal and it looks to me like roughly one-
4 third of the license conditions in that license are
5 generic, but two-thirds roughly involve specific
6 considerations at the NFS plant. So, you're still
7 going to have those licensee-specific questions
8 because of the variability of the design and the
9 operations of the facilities. But at least with
10 respect to the things that are generic, one-third in
11 the case of NFS' recent renewal, it seems to me that
12 that regulatory basis is going to be critical as a
13 means for breaking the logjam that we have now.

14 MR. BERNERO: You know, this gives me an
15 opportunity to comment on the prioritization of what
16 gets first choice, the license renewal or the
17 regulatory development. The answer I would give is
18 neither, that we're trying to maintain a balance to
19 avoid the extremes. The extreme, of course, at one
20 end would be to -- we just do nothing but regulatory
21 development and forget about license renewal for a
22 number of years, which we cannot do. That would be
23 quite disorderly.

24 The other extreme is to go back to the
25 jawbone and say, "Never mind why I demand it, I demand

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1 that you have this in your license." That too is a
2 failure. That too is a failure because we don't have
3 a thorough, properly developed regulatory basis.

4 What we've tried to do in this action plan
5 and what we're trying to do as we go forward is
6 maintain this balance to be as developed a regulatory
7 basis as possible and as well founded a license
8 renewal as possible and not indefinite postponement of
9 license renewal or indefinite postponement of --

10 CHAIRMAN SELIN: But don't miss the key
11 points that are coming out. There really are two.
12 The first is that the Agency owes it to the general
13 public to be clear about on what basis we're making
14 our decisions and that's what you're trying to do in
15 this point. But the second is that the reason for
16 doing them together is not so much because one is just
17 as important as the other, it's so that the two will
18 inform each other, that the problem of the timely
19 renewals is that they're a trap, they're not timely
20 and they're not renewals and therefore people continue
21 to operate on very flaccid grounds and they have
22 enormous incentive to stall us on all of these issues
23 because whatever happens in the renewal, it will be a
24 tougher regulatory environment than the one that it's
25 coming from.

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1 So, if you can use these to inform the two
2 processes, that's fine, but the key to my comments and
3 I think the key to Commissioner Curtiss' comments, and
4 I know the key to Commissioner Remick's comments are
5 that it's very important to develop this basis so that
6 future renewals will be both clearer and more explicit
7 and they won't depend on capricious steps.

8 Look, you're trying to become more
9 specific than we are in the ISAs on the SRPs and on
10 the form and content document. We're trying to be
11 more general in our concern so that each one isn't
12 *suigeneris*. You're trying to speed up the license
13 renewal process and make it more predictable so that
14 the incentives aren't just to stall forever, but we
15 don't have the basis why we're doing it. So, what's
16 absolutely essential is that some kind of consensus be
17 form so that the intermediate steps, although not as
18 good as you'll be able to do three years from now, are
19 better than you would otherwise be able to do and that
20 we make small progress but in the right direction, not
21 enshrine a lot of things that we'll regret a few years
22 from now.

23 That's why I keep emphasizing the public
24 meetings, the workshops and some kind of a formal
25 notice and comment, so that people really do have a

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1 chance to make themselves heard. I, at the time,
2 didn't appreciate it, but when Commissioner Remick
3 pushed to do a more formal regulatory impact review on
4 the materials side, that turns out to have been a
5 terrifically important step forward. I'm pleased that
6 you're reacting to these comments. But you are going
7 to be doing some ad hoc stuff, as Commissioner Curtiss
8 points out. There's a lot of site-specific things and
9 you've got to document these, you've got to make sure
10 we know where we've gone on these points so that we
11 don't find out that we've built a process that's got
12 a lot of unfortunate precedents built into it right
13 from scratch.

14 MR. TAYLOR: I think that's a challenge to
15 the new management in this process too, what you've
16 outlined. I think we'll do what you've said.

17 CHAIRMAN SELIN: Why don't you try to
18 continue, Ms. Ten Eyck.

19 MS. TEN EYCK: (Slide) Okay. Proceeding
20 onto slide number 12.

21 A number of changes are also planned for
22 the inspection program. At the suggestion of the
23 Commission, we reconsidered the team assessment
24 program and decided that it should be discontinued.
25 Although the large, broad-based team assessments did

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1 identify a number of weaknesses in the licensee's
2 program, particularly in the areas of nuclear
3 criticality and chemical process safety, we feel that
4 the resources can be more efficiently used by doing
5 enhanced inspections. These enhanced inspections will
6 not replace the inspections normally conducted by the
7 regions, but will provide technical support to focus
8 on specific areas of concern identified by the region
9 during their inspections.

10 We planned to invite OSHA to participate
11 in these enhanced inspections because of our
12 commitment to involve them in our team assessment
13 program. We also are constrained in this area because
14 of the lack of expertise in the Agency in the nuclear
15 criticality and chemical process area. Just as we had
16 the problem in the material control and accounting
17 area of having all of the diverse expertise that was
18 needed in the regions we consolidated the support for
19 nuclear criticality and chemical process safety to
20 Headquarters.

21 We presently at NMSS only have six
22 individuals that are skilled in nuclear criticality
23 safety and they are split between the Fuel Cycle
24 Safety and Safeguards Division and the Transportation
25 Works. We have three that are considered fairly

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1 senior people, two in the Fuel Cycle Safety area and
2 one in the Transportation area, and we have four --
3 I'm sorry, three other individuals, one in the Fuel
4 Cycle Safety Division and two in the Transportation
5 area that have various degrees of experience varying
6 from one to four years. This is an area where we are
7 in need of senior expertise and we have, of our
8 vacancies that we will discuss later, five that we are
9 looking to fill with nuclear criticality expertise, so
10 this is an area that we do need to focus on.

11 CHAIRMAN SELIN: Before you get off this,
12 in the regulatory impact statement there was a
13 complaint that the assessments or the various
14 inspections -- I mean, follow-ups that we ran were too
15 massive, they took too many resources, they got in the
16 way of solving the problems rather than helping solve
17 the problems. Do you generally agree with those
18 statements and, if so, is this a step in the right
19 direction?

20 MS. TEN EYCK: Yes. We supported those
21 findings, but the original team assessments were
22 taking a much more broad-based approach and review of
23 the facility.

24 What we're proposing is to use very small
25 streamlined, very focused enhanced inspections that

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1 would only involve maybe two or three, four people at
2 the most, and focus in on a specific area. But we did
3 agree with their comments and have taken that into
4 consideration in our program.

5 MR. BERNERO: That was a very persuasive
6 comment in the regulatory impact survey and not long
7 before the regulatory survey interviews were done we
8 had done a major team inspection, very resource
9 intensive for us and for the licensee. And although
10 it did yield useful information, it was just evidently
11 a much more costly way to do it than we should do it,
12 so I think that was a -- it's a lesson learned.

13 MS. TEN EYCK: Also, I think a lesson
14 learned is that the industry has pointed out that we
15 should try to do what we can prior to an inspection on
16 either getting information from them or working with
17 them to schedule the inspection so that it takes the
18 best advantage of their resources and also minimizes
19 the time that we have to spend on-site and I think
20 that's a very important input that we're going to take
21 into consideration.

22 COMMISSIONER REMICK: On the matter of
23 criticality, we were recently told that the exemptions
24 being granted in nuclear power plants of criticality
25 monitors are being issued by NMSS to Part 70 licensees

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1 at nuclear power plants when they initially get fuel.
2 Are you granting any exemptions for criticality
3 monitors in fuel cycle facilities?

4 MS. TEN EYCK: I personally am not aware
5 of that.

6 MR. BERNERO: No, not -- to my knowledge,
7 we have not done that. We have quite a few --
8 actually, the process -- the process controls are in
9 many ways more important than criticality monitors,
10 but I know of no exemptions.

11 MR. TAYLOR: That's being granted by NRR.

12 COMMISSIONER REMICK: Well, but in their
13 answer they indicate that NMSS is the one who's
14 actually granting it in Part 70 so they're doing it in
15 power reactors, the argument being that the
16 criticality monitorings don't prevent criticality, and
17 that's true. They serve another purpose.

18 MR. TAYLOR: Maybe we'll have to get back
19 with you.

20 MR. BERNERO: Yes, let me get back to you
21 on that, Mr. Commissioner. The licensing practice at
22 reactors when new is that the first license issued is
23 an NMSS license to store the new fuel.

24 COMMISSIONER REMICK: That's right.

25 MR. BERNERO: And that, I presume, is

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1 where the --

2 COMMISSIONER REMICK: That's where the
3 exemption is being granted.

4 MR. BERNERO: -- subject comes up.

5 COMMISSIONER REMICK: And NRR is granting
6 it subsequently when the Part 50 license is issued.

7 MR. BERNERO: Yes.

8 COMMISSIONER REMICK: I was trying to
9 understand the reasons for that, but it comes up now.
10 Are we granting those exemptions in fuel cycle
11 facilities? I hope not.

12 MR. TAYLOR: We'll look at that and get
13 back to you.

14 COMMISSIONER REMICK: Okay.

15 MS. TEN EYCK: Okay.

16 And also, in the future after the
17 licensees have conducted and implemented through and
18 licensed their ISA we plan to have small
19 multidisciplinary effectiveness review teams go out to
20 visit the facility to validate the licensee's
21 identification of their vulnerabilities and to review
22 the effectiveness of the implemented protective
23 measures. We also feel that these effectiveness
24 reviews will be very useful in judging the adequacy of
25 our revised regulatory base.

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1 COMMISSIONER ROGERS: Just before you
2 leave that, I take it then the enhanced inspection
3 areas of focus will not come out of the ISAs?

4 MS. TEN EYCK: That's true. They will
5 come out of day to day situations where the inspectors
6 in the region identify areas of design and integration
7 and adequacy of their programs or through incidents
8 where the regions will need additional support in
9 evaluating potential events at facilities.

10 MR. BERNERO: That doesn't preclude
11 something in future when the smoke clears to have
12 focused inspections on the ISA process or the --

13 COMMISSIONER ROGERS: Well, I was thinking
14 more of areas identified through the ISA.

15 MS. TEN EYCK: Actually, in that regard
16 what we're planning to do and we haven't been able to
17 proceed quite in step like we have in some of the
18 other areas in the inspection area is that we need to
19 develop inspection procedures for chemical process
20 safety. And we also need to revise our procedures for
21 nuclear criticality.

22 We envision, as I mentioned earlier, the
23 ISA being the new foundation for our licensing and
24 inspection program, that the inspection procedures
25 will be focused on the potential vulnerabilities and

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1 protective measures that have been identified through
2 the ISA process and then the inspectors will then go
3 and inspect the continued conformance and double
4 contingencies with regard to nuclear criticality that
5 are in place. So that would be the primary focus of
6 our inspection program once the ISAs are in place.

7 COMMISSIONER ROGERS: But you're not going
8 to wait for the ISAs to start the enhanced
9 inspections?

10 MS. TEN EYCK: No. Actually, the only
11 thing that's holding us up at all, as comments have
12 been made, you can't inspect safety into the program.
13 We want to have a good regulatory base that identifies
14 what we need and then we will focus our inspections in
15 that area.

16 COMMISSIONER CURTISS: Liz, could I
17 follow-up on Commissioner Rogers' point? Are these
18 team inspections -- these enhanced inspections
19 Headquarters-based?

20 MS. TEN EYCK: They will be organized by
21 Headquarters, but will involve regional inspection
22 participation. So we envision maybe a senior nuclear
23 criticality person leading the team to focus on a
24 particular thing with the regional inspection
25 participation and even a contractor support if there

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1 are areas that we need that to do a thorough review.

2 COMMISSIONER CURTISS: Can you give me a
3 relative sense if you looked at these enhanced
4 inspections from an FTE standpoint as to the FTEs
5 you're allocating to enhanced inspections versus the
6 FTEs that you would expect in the normal inspection
7 process?

8 MS. TEN EYCK: It would probably be much
9 smaller, but what we have actually done is diverted
10 the team inspection resources that were in the region
11 to Headquarters to assist us in that area. But it
12 would be small compared to our normal team program,
13 our inspection program in the region.

14 COMMISSIONER CURTISS: From an FTE
15 standpoint, you're planning on using the same number
16 of FTEs that you had previously allocated for the team
17 assessment program for these enhanced inspections?

18 MS. TEN EYCK: No, I won't say that.
19 We've had to divert the resources from the team
20 inspection program in the region across the board to
21 be able to implement our action plan, so it hasn't
22 been directed specifically at least in the near term
23 on the enhanced inspections.

24 MR. BERNERO: Yes. We literally don't
25 have the resources to support team assessments.

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1 That's one of the lessons we learned. We couldn't
2 squander the precious resources on big team
3 inspections and so we're really metering these people
4 out in small fractions of FTE at a time because we
5 have so few people with the skills too.

6 MS. TEN EYCK: In fact, to give a little
7 insight into reality, we actually only have one person
8 right now in our inspection section that has a safety
9 background and we will be losing him in June. We have
10 four to five vacancies in that area that it's very
11 important for us to fill to even be able to do our job
12 in this area.

13 MR. BERNERO: I was just going to add that
14 we have a training course in criticality safety at the
15 Technology Training Center this summer. We hope to
16 get 20 people through that. That's all internal with
17 the big focus on our regional people and that will
18 greatly enhance the quality of the field inspection we
19 get.

20 COMMISSIONER de PLANQUE: You've talked a
21 lot about the nuclear criticality area, but the
22 chemical safety area it's still not clear to me
23 exactly how this is going to be covered.

24 MS. TEN EYCK: That is an area where we
25 are very weak. We have -- I think three of our

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1 vacancies that need to be filled are specified for the
2 chemical safety area and we also are exploring
3 contractor support that we can get in this area both
4 for rules and regulatory guidance area as well as
5 inspection support.

6 COMMISSIONER de PLANQUE: So compared to
7 the nuclear criticality safety area which is in
8 trouble in FTEs, this one is dismal in this area?

9 MS. TEN EYCK: Chemical is right there
10 with it or even worse.

11 MR. BERNERO: Well, I would just add we
12 have very few people who have some capability in this
13 regard, some senior staff who do have this capability,
14 but not enough that we can say we are systematically
15 covering this subject with any thoroughness, and it's
16 a crucial subject. I bring you back again to that
17 Sequoyah Fuels incident. It's that kind of a process
18 upset that's strictly a chemical safety, chemical
19 system runaway that can injure or even kill people.

20 COMMISSIONER de PLANQUE: We had suggested
21 in the SRM that you look for procedures and standards
22 used in other industries. Has there been any time to
23 make any effort in that direction?

24 MS. TEN EYCK: I plan to address that
25 later in the presentation.

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1 COMMISSIONER de PLANQUE: Okay.

2 COMMISSIONER REMICK: I still have a
3 problem -- or, I shouldn't say a problem, a question
4 on the enhanced inspections versus team assessments.
5 I just assumed by the enhanced inspections that that
6 would be a region-based supplemented by expertise if
7 it was needed from Headquarters.

8 At the moment, I don't see the difference
9 between what was team assessments and now what we're
10 calling enhanced inspections. It sounds like they're
11 just mini-team inspections or team assessments. Could
12 you tell me a little bit why they would be organized
13 by Headquarters versus something that the region might
14 need enhancement in certain areas if they found a
15 problem? There's something I'm missing.

16 MS. TEN EYCK: Okay. Well, there are some
17 significant differences.

18 One, the team assessments were broad-based
19 assessments that were led by the region but that had
20 support from other regions and Headquarters that
21 addressed the broad-based program at the licensee
22 facilities.

23 The smaller team enhanced inspections are
24 going to be very technically focused and the lead was
25 transferred from the region to Headquarters for them

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1 because of the lack of the technical expertise in the
2 regions in these areas, so we are having a pool of
3 expertise at Headquarters. And because of the very
4 technical focus of these enhanced inspections we plan
5 to lead them from Headquarters.

6 COMMISSIONER REMICK: I see. Okay. It's
7 because of the expertise. You've centralized the
8 expertise.

9 MS. TEN EYCK: Yes.

10 COMMISSIONER REMICK: Okay. Thank you.

11 MS. TEN EYCK: (Slide) Okay. Moving to
12 slide 13, we also identified improvements that were
13 needed in the training program to broaden and refine
14 the license reviewers' and inspectors' understanding
15 of the fuel cycle processes and nuclear criticality.
16 As Mr. Bernero addressed, we have made some headway in
17 this area.

18 A working group was formed with
19 representatives from NMSS, AEOD and the regions to
20 focus on the specific training needs of the staff and
21 they also are in the process of developing a standard
22 training program for both licensing reviewers and
23 inspectors. We have developed a five day course that
24 focuses on fuel cycle facility technology and it was
25 previously given last summer and we plan another

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1 course this summer to help focus people in the fuel
2 cycle technology.

3 Because of comments such as received in
4 the regulatory impact survey that it took licensees
5 five minutes to explain that they weren't a power
6 reactor when they called the operations center or that
7 they spent needless time answering questions that only
8 applied to power reactors, we did provide a short
9 three day training course for the operations center
10 staff to help them understand the fuel cycle
11 facilities.

12 We also have developed a journeyman level
13 nuclear criticality course for inspectors and that
14 will be given for the first time this coming June 7
15 through 11, so we are working in this area and we hope
16 to make additional improvements in the future.

17 COMMISSIONER ROGERS: I take it there's
18 nothing like ERDS contemplated here for these
19 facilities?

20 MR. BERNERO: No. There isn't even a
21 standard flow sheet in this business.

22 COMMISSIONER ROGERS: Good.

23 MS. TEN EYCK: (Slide) Okay. The next
24 slide, please.

25 In recent meetings with representatives of

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1 the Facility Operations Committee we were impressed
2 with the aggressive role that they have taken to
3 develop a licensee self-assessment program. They have
4 been interfacing with other industries in learning
5 what evaluation techniques are used there and they
6 have also considered techniques such as a single group
7 going around and evaluating the various facilities.
8 They feel at this point that that would probably have
9 problems because of proprietary concerns, but they are
10 working to develop a methodology that could be
11 accepted and used by all the fuel cycle facilities.

12 In light of this, we propose to let the
13 industry take the lead in developing a self-assessment
14 program in which we would work closely with them and
15 also monitor their progress and we then would wait for
16 them to propose to us for our consideration a self-
17 assessment program.

18 MR. BERNERO: It's in reference to this,
19 Mr. Chairman, that earlier I spoke to you about
20 "they," being the industry broadly, particularly in
21 the area of chemical safety, there's a great deal to
22 be obtained by this local or narrow industry that we
23 regulate from the broader chemical industry.

24 CHAIRMAN SELIN: That leads to two
25 questions. First of all, is there a vehicle for the

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1 industry's meeting and doing this work? Is there an
2 organization or an association of some kind?

3 MS. TEN EYCK: Yes. They have organized
4 under the auspices of the U.S. Council for Energy
5 Awareness.

6 CHAIRMAN SELIN: And the second is, in a
7 couple of the documents there was some discussion,
8 particularly in the regulatory impact document, about
9 trying to use industry standards for chemical and
10 mechanical engineering. Are there such sets of
11 standards that can be used as a basis for the
12 inspection itself?

13 MS. TEN EYCK: I'm not sure specifically
14 on standards that would apply to the nuclear area, but
15 I think that they have raised that with us with regard
16 to developing guidance documents, that they have
17 suggested that we let an industry group such as the
18 ANSI standards or whatever develop our standards and
19 that in their license they just recommend that they
20 will follow or commit to following an industry
21 standard.

22 One thing that we have found, though, is
23 that a number of the industry standards have been
24 built on NUREGs and guidance documents developed by
25 the NRC, so we're kind of in a little point that we

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1 can't at this point necessarily depend upon an
2 industry standard group to develop the guidance that
3 we need at this point.

4 CHAIRMAN SELIN: I wasn't referring to
5 customized standards that these 12 facilities would
6 develop for us but whether there are the equivalent of
7 the American Society of Mechanical Engineers, you
8 know, pressure vessel and other type standards that we
9 could use by reference in these essentially chemical
10 processes or do we have to do it all from scratch?

11 MR. BERNERO: No. Let me speak to that.

12 There are standards out there. Just by
13 way of example, the chemical industry has developed
14 and supports and emergency response standard for
15 transportation accidents. If you have a tank truck
16 full of some chemical that's in an accident, there's
17 a very quick way for emergency response personnel to
18 find out what it is, how toxic, how to deal with it
19 and so forth.

20 There are many, many standards out there
21 with the chemical industry in general, but the ones
22 that would be useful to us in these regulated
23 facilities aren't all that clear to us and this, I
24 think, is an industry initiative that they're
25 proposing that they might identify some self-

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1 assessment and I hope some standards.

2 CHAIRMAN SELIN: I personally would react
3 very differently from a standard that's already been
4 put out, promulgated, vetted, for which our licensees
5 are a special case versus something that our licensees
6 put out that is developed by order for our own
7 industry. In the first case, you have the benefit of
8 a large amount of experience and a large amount of
9 relatively disinterested review. In the second case,
10 I don't care if we draft the standard or they draft
11 the standard. If it's customized for our operation,
12 it's got to get the same level of review that any NRC
13 standard would get.

14 MS. TEN EYCK: Right.

15 (Slide) Okay. We'll move to the next
16 slide and talk a little bit about resource
17 applications. I think we have addressed this topic
18 through the briefing. We would like to say that,
19 although the resources to implement the action plan
20 are identified in the five year, the '94 through the
21 '98 five year plan, in NMSS we have had to divert
22 these resources to address the Gaseous Diffusion
23 Enrichment Program that was transferred to the Nuclear
24 Regulatory Commission from the Department of Energy
25 according to the Energy Policy Act of 1992.

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1 MR. BERNERO: Elizabeth, let me pick up on
2 this because Mr. Taylor said early in the briefing
3 about the long track.

4 As you know, we have been talking to the
5 Commission and talking to the OMB and so forth about
6 just how, when and where the NRC will take regulatory
7 jurisdiction in gaseous diffusion and we're going to
8 have a briefing of the Commission on June 1st on that
9 subject. I hope it's all clear by then. The decision
10 has been made apparently to go on the long track and
11 our resource and budget estimates reflect that, the
12 later jurisdiction track.

13 The point I would like to make here is
14 that we have conducted a Gaseous Diffusion Enrichment
15 Program since last fall de facto in order to deal with
16 the new law and that prospect. We actually formed a
17 group out of the fuel cycle because those are the
18 people with the necessary skills and that has had a
19 severe resource drain on this area.

20 So, the staff is coping with it. I wanted
21 the Commission to understand that as we go forward in
22 this we are working with existing hiring constraints
23 and taking people from other areas of NRC that are in
24 surplus and retreading wherever possible, but
25 basically we're trying to conduct this work in that

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1 delicate parallel operation with all the resources we
2 can get.

3 COMMISSIONER CURTISS: Bob, are you
4 suggesting that, if in fact a decision is taken for us
5 to take over regulatory jurisdiction for the
6 enrichment facilities after our standards are
7 promulgated and not earlier, that that in turn would
8 free up resources for this area because we will not be
9 working on anything but the regulations for the next
10 couple of years?

11 MR. BERNERO: No. Our present budgeting
12 reflects the longer term, the late option as we've
13 been calling it of late.

14 MR. TAYLOR: Borrowing people to work on
15 this.

16 MR. BERNERO: Yes. I have borrowed people
17 to get there, but now we're going -- I'm speaking of
18 FY '93 is when I borrowed the people or just moved
19 them from one group to another.

20 COMMISSIONER de PLANQUE: Is that the 13
21 we're talking about that you mention in the paper?

22 MR. TAYLOR: Thirteen is in the '94
23 budget.

24 MR. BERNERO: Yes. The '94 budget is
25 where we are regularized and we have the allocations

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1 of FTE according to the late option for enrichment and
2 this activity according to the action plan we're
3 describing to you.

4 COMMISSIONER de PLANQUE: That's needing
5 13 or needing 12 additional, 12 in addition to that
6 13?

7 MR. TAYLOR: No. It's needing the 13
8 which are in the '94 budget which will allow him to
9 conduct the rulemaking and necessary activities
10 associated with the gaseous diffusion late assumption
11 of responsibility and will then allow him to backfill
12 into the people from fuel cycle that he has borrowed,
13 so those --

14 COMMISSIONER de PLANQUE: You need 12 new
15 positions by August 1 in order to backfill?

16 MR. BERNERO: Yes. These are the
17 vacancies, the backfill. Yes, this is the backfill.

18 MR. TAYLOR: This is the backfill.

19 COMMISSIONER de PLANQUE: That's to
20 release the original 13 back to where they were.

21 MR. BERNERO: There were real people that
22 were moved creating those vacancies. Those are the 13
23 and they are actually conducting the enrichment
24 program right now.

25 MR. TAYLOR: So in the next months we'll

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1 be trying to get well across the board, restoring fuel
2 cycle as well as having the people necessary for the
3 gaseous diffusion rulemaking activity.

4 COMMISSIONER CURTISS: I'm hopelessly
5 confused. How many people do you need to -- this plan
6 I think is really quite commendable. The only
7 question about it is resources.

8 MR. TAYLOR: I don't think you should be
9 confused. We are planning to hire up the additional
10 13.

11 COMMISSIONER CURTISS: Okay. To do --

12 MR. TAYLOR: Well, they will both backfill
13 into fuel cycle and go into the gaseous diffusion.
14 That's where those resources are coming from.

15 CHAIRMAN SELIN: Assuming the longer
16 turnover, right?

17 MR. TAYLOR: Right. Right.

18 MR. BERNERO: The late option.

19 COMMISSIONER de PLANQUE: But that means
20 you're going to use a total of about 12 or 13 for the
21 gaseous diffusion effort?

22 MR. TAYLOR: Yes.

23 COMMISSIONER de PLANQUE: Right.

24 MR. TAYLOR: And we have the slots that
25 are empty now that we've borrowed from and we'll

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1 backfill those.

2 COMMISSIONER CURTISS: All right.

3 MR. TAYLOR: Do you understand what we
4 have --

5 COMMISSIONER CURTISS: I think I do.

6 MR. TAYLOR: The total may come out to be
7 20 or something like that. Okay?

8 COMMISSIONER CURTISS: You have identified
9 the resources necessary to carry out the enrichment
10 activities --

11 MR. TAYLOR: For rulemaking.

12 COMMISSIONER CURTISS: -- assuming the
13 long haul --

14 MR. TAYLOR: Right.

15 MR. BERNERO: Assuming the long-term.

16 COMMISSIONER CURTISS: -- and that
17 consists of about 13 people. Some of that effort may
18 end up getting freed up to do this activity, but
19 probably not much.

20 In order to carry out this program, you
21 need to hire, you need to full 12 currently open
22 positions.

23 MR. TAYLOR: That's the idea.

24 COMMISSIONER CURTISS: And those 12
25 positions, together with -- is there anybody else in

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1 the Agency or have they all been diverted to uranium
2 enrichment?

3 CHAIRMAN SELIN: How many individuals?

4 COMMISSIONER CURTISS: Thirteen. Have all
5 13 of the people been diverted to enrichment?

6 MR. BERNERO: Not entirely. Some people
7 have been detailed to enrichment. Other people have
8 been put permanently in enrichment and what we have
9 done is gotten those people -- in just a couple of
10 cases, we've gotten them from outside of NMSS, but
11 most of them came from the fuel cycle over here
12 creating these vacancies.

13 So now with the FY '94 budget we will be
14 on a normalized or regularized basis with
15 approximately 13 people conducting the Enrichment
16 Program and in general this 12 blanks to be filled.
17 They're vacancies created by that effort to be filled
18 primarily from within the NRC, but there are some
19 special skills that we mentioned earlier, criticality
20 safety, where we really don't have the skills within
21 the NRC.

22 COMMISSIONER CURTISS: Okay.

23 MS. TEN EYCK: Okay. Well, in conclusion,
24 we recognize that there are significant weaknesses
25 throughout the Fuel Cycle Safety Program and that they

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1 didn't develop overnight but through years of
2 increased responsibility, new sensitivities, lack of
3 resources and in some cases probably an over reliance
4 on the industry to always take the appropriate action
5 with regard to health and safety.

6 We are now at a point that requires major
7 Agency focus on this area, we feel. We feel that we
8 have developed a comprehensive action plan that
9 addresses areas where we can get the great near-term
10 safety benefit from our efforts and with the needed
11 resources we feel that we will be well on our way to
12 making major improvements across the board in the Fuel
13 Cycle Safety Program.

14 That would conclude our --

15 MR. TAYLOR: That concludes our
16 presentation.

17 MS. TEN EYCK: -- presentation.

18 CHAIRMAN SELIN: Commissioner Rogers?

19 COMMISSIONER ROGERS: Well, I don't have
20 any additional questions, but my general impression is
21 that we've come a very long way from where we were two
22 years ago or thereabouts. I've been very impressed
23 with what you've accomplished so far. Obviously there
24 are concerns that have been brought up here this
25 morning by various Commissioners that all are

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1 important points. But it does seem to me that the
2 whole trust of this program has taken on a higher
3 degree of professionalism, I'll call it, than I'd seen
4 before. It seemed to me it was kind of scattered
5 around. What is appearing to me now is a much more
6 sensible, understandable approach to everything that
7 we're doing here and I really want to commend the
8 staff for, I think, enormous progress.

9 MR. BERNERO: Thank you very much.

10 CHAIRMAN SELIN: Commissioner Curtiss?

11 COMMISSIONER CURTISS: Yes. I don't have
12 any further questions, but let me just follow-up on
13 Commissioner Rogers' comments.

14 I too am quite impressed, I'm almost
15 astounded, at the progress that you've made in this
16 area really since January in the staff requirements
17 memo. A couple of comments. I think you've taken the
18 staff requirements memo to heart in the effort that
19 you've presented here and detailed in more depth in
20 SECY-93-128. In particular, your focus on moving
21 forward aggressively with what I think at this point
22 is a coordinated plan to provide a regulatory basis
23 for license renewal reviews, for inspections, for
24 enhanced inspections and so forth is right on the mark
25 and it's, I think, what the Commission was emphasizing

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1 in that SRM, or at least it was what I in particular
2 wanted to see.

3 I think while we have benefitted to a
4 degree from the team assessment program, I think
5 you've reached the right decision particularly given
6 limited resources to discontinue that now and to focus
7 more sharply on the regular inspections and these
8 enhanced inspections. I too had some of the same
9 questions that Commissioner Remick raised as to
10 whether we were just refocusing and retitling the
11 inspection and I'm comforted from what you've
12 described, that it really is intended to be an
13 expertise-driven focus on narrower areas rather than
14 the broad almost diagnostic type effort that we
15 undertook in the team assessment program.

16 I think the big question mark I guess in
17 my mind -- having said that you brought a much sharper
18 focus to the NUREG-1324 effort, the big question mark
19 in my mind is the resources. This plan is, in my
20 view, right on the mark, not because of any individual
21 recommendation that you've made, but because you have
22 brought together several related aspects of the NUREG-
23 1324 effort and the discussions that you had
24 previously with the Commission and you've managed to
25 pull those together in what I think is a very

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1 effective and will be a very workable area if the
2 resources are available to carry out this program in
3 the fashion that you've outlined.

4 That, as I say, is the only area in which
5 I still have a question. It would be useful for my
6 own personal benefit and perhaps the others if there
7 could be some further amplification upon how you're
8 staffing up to carry out this program and then perhaps
9 periodic reports as to how the staffing is coming so
10 that the Commission can be fully up to speed on how
11 this program is going forward. I think your effort is
12 commendable and I really think it's a top drawer
13 proposal.

14 CHAIRMAN SELIN: Commissioner Remick?

15 COMMISSIONER REMICK: There was a question
16 I was going to ask earlier. Commissioner Curtiss
17 addressed it and gave an answer which seems reasonable
18 to me, but I don't know if the staff agrees. That was
19 on the question of why have license renewals taken so
20 long. Why are there so many that have not been
21 renewed? Now, Commissioner Curtiss indicated that
22 that was because we are trying to add things and
23 people objected to it, so we have not gotten them
24 completed. That sounds reasonable to me, but is that
25 the reason?

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1 MR. BERNERO: Well, Commissioner Remick,
2 from my own experience with it, let me reflect. In
3 many material licenses where there have been simple
4 process, license renewal can be delayed for a very
5 long time because it has just no resource for
6 attention to it. You know, there's no attention paid
7 to the case for quite awhile because you don't have
8 someone to review it. That's not the case here.

9 In these facilities, what has happened for
10 years, and this goes back many years, I remember as a
11 branch chief where a technical issue lies before you.
12 The regulatory basis doesn't even speak to the issue
13 and you look at the issue and in order to renew the
14 license you need a basis to say, "This is acceptable.
15 This is the appropriate thing to do to justify renewal
16 of this license." There ends up being a case specific
17 debate that goes on as to what is needed, what does it
18 take and it often leads to now you have to go back to
19 the drawing board and reformulate your application.
20 That's why it has taken so long. It is -- on each of
21 the safety or quality issues it is this ad hoc
22 development of issues and it's very exhaustive.

23 COMMISSIONER REMICK: I don't completely
24 understand why that comes up only at license renewal.
25 It seems to me that that might come up five years

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1 before a license renewal or four years or whatever.
2 Why are these issues suddenly having to be addressed
3 at license renewal? Is that when we have the licensee
4 where we want them?

5 MR. BERNERO: No. No. Actually, timely
6 renewal gives just the exact opposite effect.

7 MR. THOMPSON: Commissioner, if I might
8 add a couple of issues that really didn't come up in
9 addition to what Mr. Bernero was talking about.

10 We did have a couple of incidents, both at
11 NFS with the criticality issue, with GE Wilmington and
12 the criticality. They diverted quite a bit of the
13 staff resources and attention away from the -- when I
14 say the more routine aspect of the timely renewal
15 aspects and it took away much of our emphasis on the
16 renewal. The NFS down blending of the HEU, that
17 really became a very high priority activity for the
18 staff and Agency. So, those types of activities did,
19 in essence, take precedence and higher priority than
20 the routine license renewal. So, it is an ongoing
21 process. It's dynamic. A lot of changes have been
22 going on. The events, I think, were really
23 significant in impacting our ability to do a timely
24 renewal.

25 COMMISSIONER REMICK: So, the fact that we

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1 have the backlog now is due to those type of things.
2 Traditionally we've had a backlog of license renewal
3 in this area. Has it just been our course of
4 business?

5 MR. BERNERO: It's of longstanding. There
6 has been a backlog, for better or for worse, for many
7 years.

8 COMMISSIONER REMICK: I'm not trying to be
9 critical. I'm trying to understand why.

10 MR. TAYLOR: I think it's some of both,
11 the backlog built up, the events affected it, the work
12 on the down blending affected it. There are a lot of
13 factors that have contributed to it.

14 MR. THOMPSON: And I think things like the
15 standard review plan for management tools to oversee
16 how the planning process is going for license renewal.
17 Remember, we went to the ten year time frame in effort
18 to get away from this every five years because almost
19 by the time you've renewed it the application is in
20 for renewal.

21 MR. TAYLOR: From a scheduling standpoint,
22 they ought to be staggered. It would be an ideal
23 situation.

24 COMMISSIONER REMICK: In this area, how
25 much either requirements or guidance do we provide in

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1 the area of training to licensees? If we provide
2 guidance -- it's a question I've asked of NMSS in the
3 past. Not specifically Part 70 licenses. Is it
4 prescriptive? In other words, did 20 years ago
5 somebody say, "This is how I learned the trade. I had
6 ten hours of this and two hours of that and six hours
7 of this and that's what everybody should have," or is
8 there a more systematic approach to the development of
9 training to Part 70? Do we have a reg. guide for --

10 MR. BERNERO: No, none that I can recall.

11 COMMISSIONER REMICK: Okay.

12 MR. TAYLOR: The NFS has training programs
13 for their various segments of their operation. Of
14 course they have a pretty stable work force too, but
15 I've observed, because I've been there, that they do
16 have their own training programs. But each of these
17 are unique facilities in many ways that take
18 individual training.

19 MR. BERNERO: Yes. We have requirements
20 obviously for the health physics, the general skills.
21 But requirements unique to the chemical safety and
22 criticality safety, not in the sense of prescriptive
23 anything, codes or standards for training. I don't
24 think we have anything like that.

25 COMMISSIONER REMICK: Okay. Well, in some

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1 of the parts under that NMSS annals you do have
2 training requirements and you do have reg. guides
3 that, from my viewpoint, are very prescriptive based
4 on 20, 30 years ago somebody thought that's what
5 people should have because that's what they had.

6 MR. BERNERO: Yes.

7 COMMISSIONER REMICK: So, in this area,
8 you don't have.

9 MR. BERNERO: None that I can recall.

10 COMMISSIONER REMICK: Okay. All right.

11 And finally in the resource area. For
12 what it's worth, Bob, I can share with you some advice
13 my father used to give me. That was if you can't get
14 your work done in 24 hours, work nights.

15 MR. TAYLOR: I'll use that, sir.

16 CHAIRMAN SELIN: Commissioner de Planque?

17 COMMISSIONER de PLANQUE: Yes. I just
18 have two questions.

19 Going back to the chemical area again,
20 this still worries me a little. If I understand you
21 correctly, we're going to rely quite a bit on the
22 licensee group identifying standards that are out
23 there for the industry to use.

24 MS. TEN EYCK: No, I didn't mean to imply
25 that. I meant to imply that the industry was looking

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1 closely at other industries on what techniques could
2 be used for the self-assessment program.

3 COMMISSIONER de PLANQUE: Okay.

4 MS. TEN EYCK: I think in the chemical
5 process area we have a lot of work to do in looking at
6 what other standards are being used out there and,
7 quite frankly, to date haven't had the opportunity to
8 do it because of lack of resources.

9 COMMISSIONER de PLANQUE: Is there any
10 way -- I don't know what OSHA's expertise is in this
11 area, but is there any way we could short circuit this
12 by tapping into their expertise?

13 MS. TEN EYCK: We certainly plan to
14 coordinate with OSHA. We also plan to look at some
15 other contractor resources that have worked in both
16 supporting programs for OSHA and EPA. One comes to
17 mind is the group at Oak Ridge. So, we are going to
18 be looking at those types of resources to provide
19 support to us.

20 COMMISSIONER de PLANQUE: Okay. Just one
21 more item. In the SRM we had suggested that because
22 there might be some mutual interest here that you keep
23 the agreement states informed of what we're doing. Do
24 you have any plans in that direction?

25 MS. TEN EYCK: I think in the past that we

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1 have always invited the agreement states to our
2 workshops and that we have participated in their
3 workshops. So, when we get further along in our
4 regulatory development efforts, we will be working
5 more closely with state programs.

6 COMMISSIONER de PLANQUE: And you see that
7 mainly by way of the workshop format?

8 MS. TEN EYCK: And coordinating with the
9 Office of State Programs so that they can disseminate
10 that information to their agreement states. I
11 understand they have a good network for coordination
12 with them.

13 MR. BERNERO: We systematically try to
14 talk to the states through the agreement state
15 function or through the general state function, like
16 the CRCPD all week meeting that's going on right now.
17 I was there yesterday. We routinely inform them of
18 rulemaking efforts, regulatory development efforts,
19 things like that in proportion to their interest or
20 participation in them.

21 So, we would rely on that a great deal
22 too, not just our workshops in this area alone.

23 COMMISSIONER de PLANQUE: Okay. And I
24 would just add to the compliments of my fellow
25 Commissioners on the incredible progress you've made

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1 in this area.

2 MR. BERNERO: Mr. Chairman, if I could
3 have the floor for a moment, I just wanted to give
4 some due credit. I really appreciate the compliments
5 in that regard and I'd like to recognize for the
6 appropriate credit the management and staff of the new
7 Division of Fuel Cycle Safety and Safeguards. They've
8 done an excellent job.

9 CHAIRMAN SELIN: Excellent.

10 A couple of comments. First of all, on
11 the staffing review, Jim, I think at some appropriate
12 point -- it's not just in this area. NMSS is going
13 through so much pushing and pulling to try to
14 reorganize the organization and meet a lot of new
15 requirements. So, insofar as whatever periodicity
16 seems appropriate for saying how are we doing filling
17 these skills, it probably ought to be office wide
18 since we could have had the same discussion on medical
19 or on safeguards or a lot of other questions.

20 The second is I was thinking Ms. Ten
21 Eyck's remark about the program as too performance
22 oriented, we just tell them to do a good job, and that
23 was really bothering me since I believe in
24 performance-oriented rules. She came up with this
25 program. I finally figured it out, I think. The

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1 problem is we don't give them the measures of how
2 we're going to evaluate the performance. It's not
3 that it's too performance oriented. As you go through
4 this, that's really an insight that you brought. But
5 how are we going to measure good performance is going
6 to be a key question.

7 I would just admonish to make sure that
8 while we go through this transition period, take
9 smaller steps rather than bigger steps and try to
10 avoid going in the wrong direction. In other words,
11 if we're going to do things without having a
12 regulatory guide or a rule as a basis, when faced with
13 the question about how far do we go on an interim
14 basis, take the smaller step so that we don't end up
15 taking big steps that we will then go back once we
16 finally have a rule and say, "No, this went too far."
17 You know, make real progress, but be a little cautious
18 on that.

19 I do believe, in addition to the general
20 agreement I have with particularly Commissioner
21 Curtiss' remarks about how much progress you made, is
22 that unlike the last presentation you've caught on to
23 the idea that we're not looking for more regulation or
24 less regulation, we're looking for obviously better
25 regulation, but particularly more explicit, you know,

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1 so people know in advance what the rules are. I think
2 you really -- I don't believe the last presentation
3 gave us the feeling that that was understood and this
4 one clearly does. So, you and all of your colleagues
5 should be commended on the work.

6 Thank you very much.

7 (Whereupon, at 10:32 a.m., the above-
8 entitled matter was concluded.)
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CERTIFICATE OF TRANSCRIBER

This is to certify that the attached events of a meeting
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TITLE OF MEETING: BRIEFING ON STATUS OF ACTION PLAN FOR
FUEL CYCLE FACILITIES

PLACE OF MEETING: ROCKVILLE, MARYLAND

DATE OF MEETING: MAY 18, 1993

were transcribed by me. I further certify that said transcription
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STATUS OF ACTION PLAN FOR REGULATING FUEL CYCLE FACILITIES

COMMISSION MEETING
MAY 18, 1993

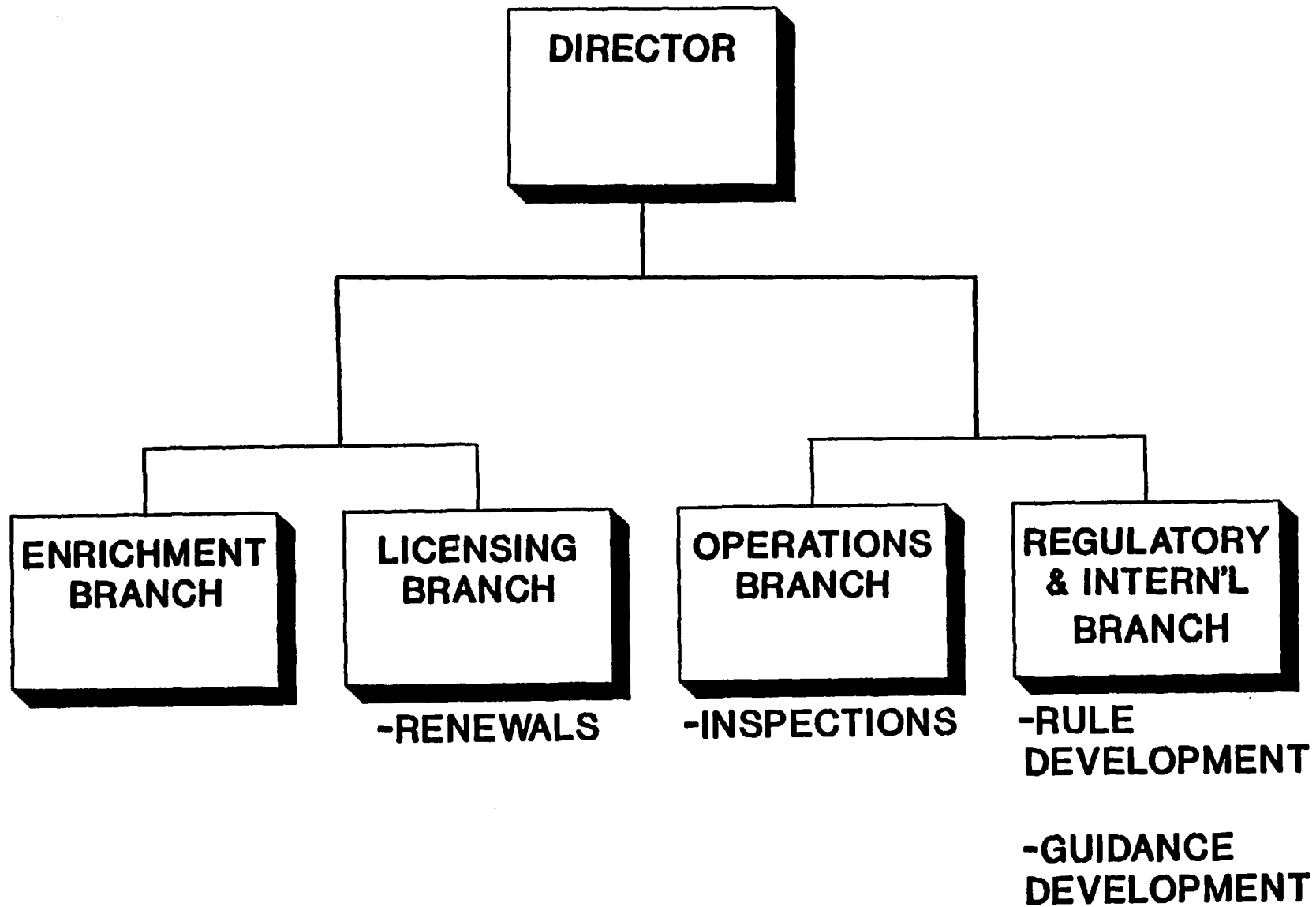
PLAN OF ACTION

- **Regulatory Development**
- **Licensing Program**
- **Inspection Program**
- **NRC Staff Training Program**
- **Licensee Self-Assessment**
- **Resource Implications**

A FRESH LOOK

- **Reorganization**
- **NUREG-1324**
- **Commission Guidance - 1/15/93**
- **Regulatory Impact Survey**

FUEL CYCLE SAFETY & SAFEGUARDS DIVISION



REGULATORY DEVELOPMENT

- **Rulemaking - Part 70**
- **Guidance**
 - **Integrated Safety Analysis**
 - **Standard Format and Content Guide**
 - **Standard Review Plan**

PART 70 RULEMAKING

- **New License Application Format**
 - **Conditions of Operation**
 - **Safety Analysis Report**
- **50.59 - Type Changes**
- **Quality Assurance**
- **Management Control Systems**
- **Maintenance**
- **Event Reporting**
- **Integrated Safety Analysis**

INTEGRATED SAFETY ANALYSIS (ISA)

Analysis of facility processes from an integrated perspective to identify potential safety vulnerabilities

- **Foundation for Licensing and Inspection**
- **Licensee Guidance**
- **Standard Review Plan Acceptance Criteria**
- **Licensee Workshops**
- **Facility Operations Committee**

STANDARD REVIEW PLAN (SRP)

- **Current Licensing Process Ad Hoc**
- **SRP Standardizes Licensing Approach**
- **Task Force Developed Draft**
- **Topical Acceptance Criteria**

STANDARD REVIEW PLAN TASK FORCE - TOPICAL AREAS

- 1.0 - General Information**
- 2.0 - Organization/Management Control and Oversight Program**
- 3.0 - Quality Assurance Program**
- 4.0 - Integrated Safety Analysis Program**
- 5.0 - Radiation Protection Program**
- 6.0 - Nuclear Criticality Safety Program**
- 7.0 - Chemical Process Safety Program**
- 8.0 - Fire Protection Program**
- 9.0 - Emergency Preparedness Program**
- 10.0 - Environmental Protection Program**
- 11.0 - Decommissioning Program - Financial Assurance**
- 12.0 - Safeguards Program**
- 13.0 - Waste Management Program**

LICENSING PROGRAM

- **Standard Review Plan**
 - **Standardizes Renewal Process**
- **Accelerated Renewals**
 - **Renewal Cycle Completed By December, 1997**
 - **Resource Dependent**
- **10-Year Renewal Period, When Appropriate**

LICENSING RENEWALS

<u>LICENSEE</u>	<u>ESTIMATED TARGET DATE</u>
C-E HEMATITE	9/94
B&W-NNFD	5/95
WESTINGHOUSE	6/95
ALLIED-SIGNAL	8/95
SIEMENS	12/95
GE-WIL	2/97
GA	7/97

INSPECTION PROGRAM

- **Team Assessments**
- **Enhanced Inspections**
 - **Nuclear Criticality**
 - **Chemical Safety**
- **Limited Technical Resources**
- **Effectiveness Reviews**
 - **Vulnerabilities**
 - **Protective Measures**

NRC STAFF TRAINING PROGRAM

- **Special Working Group**
- **Focus on Specialized Training**

LICENSEE SELF-ASSESSMENT PROGRAM

- **Facility Operations Committee Initiative**
- **Support Industry Lead**

RESOURCE IMPLICATIONS

- **Gaseous Diffusion Enrichment Resource Drain**
- **Management/Supervisory/Technical Vacancies**
- **Regulatory Development and Inspection Resource Needs**

CONCLUSIONS

- **Comprehensive Improvements For Near-Term Safety Benefit**
- **Resource Constraints Currently Being Addressed**



POLICY ISSUE **(Information)**

May 12, 1993

SECY-93-128

FOR: The Commissioners

FROM: James M. Taylor
Executive Director for Operations

SUBJECT: STATUS OF ACTION PLAN FOR REGULATING FUEL CYCLE
FACILITIES

PURPOSE:

To inform the Commission of the staff's revised plan of action to correct weaknesses identified in the fuel cycle facility safety program, which addresses the Staff Requirements Memorandum (SRM) of January 15, 1993, on SECY-92-337, "Response to Recommendations of the Materials Regulatory Review Task Force."

SUMMARY:

The staff shares the Commission's concern regarding the rigorousness of the regulatory base of the fuel cycle facility safety program, the timeliness of the licensing renewal program, and the need to make many improvements in the program identified by such efforts as NUREG-1324, "Proposed Method for Regulating Major Materials Licensees," and the Regulatory Impact Survey for Fuel Cycle and Materials Licensees. The primary programs discussed in this paper (regulatory development, licensing, inspection, training, and licensee self-assessment) represent areas that require high-priority attention to gain the greatest improvement in safety with the limited resources available. Many other areas need improvement, and the staff will address these as resources are made available.

BACKGROUND:

Many of the programs addressed in the SRM were subject to a reorganization within the Office of Nuclear Material Safety and Safeguards (NMSS) which consolidated the fuel cycle safety and safeguards programs in a single

Contact: Jerry Swift, NMSS
504-2609

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DATE OF THIS PAPER

division. This reorganization, effective February 7, 1993, was implemented to permit closer management attention on such topics as fuel facility license renewals, enrichment activities, and fuel cycle safety issues. As a result of the reorganization, the newly formed Division of Fuel Cycle Safety and Safeguards (FCSS) is taking a fresh look at the fuel cycle regulatory, licensing and inspection programs, emphasizing activities that will offer the greatest and/or near-term safety benefit without placing undue burden on the licensees.

This paper reports on the staff's revised plan of action for the fuel cycle facilities, taking into consideration the Commission's suggestions in the SRM, the findings from the Regulatory Impact Survey, and FCSS's redirection of the program.

DISCUSSION:

REGULATORY DEVELOPMENT PROGRAM

The staff shares the Commission's concerns about the weaknesses in the present regulatory base and the potential for inconsistencies and variations inherent in licensing without appropriate guidance. The staff is pursuing a long-term, more structured approach, supported with updated rules and guidance.

Among the principal products of the effort to sharpen and upgrade the regulatory base will be a major revision of 10 CFR Part 70 and of its supporting regulatory guidance to correct weaknesses and to delete any unnecessary requirements. The staff proposes to revise Part 70 in a single rulemaking effort, and will work collegially with the Office of Nuclear Regulatory Research to develop the technical foundation. A change currently under consideration is a requirement for submitting an application containing (1) Conditions of Operation, which would become part of the license and inspectable commitments, and (2) a Safety Analysis Report. The rule will require performance of an Integrated Safety Analysis (ISA) for the initial application and, as appropriate, reanalyses to support subsequent modifications of the licensee's procedures and plant through a license amendment or a 50.59-type process.

Two high-priority efforts that will help identify needed revisions to current rules, and will also contribute in the near-term to upgrading the fuel cycle facility program, are the development of a Standard Review Plan (SRP) for reviewing fuel cycle license applications and the development of detailed guidance for licensees to use in performing ISAs.

Placing greater urgency on the need for a more standardized approach to licensing, FCSS modified the plan of action to include the immediate preparation of an SRP that can be quickly put to use by the licensing staff to make the license renewal process more consistent. A task force, consisting of headquarters and regional personnel, was formed in March 1993 to develop a draft SRP. It is scheduled to submit a rough draft for internal use in early May 1993. Preparation of an SRP utilizes the collective knowledge and corporate memory of staff members who have expertise in diverse areas, to document necessary licensing commitments in specific topical areas. The SRP task force will identify draft acceptance criteria for its various topics (see Enclosure 1). As the task force develops the draft SRP, it was also asked to note where new or revised regulations and regulatory guidance are needed. The SRP will be further refined through use by the licensing staff and through contractor support in the areas of ISA and chemical safety. See Enclosure 2 for the proposed schedule.

The other high-priority effort under way is the development of ISA guidance for use by licensees. The concept of an ISA appeared in NUREG-1324 and was discussed with licensees at the Uranium Fuel Cycle Workshop in September 1992. The staff expects the ISA to become the new safety foundation for an effective licensing and inspection program. The licensee, by performing an ISA, will analyze its unique facility processes from an integrated perspective to identify potential safety vulnerabilities and then develop appropriate protective measures. Licensees will be able to modify their facilities through a 50.59-type process based on reanalysis of the individual ISA. The safety inspection program will be refined to focus on inspection of implemented protective measures that address vulnerabilities identified in the ISA.

The staff has initiated a process to prepare a guidance document that gives the purpose, basis, scope, and nature of the ISA expected from a licensee. The refined SRP will describe what constitutes an acceptable ISA and will include criteria for determining which potential vulnerabilities require remedial actions. The schedule for the ISA guidance development is included in Enclosure 2. A technical assistance contract has been awarded to provide support in developing a NUREG report containing detailed guidance on performing an ISA. As soon as a draft report outline is prepared, a workshop with licensees is planned. In the meantime, representatives of major fuel cycle facilities formed the Facility Operations Committee, under the auspices of the U.S. Council for Energy Awareness (USCEA), and are independently defining what they consider to be the appropriate role and associated components of an ISA. The workshop will provide a forum for the exchange of information regarding the various perspectives of both industry and the Nuclear Regulatory Commission. After the contractor has prepared a draft guidance report, a second workshop will be held with industry to familiarize them with the proposed concepts and methods, and to obtain comments.

In the accompanying development of regulatory guidance, a new Standard Format and Content Guide for Uranium Processing and Fuel Fabrication Facilities

(SF&CG) will be developed to reflect the information needs identified in the SRP and to incorporate some planned changes in the license application structure. The staff also plans to consolidate regulatory guides in the fuels and materials facilities series to reduce the number of guides requiring maintenance and updating, in particular, those relating to a single topic, for example, nuclear criticality safety.

In addition to the workshops planned to support ISA development, the staff is considering USCEA's offer to sponsor NRC/licensee topical workshops, and to strengthen licensee participation in other regulatory guidance development efforts. The annual Fuel Cycle Workshop will also be utilized for this purpose, to the extent possible. Similarly, to obtain feedback from the States where NRC-regulated fuel cycle facilities are located and from other regulators, these topics will be proposed for inclusion at the annual meeting with the Agreement States, and at the Conference of Radiation Control Program Directors.

LICENSING PROGRAM

The staff has developed a strategy for renewing fuel cycle facility licenses to ensure that the process is efficient, predictable, replicable, and defensible. Central to the new strategic approach is the recent NMSS reorganization. Fuel cycle facility regulation and licensing functions that were formerly carried out in a single Section are now conducted in three distinct Branches, each with a different functional responsibility (licensing, operations, and regulatory development). This has a direct and positive impact on the efficiency of the renewal process because it permits a licensing staff to concentrate on licensing, without the distraction and displacement of schedules associated with other work activities.

A quantitative result of this reorganization is that, with existing staff, the proposed schedule for renewals has been accelerated, so that all major fuel cycle facility licenses are now expected to be renewed by the end of 1997 (rather than by 2003, which was the projected date before the reorganization). This projection is based upon an assumption that the licensing staff will not be diverted during this period to other activities, such as to incident response or guidance development. However, shortages of staff will make it difficult for FCSS to satisfy all its commitments on the desired schedules. Staffing problems have, for example, made it necessary for several licensing staff members to be diverted to developing the draft SRP discussed earlier. The short-term negative impact on license renewal schedules, however, is expected to be offset over the long term by the improvements in licensing efficiency, predictability, and replicability afforded by the SRP, which will give NRC staff reviewers guidance on review procedures as well as acceptance criteria.

In applying the draft SRP to the review of license renewal applications, the staff's objective will be to reconfirm that licensee operations are in sufficient conformance with NRC requirements to justify renewal for a period

of ten years (shorter periods may be required for cases where the licensing bases are not sufficiently robust). Thus, facility licenses will be renewed in accordance with current standards, and will be revisited and modified by amendment, if necessary, after the appropriate guidance (on integrated safety analyses, for example) has been prepared and needed rule modifications (including the proposed 50.59-type process) have been completed.

This strategic approach to renewing fuel cycle facility licenses has the following benefits: (1) by conducting and completing the licensing renewal reviews on a reasonable schedule, the NRC will reconfirm that the facility operations are, indeed, in conformance with safety and environmental requirements; (2) the licensee is afforded latitude and flexibility to make 50.59-type changes in the facility (when safety is not affected) without requiring prior NRC approval; (3) the staff has the opportunity, via an iterative process involving the licensees, to conduct the reviews using the draft SRP, thereby learning where potential weaknesses in the guidance documents and regulations exist that can be later rectified (with full licensee knowledge and involvement); and (4) the time required and resources needed to renew licenses after the currently planned ten-year licenses expire should be considerably reduced because of the availability of the new guidance documents and the improved regulations, as well as the experience gained by both the NRC staff and the licensees in applying the improvements in the process during the interim period.

INSPECTION PROGRAM

A number of changes are also planned for the inspection program. As part of the reorganization of NMSS, an Inspection Section was formed in FCSS to enable increased focus on inspection activities, and to provide more efficient use of limited technical expertise in performing criticality and chemical safety inspections. The regional and resident inspectors will continue to perform the normal, day-to-day maintenance, operations, and training inspections for criticality and chemical safety. However, headquarters will provide senior technical expertise to address difficult design, integration, and adequacy concerns. With contractor and regional support, emphasis will be placed on developing chemical safety inspection procedures and refining the procedures for inspection of nuclear criticality. After new inspection procedures are in place, enhanced inspections of chemical and criticality safety will be conducted by headquarters with regional support.

TEAM ASSESSMENTS PROGRAM

At the suggestion of the Commission, we have reconsidered the Team Assessment Program and have decided it should be discontinued. Although significant benefit resulted from findings of the team assessments, particularly in identifying weaknesses in implemented nuclear criticality protection programs, it is felt that resources will be used more cost-effectively at this time

through use of enhanced inspections. The Occupational Safety and Health Administration (OSHA) will be invited to participate in the enhanced inspections of chemical safety, in lieu of the participation in team assessments specified in the NRC-OSHA Memorandum of Understanding.

In the future, after an ISA has been incorporated in the license and implemented at a fuel cycle facility, it is proposed that a small, multi-disciplinary effectiveness review team independently (1) review and validate that the licensee has found all safety-related vulnerabilities and (2) review the overall effectiveness of implemented protective measures. The findings of these effectiveness reviews will also be used to judge the adequacy of the revised regulatory base.

TRAINING PROGRAM

Improvements in the training program are also needed to broaden and refine licensing reviewers' and inspectors' understanding of fuel cycle processes. Management has established a special working group to address training needs. The working group includes representatives from NMSS, the Office for Analysis and Evaluation of Operational Data (AEOD), and the Regions. At its first meeting, the group discussed the full range of training needs. The recently developed five-day Fuel Cycle Technology Course will continue to be given, and the first journeyman-level course on criticality safety for inspectors is scheduled for this summer. Recognizing a need to improve understanding of the terminology, a short version of the Fuel Cycle Technology course was presented to the AEOD staff in headquarters in April. The special working group is developing a standard training program for the licensing and inspection staffs.

LICENSEE SELF-ASSESSMENT PROGRAM

The staff found, in a recent meeting with representatives of the Facility Operations Committee, that they have taken an aggressive role in developing performance indicators and exploring various self-assessment techniques, varying from individual licensee self-assessment using a common methodology, to industry-wide assessment by a single review group. Due to proprietary considerations, the preliminary view is that a single review group concept does not appear to be acceptable to the industry. In light of the progress made to date, the staff proposes to let industry take the lead in this initiative and propose a program to the NRC for consideration. The staff will coordinate closely with the industry representatives to monitor progress.

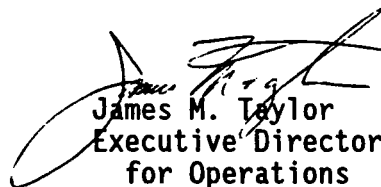
RESOURCE IMPLICATIONS:

The resources for NMSS, RES and AEOD to conduct the activities addressed in the staff's revised action plan are included in the proposed FY94-98 Five Year Plan. However, most of NMSS' resources to implement the action plan have been diverted to fulfill regulatory responsibilities for the gaseous diffusion enrichment program assigned to NRC in accordance with Title XI of the Energy

Policy Act of 1992. The Act transferred to the NRC from the Department of Energy the responsibility for oversight of two gaseous diffusion enrichment plants. The resource benefits realized during the reorganization that consolidated fuel cycle safety and safeguards were significantly impacted when NRC had to prepare for the gaseous diffusion enrichment program in FY93 without any additional resources. Staffing the enrichment program has resulted in the diversion of 13 employees, from the fuel cycle safety and safeguards program. These circumstances have significantly affected the ability of staff to pursue an aggressive regulatory improvements program to correct identified weaknesses and to provide technical support to the Regions in the nuclear criticality and chemical safety inspection programs. The action plan discussed above is based on the budget plan to fill 12 positions above the currently on-board staff strength by August 1, 1993.

COORDINATION:

The Office of the General Counsel has reviewed this paper and has no legal objection.



James M. Taylor
Executive Director
for Operations

Enclosures:

1. Proposed Outline for SRP
2. Action Plan

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PROPOSED OUTLINE FOR STANDARD REVIEW PLAN

Introduction

- 1.0 - General Information
 - 1.1 Facility and Process Description
 - 1.2 Institutional Information
- 2.0 - Organization/Management Control and Oversight Program
 - 2.1 Organizational Responsibilities and Authorities
 - 2.2 Safety Committees
 - 2.3 Audits and Self-Assessments
 - 2.4 Reviews of Design Changes
 - 2.5 Human Factors
 - 2.6 Investigations of Abnormal Events
 - 2.7 Training and Qualification
 - 2.8 Maintenance Program
 - 2.9 Procedure Development/Approval
 - 2.10 Recordkeeping/Reporting
- 3.0 - Quality Assurance Program
- 4.0 - Integrated Safety Analysis Program
- 5.0 - Radiation Protection Program
- 6.0 - Nuclear Criticality Safety Program
- 7.0 - Chemical Process Safety Program
- 8.0 - Fire Protection Program
- 9.0 - Emergency Preparedness Program
- 10.0 - Environmental Protection Program
- 11.0 - Decommissioning Program - Financial Assurance
- 12.0 - Safeguards Program
 - 12.1 Material Control and Accounting (CAT I)
 - 12.2 Material Control and Accounting (CAT II)
 - 12.3 Material Control and Accounting (CAT III)
 - 12.4 Physical Protection (CAT I)
 - 12.5 Physical Protection (CAT II/III)
- 13.0 - Waste Management Program

Enclosure 1

ACTION PLAN

SRP

Complete rough draft 5/93

ISA

Start contract 5/93

Complete outline of guidance document 8/93

Hold licensee workshop 9/93

Complete draft report 4/94

Hold licensee workshop 5/94

Complete final SRP chapter on ISA 6/94

Publish guidance NUREG 8/94

RULES

Develop user need letter 6/93

Obtain EDO approval to initiate 8/93

Publish proposed rule 8/94

Publish final rule 8/95

GUIDANCE

Publish SRP and SF&CG 8/94

RENEWALS

Complete timely renewal cycle 12/97