UNITED STATES OF AMERICA

NUCLEAR REGULATORY COMMISSION

Title: BRIEFING ON BUSINESS PROCESS REENGINEERING FOR MATERIALS LICENSING AREA - PUBLIC MEETING

Location: Rockville, Maryland

Date: Thursday, May 11, 1995

Pages: 1 - 69

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BRIEFING ON BUSINESS PROCESS REENGINEERING

FOR MATERIALS LICENSING AREA - PUBLIC MEETING

Nuclear Regulatory Commission

One White Flint North

Rockville, Maryland

Thursday, May 11, 1995

The Commission met in open session, pursuant to notice, at 10:00 a.m., Ivan Selin, Chairman, presiding.

COMMISSIONERS PRESENT:

IVAN SELIN, Chairman of the Commission

KENNETH C. ROGERS, Commissioner

E. GAIL de PLANQUE, Commissioner

SHIRLEY A. JACKSON, Commissioner

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STAFF SEATED AT THE COMMISSION TABLE:

JOHN HOYLE, Secretary of the Commission

KAREN CYR, General Counsel
HUGH THOMPSON, Deputy Executive Director, NMSS and Operations Support
DR. CARL PAPERIELLO, Director, NMSS
DR. PATRICIA RATHBUN, BPR Core Team Leader, NMSS

P R O C E E D I N G S

[10:00 a.m.]

CHAIRMAN SELIN: Good morning, ladies and gentlemen.

It's my pleasure to note that this will be the first meeting at which Commissioner Jackson will attend, our newest Commissioner and our prospective next Chairman.

Welcome, Dr. Jackson.

COMMISSIONER JACKSON: Thank you.

CHAIRMAN SELIN: This morning the Commission is to receive a briefing from the staff on the use of business process reengineering to formulate fundamental changes in material license activities. When we have phrases like "business process engineering," and when we have Taylor gone and Thompson here, we know we have to listen very carefully. So, I want you to know we're going to be paying very close attention.

MR. THOMPSON: You picked a good one to come to for your first Commission meeting.

CHAIRMAN SELIN: The purpose of this effort is to identify new and individual approaches to material licensing in order to lessen the adverse impacts that these effects have on our licensees while maintaining an adequate level of health and safety. In fact, the Commissioners have felt a certain unease that we have not -- it's not been evident to

us exactly what the risk benefit calculations are that would lead to the areas that we would license carefully and the other areas that we don't license at all. So, this is a very welcome effort.

We know it's not going to be easy to make fundamental changes. The agency has been doing a lot of these things for a long time. NMSS in particular, because of the highly diverse kind of work that it does, has been very highly decentralized and there are many benefits to that, but inevitably there are practices from branch to branch and division to division that don't compare so consistently with each other. So, this is an effort that we welcome.

We look forward to the briefing to provide us with some initial recommendations that will serve to facilitate change and we'd be particularly grateful if in your presentation today, Mr. Thompson, Mr. Paperiello, and Ms. Rathbun, that you pointed out where you feel that you're just ready to do this and you want to keep us informed in where guidance and reaction would be needed. I'm sure it would be welcome throughout, but it might be needed more one place than others.

MR. THOMPSON: It's always welcome.

CHAIRMAN SELIN: Commissioners?

COMMISSIONER ROGERS: Just you threw me a little

curve here in that the R in DPR is redesign in most of this, although I did see reengineering creep up someplace in it. I've always had a little problem with reengineering something that hasn't been engineered in the first place. So, I like redesign.

DR. PAPERIELLO: I might add I'm not quite sure it was designed in the first place either. It evolved.

MR. THOMPSON: Evolved, that's right.

Thank you, Mr. Chairman. As you know, the Commission did approve the staff's information technology strategy in 1993 and one fundamental part of that was to reevaluate a number of our systems and before we developed information systems to make sure that that system was automating a process that was effective and efficient. This is the second such BPR effort we've had underway and by far I believe the most effective and the presentation today has been one that I have been particularly enthusiastic about because it has both integration of headquarters, the field operation activities, a real program licensing activity that we are doing, and identifies what I believe are some real effectiveness in improving and streamlining the process that we have underway with respect to the material licensing program.

Dr. Paperiello will give the briefing and Pat Rathbun, Dr. Rathbun, who is the head of the core team, I

think have done an outstanding job and I think Dr. Paperiello will introduce briefing the members of the team who represent the regions and Headquarters, a number of Headquarters offices. I think it's just the type of activity and effort that really we are taking advantage of the information technology capabilities that we have.

With that I'll turn it over to Dr. Paperiello.

DR. PAPERIELLO: Yes. Good morning. Thank you.

Can I have the first slide, please?

[Slide.]

DR. PAPERIELLO: Last November we initiated a task to take a look at how we regulate material license activities with a view to automate the process and save resources while improving the timeliness. The process has led us to go well beyond automation to propose a fundamental change in material licensing program. As shown on this slide though, the materials program is integrated with other -- it's not just licensing. It includes inspections, regulations, data evaluation and incident response. I think these changes that we envision are going to have major impacts on how we do inspections and the way we regulate. One of the things that I do propose to do starting near the end of this year, once we get a lot of these initiatives underway, is apply the process to the inspection program where there will be a lot of opportunity for savings.

Let me describe the problem. If I take a look at data that I have for the last ten years, the materials licensing casework has amounted to about a half a year's work. We've always had a half a year's work in the hopper, 2,000 cases. It peaked in 1991 at 3,000 cases due to amendments that were filed in response to the full fee recovery rule and financial assurance rule. Currently we're at 1,800 cases and we're slowly coming down. However, progress is very slow. The resources for the current program are going to be reduced by roughly a third over the next several years in downsizing. As I've noted in various earlier reports to you, particularly in the medical program and in phase 1 of the regulatory impact survey, licensing guidance is out of date. It receives the lowest priority in the budget and much of what is issued is issued in a very ad hoc and not a formal way. And based on my recollection, at least when I was a materials section chief in the late '70s, and the recollection of the senior staff at NMSS to backlog when the whole program was here in Headquarters and there was no regionalization was even worse than it is now.

Traditionally, the way the large caseload has been managed is we've given priority to applications for new licenses and amendments and we let renewals just drift. A licensee can remain under timely renewal for several years. Legally they can remain under timely renewal and function

forever. To keep the backlog numbers as low as possible, various people do certain things. For example, when you do renewals, you do the easy ones. You don't do the hard ones. Subsequently, when you sit down with a renewal application that's three or four years old, so much of the regulations have changed and the guidance has changed that you wind up either issuing a 20 page deficiency letter, which I've seen when I was in the region, or you literally have to ask the licensee to completely resubmit the application. Of course, that costs you money and it has cost them money. Of course, the situation is aggravated when our licensing guidance may be 10 or 20 years out of date.

In the past few years, we have made progress in the backlog. That's why we're down to 1,800, by diverting resources from the inspection of low priority licensees but progress has been slow, but resources will shrink and nothing is being done to maintain licensing guidance.

The program has got to be changed to bring it into line with the available resources. I thought that I would use automation because I knew of very inefficient procedures that were being used when I was in Region 3. I was introduced to the concept of business process reengineering by IRM and this is the path that we took.

Can I have the next slide?

[Slide.]

DR. PAPERIELLO: I'd like to recognize the people who are on the team. The core team who did most of the work was headed by Pat Rathbun, guided by the business process reengineering consultants from Computer Sciences Corporation.

Could I ask the people here that are on the team to stand up? Thank you.

If you look at the list, they are staff people. One supervisor and the rest were staff people from here and NMSS and the regions. These are the people who do the work. This is the heart of business process reengineering. You get the process reviewed by the people who actually do the work. However, there were two oversight committees, a steering group which I headed and made up of managers in both the region and Headquarters offices at my level, and an executive team made up of the NRC senior executives, the office directors. Their function was to review and guide the core team's work. They provided a very essential function. For example, the discussion I have here on fees was Jesse Funches as part of the steering committee. The team said fees are a problem or a bottleneck in reviewing licenses, but he and his staff were the ones that provided a solution. So, there was a lot of help provided to the core team.

Next slide, please.

[Slide.]

DR. PAPERIELLO: This is what we thought the process was when we started, an eight step process and we could automate it.

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[Slide.]

DR. PAPERIELLO: The team did a complete systems analysis of the actual process by interviewing everyone involved in the process both in Headquarters and the regions. This icon represents the actual as-found process. Now, there is a detailed description in a manual we put together on the process of what each of these things was, but it was much more involved than the eight steps. It's characterized by a large number of handoffs and players, particularly with regard to administrative matters such as fee collection, information entry into the license and tracking system and ensuring entry of all relevant documents into the docket files and NUDOCS. In spite of this, as the Inspector General reported I think about a month ago to you, intermediate decisions, that is the basis for decisions by reviewers to seek additional information from applicants isn't documented.

Can I have the next slide?

[Slide.]

DR. PAPERIELLO: The team found on the average

that there were 54 handoffs for an average licensing action that took about 84 days. Now, 84 days may not sound too bad, but remember most of these are amendments. They should be the simplest thing we do. When you start taking a look at how long it's taking for us to do renewals, you start dealing with years.

But anyway, of this 84 days, and again it's an average, only 1.8 days were spent in actual processing and 82.2 days were dead time. Paper was in transit or in a queue. Our goal is the creation of a process such that the handoffs and cycle time are drastically reduced as shown and these goals are meant to be stretching.

As an aside, if you read the book on reengineering a corporation, when you start finding a lot of handoffs and a lot of paper being moved around, you have a process that is ideal for reengineering.

Next slide.

[Slide.]

DR. PAPERIELLO: This is the new process. Now, I'm going to go into the various parts of the process later, but this process model that has been put together uses state-of-the-art technology. But every step of it, all the technology and processes being used, you can find in another federal agency or in some private corporation within an hour and a half drive of this office. The longest is an hour and

a half to the FCC up in Gettysburg. Most of it is here in Montgomery County.

Next slide.

[Slide.]

DR. PAPERIELLO: However, to streamline this, it forced us to reconsider how we regulate material licenses. After 40 years of regulation, uses of radioactive material have matured. There exists a large infrastructure of people and institutions experienced in the safe use of radioactive material and most retuning uses, such as gauging, laboratory biological tracer studies and diagnostic nuclear medicine pose only a limited hazard to the user or the public. We believe that most uses by qualified individuals can be safety regulated through performance requirements, most of which are already in existing NRC regulations.

We believe the current practice of reviewing and making binding requirements that detail -- the licensees submit their how-to procedures. This is how many times I'm going to turn my survey meter on or I'm going to use a survey meter that has this sensitivity and this range. I'm going to do a survey once a week or once every other week or whatever. We review those. We make those procedures through tie-down conditions a binding legal requirement and we believe that practice can greatly be reduced. If we do that, then we have fewer license conditions and a license

with fewer conditions doesn't need to be renewed. The problem is every time the licensee wants a change, they have to submit an amendment request. We amend it and add that as a condition on their license as the license grows and it gets to be multiple pages and you almost have to do a renewal periodically to clean out all the debris so everybody can figure out what the licensee has to do.

So, if you say, "Look, you have to meet dose limits. You have to meet contamination limits," and I'm thinking of mostly the simpler ones where people know how to do this sort of thing, we won't have to amend the license and unless there's a major change in the license, we really don't have to renew it. So, we can reduce the frequency of a licensing error interaction with the licensees if we make those changes.

Could I have the next slide?

[Slide.]

DR. PAPERIELLO: Now, how are we going to do it? We all know that resources are tight and are going down. We propose to get some of the staff resources for streamlining by immediately extending most licenses by five years. Currently you have a five year license. So, we would go to a ten year license. This eliminates most license renewals for the next five years. Since the payment can be a critical path in the materials licensing process, we also

propose to separate payment of fees from the process of issuing a license and continue to work at streamlining the fee structure. We then propose to move to phase 2 of the program which is to develop the automated systems, prototype them, train the staff and develop the infrastructure to support the system, also establish an electronic licensing manual. Essentially we will get the licensing manual, we will put it on the computer. If you use things like groupware -- one thing, and we're not endorsing a particular product because a lot will do this, Lotus Notes. The license reviewer could be working on an application with a keystroke and call up the regulations, the licensing guidance, any document he needs for reference under Windows just as another window with all that material on it. That guidance would also be available to licensees electronically. We are also proposing the development of a standard license condition for broad scope licensees. These are our major universities, major manufacturers, major medical institutions functionally equivalent to 50.59. In other words, these people have radiation safety committees, a large infrastructure to support the program. So therefore, just like our nuclear power plant, if they want to change a procedure that does have a major safety effect, but I decided I'm going to survey a certain type of laboratory once every two weeks. I mean the laboratory user

does it, but I check on. Experience shows me after two years I don't have a problem. Why don't I back off to every four weeks? Right now they have to come in with an amendment. This would allow them to change those procedures themselves with a process that we envision to be similar to 50.59. They change their procedure, the Radiation Safety Committee reviews it and approves it and that's it.

This has already been done pursuant to Commission direct for uranium recovery licenses. So, we're not really -- we're just taking something we've already done and applying it to this process.

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[Slide.]

DR. PAPERIELLO: I said we proposed to extend most licenses. We believe at this point about 200 to 300 we won't. This describes the basis for not extending. Now, eventually we may. At least in this first across the board we propose not to do it for licensees that require an emergency plan. There's only about eight of them.

A licensee subject to financial assurance requirements where we do not have an acceptable decommissioning funding plan because that plan has to be submitted with renewal. It would be a fairly large licensee.

A licensee currently on a site decommissioning

management list. We have about 50, but I think about ten or 11 are not even licensees. So, it's about 40.

A licensee for which an environmental assessment is needed. That's a large amount of material. I think there's only two.

License for which the license has received a major escalated enforcement action at the last inspection, of which there may be about 150 to 200, somewhere in that range.

COMMISSIONER de PLANQUE: Carl, will this extension require public notice and comment?

DR. PAPERIELLO: It hasn't been brought to our attention by OGC. See, there's no life -- there's nothing in the regulations that indicate how long a materials license is supposed to be.

MS. CYR: There's nothing in the statute that sets a particular time limit for them and many of them are under timely renewal. We have a timely renewal provision. So for many of them, that may be in a sense what happens. We haven't exactly worked out depending on -- I don't know that it will be a uniform thing we will do for every particular across the board.

COMMISSIONER de PLANQUE: But this is probably something we can do without having to go through that process.

DR. PAPERIELLO: That's what we believe. That's what we believe.

CHAIRMAN SELIN: I would be uncomfortable without having some public discussion of such a change in practice, even though there's no policy statement in the statute.

DR. PAPERIELLO: Yes, sir.

CHAIRMAN SELIN: You know, we are governed by English law and if you've done it long enough it's become the law just by having done it.

DR. PAPERIELLO: Yes, sir.

CHAIRMAN SELIN: It doesn't mean we need a formal rule change, but at least there should be some discussion in my opinion before a change like that would be just instituted.

DR. PAPERIELLO: Yes, sir.

Next slide.

[Slide.]

DR. PAPERIELLO: This shows you a map we have been maintaining, where we believe we are in the process. We're ready to build and test the system and that's exactly what will be done. We will take an area of the building and we will set up a laboratory and it will be basically some people and the equipment and we will model and run dummy samples through to make sure that, in fact, the system, the procedures work.

Next slide.

[Slide.]

DR. PAPERIELLO: We propose to decouple fee collection from the processing of most licensing actions. Although steps have been taken to initiate licensing reviews prior to ensuring licensees have submitted the correct fee, this is the direction of the EDO, and the check clears, fee clearance does hamper licensing timeliness because reviewers have to constantly look over their shoulder to see where the fee situation stands. We propose the implementation of a new fee concept. A first year fee would include the annual fee as well as the fee for the initial review. In later years, the annual fee will be charged on the anniversary of the license and a license would not be effective until the fee was paid. This is an interesting case where we gained a little something extra because fees looking at this said, "We could turn around and make life easier for us if rather than billing all the licensee at the same time we could turn around and spread the billing out over a period of a year." The staff plans on working on the appropriate rulemaking this summer to accomplish this task.

MR. THOMPSON: Yes. This is one of the type items we'll have to come back to the Commission for formal approval on before we're able to implement those.

DR. PAPERIELLO: Yes.

COMMISSIONER ROGERS: Do you really know that it's going to spread out reasonably uniformly over the year or is that just a whole -- I mean do you have some basis of knowing?

DR. PAPERIELLO: I would have to ask Fees that.

COMMISSIONER ROGERS: It's clear to me that you still might not have somehow some clumping in the calendar.

MR. THOMPSON: I think there may be some clumping but generally we do things annually. We know we have a problem.

COMMISSIONER ROGERS: Yes, I understand.

MR. THOMPSON: What I can't tell you precisely is how evenly the other distribution is, but it has to be better than once a year.

COMMISSIONER ROGERS: Well, it will be an improvement. It's just a question --

MR. THOMPSON: Right.

DR. PAPERIELLO: I will be an improvement. I don't know how much. I think over a long period of time it will probably average out. But initially I don't know.

We also plan additional procedural actions to streamline. And some of these, we are going to be coming back to you for approval. For example, there is no clear basis for our five year license. A long time ago, long before my time, it was two years.

The concept from talking to people who have been around for a long time was that this area was so magic, so complicated, that every couple of years we ought to reexamine the basis for licensing somebody and that's why we had a five year or two year renewal. Well, again, as I said, many of the applications we license have not changed very much in years and they're fairly standard. And there's other areas under my responsibility, not just material licenses, that when I ask people why do we do what we do, it's because we've always done it this way.

I'll give you an example. Transportation casks are certified for five years. If I have a radiographic camera which is, in fact, with its overpack the shipping container for the source, I certify the camera as a camera indefinitely and the camera as a transportation device for five years. Why? Because two different groups did it. So, what I want to do not only just for material licensees that we're addressing today, but for every license or certificate issued by NMSS, I want to develop a policy on duration based on risk, technological stability and the institutional stability. Before I do anything with it, I will send it to the Commission for approval and it would be paper to justify why we're doing what we're doing.

But my own view is there's certain material licenses, for gauges for example, to specifically license

gauges, could be issued for almost indefinitely, whereas certain things we might want to keep. Something like major manufacturers we may want to keep every ten years. I don't know. I want a policy on it that has not evolved, but something we sit down and think about because there is major resource savings if we can reduce the number of renewals that we do.

COMMISSIONER JACKSON: Is your policy on license duration and where you are in developing that consistent with the time line you showed us earlier?

DR. PAPERIELLO: Oh, yes. I anticipate we would have this paper to you by the end of this year.

CHAIRMAN SELIN: What about things that now are just on general license, that are not really licensed sources? Is that included in the --

DR. PAPERIELLO: I'm going to mention this later. You will be getting a paper by the end of this month on general licenses. We're going to propose, and I'm getting ahead of myself, but an operations committee with the agreement states. This streamlining process will make it very easy to create a class of registered devices that we have a hook on because right now if I have to take 4500 general license gauges and make them specific licenses, I can't afford it. They may not afford it and I can't afford it. Where if I have a very automatic process like this,

then we could do it. However, since the agreement states have two-thirds of the generally licensed devices and most of the smeltings, if they're not on board our fix won't work.

Plus the fact I had another idea that I popped on the agreement states at the last meeting and I thought it was off the wall and they kind of liked it. That is that we would not --

COMMISSIONER de PLANQUE: What does that mean?

DR. PAPERIELLO: I said, well, we won't allow people to owned generally licensed devices. They can be leased and then the handful of vendors can keep track of where the devices are and I thought that was a bit unusual, except some people around said, "That's the way it was done 30 years ago." Well, since that's before my time, I don't know. I'm not proposing -- I'm just saying --

CHAIRMAN SELIN: Generally, this is to clean up what we do today, to do it a lot better and have a much better base before we take a look at --

DR. PAPERIELLO: Right.

CHAIRMAN SELIN: -- additions and subtractions to our jurisdiction.

DR. PAPERIELLO: This will provide a very clean system that if we want to pull in some or a portion of the general licenses under the specific license umbrella, we can

do it cheaply. As I point out, we have an indefinite license because that's what a general license is today, an indefinite license.

CHAIRMAN SELIN: Just for a moment on your off-the-wall advice, unless there's a clear health and safety imperative, we can't do what you just suggested, to forbid people from owning devices, unless we can make a case that there's a health and safety --

DR. PAPERIELLO: You're right, but we could make it financially worthwhile. In other words, if you want -- well, the point is there have been pieces that were leased. 3M, when it had static eliminators, they were all leased. Static eliminators were not owned, they were leased.

CHAIRMAN SELIN: But it wasn't because of the safety requirements.

DR. PAPERIELLO: I understand that. I understand that. But we may have to come up with an option. If you lease it, then you don't need a specific license for it. If you want to own it, you need a specific license for it. I'm getting away from the other discussion.

MR. THOMPSON: You are correct, Mr. Chairman. We do have to have our regulations based on a health and safety reason. There are some generally licensed devices now that we may be able to demonstrate under a more rigorous review than we've done in the past that they may be appropriately

covered by a specific license requirement. I think that's the type of review that we'd have to do to be able to look at those things.

DR. PAPERIELLO: I really wasn't prepared for that.

CHAIRMAN SELIN: You weren't prepared the last time you raised it either. Why should you be prepared now?

COMMISSIONER de PLANQUE: It gets better each time.

CHAIRMAN SELIN: By the second time, you should --

DR. PAPERIELLO: Just working. We're going to look at our regulations and licensing documents to also achieve the vision. We have standard license conditions. We put in all licenses with sealed sources to do leak tests. Well, the way I put it, since the time Madam Curie encapsulated radium in gold, we have been leak testing sources. But we do not have a universal leak testing requirement in our regs. We have pieces here and there. You have to leak test brachytherapy sources. The State of Illinois, in their equivalent of Part 20, has a universal leak testing requirement. Well, there is a case of where something we put in every license for a sealed source has a leak testing requirement. Why shouldn't that be in a regulation? The same way other -- we have about 70 or 80

standard license conditions we use and we need to determine if we want people to do it, it ought to be in a regulation and we shouldn't be imposing routine things through licensing. When we do that, that of course creates greater stability.

We expect that we're going to have to be making organizational or administrative changes as we change the process. For example, right now license applications are submitted to the region. It may be more efficient to have them all submitted to a central location because our vision is that license applications will come in. We're going to encourage people to do it electronically, but if they come in on paper, they will be scanned and put into a computer system and it might be probably beneficial to do it in one location rather than multiple locations. We don't know. We have to look at the technology and determine how easy it is to use.

Can I have the next slide?

[Slide.]

DR. PAPERIELLO: Let's talk a little bit about details in the new process. We have something we call the Virtual Regulatory Product Design Center and it mimics what we have found in other federal agencies. This is not a location, it's a concept. If it's a location, it's going to be where a computer file server lives. The function of this

-- and it will be a process managed by Headquarters but using regional people as well as Headquarters people, using groupware, which is a type of computer software that does a lot of things for you, a much higher level -- I call it an extra dimension to our current WordPerfect office and E-mail. So, there can be collaborative efforts by the people who actually do the work on various documents without them physically being located in the same place. The products that we will develop are what we need to implement this process, to extend the license duration, to build a single licensing manual, to create the 50.59 amendment and the guidance we're going to use to come up with criteria that we might allow for an indefinite license and all the changes that we're proposing to do and put the team together to do does not have to be done in a physical location. We can have people in various offices work together on this. That concept is being used elsewhere in this area and that's what we call our Regulatory Product Design Center.

Next slide.

[Slide.]

DR. PAPERIELLO: Let's talk about how we would process the application. The application would come in and would have an immediate, you might say, once over. A completely bad application would be rejected. The application would then be reviewed just like a reviewer does

now, but now the reviewer would be assisted by an expert system on a computer. We anticipate with what we would hope would be straightforward requirements that would be explicitly stated that simple application, things for gauges, gas -- I show a gas chromatograph because to my mind that's about the simplest thing we license and it represents almost no hazard.

The inspector or the license reviewer would be walked through the review and if the process was satisfactory, the computer would generate a license.

For more complicated reviews, I'll give you an example, broad scope, major new broad scope, the system would allow the review to be broken down into components. We may have an expert on incineration here in Headquarters. So, if there was a request for incineration, that would be reviewed in Headquarters. If there was a certain type of waste disposal that was unusual, that would go somewhere. So, therefore, the review could be done in parallel by different people with the appropriate expertise.

Let me give you an example how this will really help. Well logging. The Region IV being in Texas and the Southwest gets a lot of well logging applications. Region I, being in Philadelphia, it's rare. In fact, one of the interesting things, we developed a procedure for certification of license reviewers and they had to do two of

every kind. Well, Region I had problems certifying its reviewers because they couldn't get enough well logging applications. So, they actually created a process, "Well, we'll mail them up to Region I so Region I can do them and the reviewer can get qualified." Well, the obvious thing is why even do them in Region I? Why not have all well logging reviews done in Region IV regardless of which region gets them because they a lot of them and are expert? This whole system would allow us to do that.

Next slide.

[Slide.]

DR. PAPERIELLO: I'd like to talk about work teams. This whole project has been an example of a self-directed work team in action. I'm enthusiastic about teams and I always have been. I have been served on teams myself, at least mostly on the inspection part, having led not only an IIT a few years ago, but an AIT, and I've been on a lot of task groups in the agency. I think it's a good way for NMSS to handle a lot of its future challenges. I have a highly educated staff. I did check. Forty-seven percent of my staff have advanced degrees. Twenty percent of my staff have Ph.Ds. I think when I look around the table, most of us have worked in several areas, different areas in our lives and have done reasonably well or we wouldn't even be here. I think our staff can do the same.

We are likely in NMSS to be presented with a lot of one-of-a-kind licensing and the traditional way that we have licensed, "Well, we're going to create this great standard review plan," we're just not going to survive. We're going to have to put together teams that can quickly create review procedures in a short period of time and then implement them. I don't know what they're going to be for.

We were briefed a couple weeks ago by DOE on, "What is your views of 11 different ways of disposing of plutonium? And by the way, we'd like to have you license it if we ever get authorization." Which am I going to do? So, if I'm asked to do that and the Commission agrees to do that, I'm going to have to do it quickly and we're going to have to work on a very loose environment. I believe the self-directed work teams is an ideal way to use the talents of highly educated, motivated people. That's sort of the concept behind reengineering. It's almost like the transition from a special purpose computer to a general purpose computer. Now, the fact that we have a lot of people with a lot of education, people can do a lot of things. It's not like things may have been a long time ago where people did one very, very small piece.

Next slide.

[Slide.]

MR. THOMPSON: Before we get on the next slide, I

might want to add in that that this was one of the areas that we were able to work in a partnership arrangements with the NTEU. In addition to the traditional activities, it would work very well with the union incorporating with this and knowledgeable of where we're going on because obviously a lot activities here will affect the ways in implementing the procedures and I think it would work very, very well with the union partnership in NMSS and with the agency partnership also.

DR. PAPERIELLO: The next two slides show how our vision directly addresses all four national program review functional areas. But I'm going to be very honest. We didn't use these. In other words, this is how it fell out. We did what we did and then --

CHAIRMAN SELIN: You did what you did because it was very sensible. The NPR is very sensible.

DR. PAPERIELLO: I think that's --

CHAIRMAN SELIN: But seriously, they didn't invent these ideas. This is part of good management.

DR. PAPERIELLO: And I agree, but I have to be honest. I can say, "Isn't this wonderful, I do it," but I did it to be very efficient and address the thing. I will say the concept of putting the customers ahead was certainly in our view. I believe very much in empowering employees and certainly getting back the basics in cutting red tape.

Can I have the next slide?

[Slide.]

DR. PAPERIELLO: Safety implications. I'm going to be very -- a few members of the executive committee did express --

COMMISSIONER JACKSON: Actually, I wanted to take you back a slide.

DR. PAPERIELLO: Yes, sir.

COMMISSIONER JACKSON: You talked about the participation of the agreement states in the regulatory product development. Can you expand on that a bit?

DR. PAPERIELLO: Yes. The Commission has given us direction that in developing regulations and developing doing things that impact them, that we should seek early and substantial -- I think the words are early and substantial involvement. This process will allow them to do that. We plan on doing that to the extent they want to participate because in some cases when you ask them, they're just not interested in doing it.

COMMISSIONER JACKSON: So you're saying that to this point they have not been involved?

DR. PAPERIELLO: Not in what I'm presenting today, no. They have been briefed on it, but they did not participate in the process, no.

DR. RATHBUN: Yesterday they were briefed by Don

Cool at the Conference of Radiation Control -- how do you say that, CRCPD Committee. My understanding from --

COMMISSIONER JACKSON: That helps me.

DR. RATHBUN: Excuse me. I'm struggling with this too. My understanding is that they were very receptive to this. In the next six weeks, we are planning to visit either three or four agreement states to roll out this concept there too and will at that point try to take their input. But that's in the planning stage.

COMMISSIONER de PLANQUE: Which ones do you plan to go to? Have you determined that?

DR. RATHBUN: We are currently talking about Utah, Illinois, Texas, and what's the other one? We have one other one.

MR. PELCHAT: We are talking about going to Oklahoma.

DR. RATHBUN: But we will bring that up --

MR. THOMPSON: Oklahoma is not an agreement state yet.

MR. PELCHAT: No, sir, but they have agreement state licensing process.

MR. THOMPSON: Okay.

COMMISSIONER de PLANQUE: Okay.

DR. PAPERIELLO: Frankly, in part, when we started we didn't realize we were going to wind up at this point.

So, when you envisioned that you were just going to automate what you were already doing, and you weren't going to make the kind of changes it looked like we want to make, we just didn't know we were going to be here.

CHAIRMAN SELIN: Never automate what you're already doing. I'm serious. This is the opportunity not only to clean things up that have been a mess for 20 years, but to see opportunities that you couldn't carry out if you didn't have --

DR. PAPERIELLO: That's exactly what happened.

COMMISSIONER ROGERS: Yes, and if you automate too fast, you lock into something that you should have gotten rid of.

CHAIRMAN SELIN: Two-thirds of the licensees are there. So, are you looking at the ability of using some of -- I mean is this just for us or can it be broken down into PC-based units that agreement states --

DR. PAPERIELLO: Oh, these are all PC-based.

CHAIRMAN SELIN: So, it's intrinsically a devolvable system that the agreement states could pick up?

DR. PAPERIELLO: Oh, yes.

CHAIRMAN SELIN: So, therefore, you're really very interested in their reaction, to make sure their concerns are taken into account before the design is finalized?

MR. THOMPSON: Well, I think all the elements, as

I see it, are there. Some of the things that we face that the agreement states don't face is they don't have regional offices and they don't have centers of expertise. They typically are co-located in an area, but much of the process of how the process can work, we would like their input on. But particularly with the regulatory guide, changes in regulations obviously will be coordinated very closely with the agreement states and the concept of putting in regulations, those things in the past that have been license conditions, I think we'll coordinate closely with -- it will make the agreement states life a lot easier, just like it makes our life easier on that.

MS. CYR: But that's sort of consistent with where you're going with the policy which is being more flexible in that how that uses various -- where they have it in the regulations or license conditions anyway.

COMMISSIONER JACKSON: But since so much of what you're doing does seem to rest on this system approach, user friendliness would seem to dictate that their input would be useful to you earlier rather than later.

DR. PAPERIELLO: Yes. We did plan on inviting them to participate to the degree they wanted to participate. Certainly any changes in regulations, things that -- I mean there are things that would affect them directly. If we change Part 20 to require sealed sources to

be leak tested, that's clearly something we have to coordinate with them. If I decide that I'm going to use a certain brand of groupware, that's a little touchier because they're probably under the same requirements that we are. We have competitive bidding and all the rest of that sort of thing. So, there's a range of things we're going to do here --

CHAIRMAN SELIN: That's actually not an issue.

DR. PAPERIELLO: I understand.

CHAIRMAN SELIN: All software these days can read all other software.

DR. PAPERIELLO: That's right.

CHAIRMAN SELIN: So you could develop it under Microsoft stuff and Lotus will pick it up.

DR. PAPERIELLO: I'm trying to address the question of how much do they get involved in what decisions and all.

COMMISSIONER JACKSON: But it seems to me that they haven't really been involved that much to this point.

DR. PAPERIELLO: No, they haven't. They were briefed -- I briefed them in -- well, my staff did. I talked to them on another subject early in April. Again, we didn't really expect to get to this point when we started out in November.

COMMISSIONER de PLANQUE: I asked for which states

because I was hoping to hear at least Illinois and also Texas because it's my understanding that they have some systems --

DR. PAPERIELLO: Yes.

COMMISSIONER de PLANQUE: -- from which we may learn as well.

DR. PAPERIELLO: That's exactly why we're going to visit them.

COMMISSIONER de PLANQUE: Good.

MR. THOMPSON: Commissioner Rogers had a question.

COMMISSIONER ROGERS: Yes. On this question of who participated, I haven't seen any evidence that you had any input from licensees themselves in this.

DR. PAPERIELLO: We did not have input from licensees directly in this particular thing. We do have the input from phase 2 of the regulatory impact survey where we did -- this was done now about a year ago in which we finally got a contractor's report. At least it's on its way up to the Commission right now, that paper transmitting the report. Basically what the licensees are telling us in terms of regulations, they understand and know what's in the regulations and they understand and know what's in the licensing guide. But when you start looking at any kind of guidance documents that gets further from those things, their degree of knowledge goes down. They are impacted by

delays in licensing. About half of them say that. So, therefore, insofar as the licensees have commented on -- they have not been though involved in this --

COMMISSIONER ROGERS: They've stated their problems and they're working on a solution.

DR. PAPERIELLO: They say they're problems and we believe these are addressing the problems that they enunciated to us as a result of that survey.

COMMISSIONER ROGERS: I understand that, but we are trying to get a little feedback from them on our solution.

MR. THOMPSON: Absolutely, and we will put that as part of our program to clearly have an opportunity to get licensee and the groups of licensees input on the process because part of it obviously they have a vested interest and I think they would certainly want to participate and we'll provide that opportunity for them.

DR. RATHBUN: In phase 2, we have actually already modified the CSC contract to include a module on what we're calling licensing readiness to accept both the automated aspect of this project as well as the regulatory changes that we might have to propose. It would be easy for us to incorporate public meetings. It would be simple.

DR. PAPERIELLO: Let's talk about the safety implications because a few members of the executive

committee did raise concerns over the potential safety implications of the new process. So, I will discuss the issue.

We are going to be less involved in "how" procedures for simple licenses. I mentioned previously about phase 2 of the regulatory impact survey. My belief is the more we can put what licensees need and ought to do in our regulations and the licensing guides and keep them current, we will promote safety. Most licensees want to do the right thing. However --

Next slide.

[Slide.]

DR. PAPERIELLO: I plan to use two tools to monitor licensee safety performance in this program. First, new licensees and those with amendments which substantially change the scope of their activities will receive inspections within six months of the licensing action. This is a commitment I made to you earlier. Our current manual Chapter 2800 on the inspection program has been issued and has that change in it. We used to do it. This makes it a high priority inspection. You will inspect new licensees and licensees with major amendments within six months of the issuance of the document. This will provide immediate information on the licensee's ability to meet performance based requirements.

Secondly, we'll use the AEOD database on reported events to measure what you, Chairman Selin, have characterized some time ago as output indicators as a second measure of licensee safety performance. They'll include occupational and public over exposures, violations of NRC effluent limits, lost material, medical misadministrations and the events of the type reportable under 30.50 involving various upset conditions. If we detect increases in these output indicators, we'll take whatever action we need to reverse the trend.

We're going to start off this process with simple licenses. We are going to be dealing with -- gauge licenses and gas chromatographs make up roughly 3,000 of our 6,500 licenses. Medical licenses, particularly diagnostic nuclear medicine, make up about another 1,500 to 1,600. So, we're dealing with some licenses where the quantity of material used is not particularly hazardous and you would have to work hard at violating a regulatory limit. So, if you start with the simpler licenses and see that licensees are capable of working in that environment, then we will basically expand it to the larger licenses.

At the other end, I just believe that most large academic licensees are perfectly capable of meeting performance regulations. They have very large programs and very knowledgeable people.

COMMISSIONER de PLANQUE: Carl, on the inspections, who would be doing this? Would these be people who are part of your prototype group or separate?

DR. PAPERIELLO: That would be the regional inspector, the same inspectors that do them now.

COMMISSIONER de PLANQUE: Okay.

DR. PAPERIELLO: But some of these people are going to be involved in all this prototype. The whole concept of this Virtual Regulatory Products Center is the people in the field are going to be spending part of their time. It won't be, "We in Headquarters write all the procedures and you people out in the field, you use them." It's a joint sharing of the responsibility and so people who are developing procedures are people who actually have to use them and do use them and bring in their operating experience to developing procedures.

COMMISSIONER de PLANQUE: Do you see any possible role in this exercise for agreement states people, either as a cooperative or learning --

DR. PAPERIELLO: I haven't given it a thought. I guess we could.

MR. THOMPSON: We have that kind of initiative as one thing that we're considering in the longer phase of where we are headed. That is, as we get more and more agreement states, it may make lots of sense to really have

the agreement states participate under some type of interagency agreement or -- I don't want to use the contract, to be able to have California people inspect in California if we didn't have a high representation of inspectors there. Alaska may be one where you might be able to get some type of state support. So, this concept that we're looking at, we haven't matured our thinking in that area.

DR. PAPERIELLO: The next slide.

[Slide.]

DR. PAPERIELLO: I may --

COMMISSIONER ROGERS: Talk about agreement states.

DR. PAPERIELLO: I had planned on it.

They have been briefed and I briefed or we briefed them early in April on the meeting here in Headquarters with the management people. There was another briefing for the conference yesterday. The process, the actual change in the process is going to be implemented in controlled phases over about a two year time frame. It will be ample opportunity to look at the potential interaction with the agreement states. The guidance, the changing the licensing documents will be open to agreement state participation. The reality is if we chose a certain kind of groupware and they can procure it or we can provide it for them, they can go on a PC and participate in a team over the telephone lines.

Any new technology or processes we develop will be available to the agreement states if they want to use it and essentially any of the regulatory tools we develop they can use. As I said, if we have to change regulations, they'll fully be part of that change in the regulations.

COMMISSIONER de PLANQUE: Carl, I guess over the past several months we've all given a lot of lip service, which is good, towards cooperation with the agreement states. I think that's been easy for us to do. The hard part now is to make it work in reality. There's so much opportunity here in what you're proposing to really get a cooperative venture going with the agreement states. So, I guess I would also be looking for potential ways to use them, possibly on the steering committee or use them as intensely as you possibly can, hopefully in some sort of informal cooperative voluntary way rather than have to get into all these administrative difficulties.

DR. PAPERIELLO: Right.

COMMISSIONER de PLANQUE: But I guess I would encourage seeking involvement in any way possible to get their experience and their buy-in.

DR. PAPERIELLO: That's right.

[Slide.]

DR. PAPERIELLO: Let me discuss on the last slide the principal near-term actions. We are going to make a

major effort to reduce the existing backlog by creating a backlog team to get -- I'd like to see the backlog to 300 cases, about a month's work. I think friction won't let us do any better than that.

Developing a licensing manual. We're in the process. I have staff in the process of assembling all of the licensing material we've ever issued. I want to take it -- I have to put it in one location and see what I have. I'd like to reduce the volume, the whole team has been given a goal, cut it in half and produce for the first time a single comprehensive licensing manual. I intend to publish it in electronic format and on paper as a NUREG and this will replace all existing guidance. I'll do away with policy and guidance directives and licensing guides and we will have one document. This will be functionally equivalent, the same as NUREG-0800, which is the NRR standard review plan. We have other -- our licensing guide for Yucca Mountain, our licensing guide for low-level waste, all our other licensing guides that we have are NUREGs. So, this is only a replication of past practice.

What will be new is my goal to have it in electronic format to maintain the maintainability and it will be maintained. My concept is to assign various portions of it to different organizational units. For example, Region III might be responsible for the medical

guidance and Region I might be responsible for the radiography guidance. There will be a clock and every two years or three years or whatever looks -- it depends on the change in the technology, that particular organization will have the responsibility to revise the guidance. We will put it out in draft for comment and we will incorporate the comments.

One of the responses we got in the phase 1 of the regulatory impact survey is in 1985 and 1986 when we regionalized licensing, the agency issued about ten licensing guides, put them out for interim use and draft comment and they were never issued in final. The reason they were never issued in final is there never was any resources budgeted to issue them in final. So, I think that if we make it easy to do, we simplify the volume and we keep them current, we can keep that particular guidance current.

Incidentally, I'll brag that in Region III our regional procedures were up to date. They were revised every two years. As Deputy RA, I had 35 procedures that I was responsible and the admin. people once a quarter would send me a memo, "You have these eight or whatever number of procedures to review this quarter," and I'd review them and maybe half of them would have to be changed and the other half were okay to reissue as is. So, I'm familiar with how you could do this and it can be done.

Anyway, that's the process that we envision.

MR. THOMPSON: That completes our briefing. I guess I would say we have requested the Commission's approval to endorse the fundamental approach. I think we own you a bit more detail on how the license rule extension would be -- if you'll approve that approach, how that would be actually executed with respect to the public comment activities. The rulemakings with respect to the fees, we obviously will -- and the other rulemakings will come back specifically to the Commission. But essentially we're asking for the Commission's endorsement of this approach to streamline the material licensing effort and activity and we'll certainly include the public meeting approach that you've discussed and licensee implementation and the agreement states as you discussed today.

So, we're prepared to answer any questions you may have.

CHAIRMAN SELIN: Commissioner Rogers?

COMMISSIONER ROGERS: Well, first let me say that I really think this is an outstanding effort. It really reflects a dramatic change from an incremental approach to looking at what we're doing. I really want to commend everybody that was involved with that and I know Dr. Rathbun's group was very important in this. I think it's really exciting. I think there are a lot of things to talk

about. There are a lot of issues to express some concern about as we proceed along, if we do proceed along if the Commission approves going ahead. But I think that the approach that's taken here is really very commendable in the sense that it seems to me that you really just said, "Let's look at the whole thing all over again and see if we can't do it in a different way, in a better way." That's what we have to do. We just can't make incremental changes. We've got to think more dramatically, I think, about possible change.

I really am excited about the process that's led you to this point as an example of perhaps something that we'll have to apply in a somewhat different way, perhaps in other parts of the organization. So, I think it's a very interesting piece of work, very exciting, very promising. But I do think that there are a lot of things that we'll have to look at. So, I have a couple of questions about some concerns that I have. But one thing that we didn't hear about are resources here. In the paper you sent us, you had a slide 17 that was an investment breakout. I'm surprised that we didn't hear anything about the resources here this morning. Can you say something about that?

DR. PAPERIELLO: Yes, I can. I can.

By deferring renewals and by eventually reducing the frequency of renewals, we free up a lot of resources

immediately to work on the program. Over the long-term, I envision -- and let me give you some numbers. Currently, 50 percent of our licensing resources are spent on renewal. These are numbers I knew were sort of shockers to me when we got into this. Thirty-five percent of our resources are spent on amendments and 15 percent are spent on news. So, therefore, if you want to save resources in licensing, so therefore for the benefit of us, we should look at renewals and amendments.

However, I had other needs. I had license -- the feedback I had from licensees is part of two regulatory impact surveys I did which says, "I want to make the world better for them too. So, I need timeliness on what I do and I need clear guidance on what I do and I've got to give them flexibility." So, a major portion of the resources are going to come from the process itself because I don't need as many people to do licensing.

Secondly, the medical program. The medical program today is about 65 percent done. As of the end of September, going into the next fiscal year, we expect to be 75 percent completed in terms of the tracks. The only remaining work that remains from fiscal '96 on just about is completion of the National Academy study and any rule changes. About a quarter of the program involves either rule changes in Part 35 and change in guidance. So, those

resources will be available. And we're going to have consultants to help us in terms of the automation part in the information technology. So, we're doing it with -- we are just moving people from existing programs around.

I propose to incorporate the balance of the medical program within BPR because regardless of how the National Academy -- let's make something up. The National Academy says, "Don't change anything." I don't think that's going to happen. Let's say that. I would still streamline Part 35 and I would still streamline the medical program. So, therefore, BPR would call for doing something with Part 35. It's going to ask us to do some things with other parts of the regulations, expect Part 35 is one of the more prescriptive -- not only just prescriptive, but how to. "You will survey your laboratory for betas once a week." There is no other regulation we have that is quite that prescriptive. So, there are things that -- the resources are coming within the framework of the current budget.

COMMISSIONER ROGERS: Well, let me ask that question a little bit differently because I think we're drifting into a collection of other considerations here, from at least what I'm interested in. That is if I look at your slide 17 in your report, you list NMSS personnel under the old process at an annual cost of about $17.5 million and under the new process $13.8. It just occurred to me that

that's not a very dramatic difference. So, if we're talking about a very dramatic change in how we do things, I would have expected a bigger difference, just offhand. What you're saying is that you're planning to incorporate -- well, use the same people that you have right now and therefore more or less carry those costs along. I'm just asking you how you got those numbers, whether that's the basis or whether it's a reanalysis of what you really mean.

DR. PAPERIELLO: No, it's the basis of what the budget projections were that had already been decided on maybe about three months ago.

COMMISSIONER ROGERS: All right. So it's not really constructed from zero base using this process.

DR. PAPERIELLO: No, it isn't.

COMMISSIONER ROGERS: All right. That's the answer.

Now, about the capital, it looks to me like you're talking what, about a million dollars in capital investment here roughly?

DR. PAPERIELLO: In fiscal '96, yes.

COMMISSIONER ROGERS: Well, it says one time. It doesn't say what year. It just says one time.

DR. PAPERIELLO: Well, right now it's in the budget for fiscal '96.

COMMISSIONER ROGERS: And so, what's the

difference between technical infrastructure and capital infrastructure? What do those involve? Some involves computer hardware and some involves arranging the building around or what?

DR. PAPERIELLO: It involves consulting assistance and the like.

DR. RATHBUN: And we will have to do some space modifications because we'll have to set up work stations, prototyping stations. So, that's in there too.

COMMISSIONER ROGERS: Yes. Well, I think it would be nice to see what the breakdown of these things is, just so we have a little better feeling about it.

DR. PAPERIELLO: Sure.

DR. RATHBUN: Right.

COMMISSIONER ROGERS: So much for cost. A couple other questions.

One is I'm a little bit concerned about the basis of assuming the skill of the craft will cover certain things. That's fine, but how do you know that they have those skills? How do you know a particular licensee, in fact, possesses the recognized skills of the craft, whatever they are, in a sort of totally automated system? How do you check that?

DR. PAPERIELLO: Well, you would look at the applications. Today they have to submit the qualifications

of the staff involved and the reality is when you look at some of the things that we ask them to do, we're not dealing with things that are very profound, and I'll give you an example. Look at a laboratory that uses millicurie quantities of tritium or C-14 for tracers. Probably 80 percent of all the university laboratories who use radioisotopes are using millicurie quantities of tritiated C-14 labeled, P-32, sulfur-35, compounds like that.

You don't need a whole lot of skill. You're talking about laboratories --

COMMISSIONER ROGERS: Well, I'm talking about how do we know when somebody files an application electronically with us that their claims are valid as to their skills of the craft?

DR. PAPERIELLO: Well, we would review the application the same as if we're on paper. Then, of course, if we inspect them within six months and find out that it's drastically different than --

COMMISSIONER ROGERS: Well, then they're in real trouble, of course, I would hope. But how do you tell this from an electronic submission or a paper submission for that matter?

MR. THOMPSON: As I understand it, there's a couple ways that give me the level of confidence that where the staff is headed is the right way. One, by involving the

regional inspecting and licensing people who kind of basically have the experience. They will have, I think, that input as to which of those type licensees -- renewals, you basically have some knowledge of renewals, if you're going to do renewals.

COMMISSIONER ROGERS: Oh, yes.

MR. THOMPSON: It's the new ones --

COMMISSIONER ROGERS: Unless they've lost it. You know? All their trained people might have left the day before they filed the license application.

MR. THOMPSON: And that's one of the things that we have to be -- we would not have one of the more automated processes for licenses for which the intelligence screening process you put in place says, "All staff has been replaced in the last six months. I think part of the thing is being intelligent in a systematic way to decide what are those key factors. If you have an experienced radiation safety officer who's been there for five years, you have a level of confidence that that's the --

COMMISSIONER ROGERS: Well, that's right, but what you're telling me is that somebody is going to exercise this judgment. So, there's a human in the loop here. This is not just a totally automated "send us in the application, the computer will check it and send you by return mail your license."

MR. THOMPSON: Yes.

COMMISSIONER ROGERS: I think you have to explain that to us.

DR. PAPERIELLO: It's going to be more like using a -- somebody said use the analogy of Turbo Tax. Well, I've never used it, so I really don't know the analogy. This is not going to be something where I get an application electronically, no human being looks at it and the computer reviews it and then issues a license. This is going to be an application that's going to come in, we're going to get it on an electronic format so the reviewer can look at it on a screen, on a window, and we don't have to move a lot of paper around and make multiple Xerox copies, which is what's going on now, and where the person will have, instead of a paper check sheet list, will have a computerized check list that says, "Look at this," and the reviewer will be able to pull up the reference material to show the acceptance --

COMMISSIONER ROGERS: I see. So, the expert system is to assist this reviewer. Is that how --

DR. PAPERIELLO: Yes, right.

COMMISSIONER ROGERS: See, that wasn't clear in what you sent us. There was a reference to the expert systems, but an expert system could be automated, it does the check itself on the electronic submission and there is no intervention of a human hand.

DR. PAPERIELLO: No, that's not what's going to be -- and also there is going to be 100 percent QA check, at least for the first six months, and a smaller percentage but a QA check thereafter of every license that is issued in this process to make sure, in fact, something does not fall through the cracks. So, it is not a machine review of an application. It's computer-aided assistance to ensure all the reviewers do the same kind of review. We have had complaints about whether there's uniformity among the regions. This certainly will ensure documentation that it was looked at and documentation of the deficiencies that were identified and the basis for asking for more information, which we've been told we're not doing right now. So, that's how the system will work.

COMMISSIONER ROGERS: All right.

DR. PAPERIELLO: There will be a lot of human intelligence applied except a lot of the paper will go away.

COMMISSIONER ROGERS: Yes. I think it could be a little clearer exactly how that part of the process is going to work.

DR. RATHBUN: Commissioner Rogers, there's another sort of trap that the BPR team falls into and that is these processes and procedures are what we work out thoroughly in the next phase, but it's really a bad answer for me to tell you, "Oh, phase 2." You know what I'm saying? But the

actual true mechanics of some of this, that's what is the business of phase 2.

COMMISSIONER ROGERS: That's the prototype.

DR. RATHBUN: Exactly.

COMMISSIONER ROGERS: And that's absolutely essential.

The other question relates to the self-managed teams. When you address that in your remarks, you indicated that most of what these teams will be looking at are -- maybe I'm putting words in your mouth, but sort of one-of-a-kind type of situations. So, there one is not so concerned about consistency. If each is an individual special case that has to be decided on its own merits or taking into account special circumstances, then the question of total consistency from team to team is not such a big issue. But I am a little concerned about how you maintain a regulatory consistency when you have a number of self-managed teams running at the same time.

DR. PAPERIELLO: Well, I think in the way we did in this process. We had a steering committee which was made up of people at the division director level, both in Headquarters and in the regions and from a variety of offices, not just from NMSS, and an executive committee headed by the Deputy EDO and the office directors to --

COMMISSIONER ROGERS: Yes, but that's a lot of

superstructure that you put on the system during this development phase. So, that presumably is mostly going to go away if you adopt this for the long term.

DR. PAPERIELLO: I didn't plan on that.

COMMISSIONER ROGERS: Really?

DR. PAPERIELLO: Because it only involves --

COMMISSIONER ROGERS: You mean you intended to keep the same --

DR. PAPERIELLO: The superstructure only gets involved -- the steering committee met with the team maybe an average of once every three weeks. It's not an outrageous burden. People at that level get involved in task forces all the time, all over in periodic meetings. I think that's the part of a responsibility of the manager.

MR. THOMPSON: Are we talking the same thing? I think you're down into the implementation phase in the out years.

COMMISSIONER ROGERS: Steady state operations.

MR. THOMPSON: Steady operations and you may still be -- still working our way through the process.

COMMISSIONER ROGERS: Yes. I'm not talking about phase 2, I'm talking about the ultimate, once you've arrived and the system is working.

MR. THOMPSON: I'm not sure that we've really thought that process out.

COMMISSIONER ROGERS: If you still are using self-managed teams, then how do you maintain consistency on a policy basis or even in terms of practice from team to team? That's really what the question is.

MR. THOMPSON: As I say, they may well be unique license applications which we will get management attention just to start off with. I don't think we would ask a self-managed team to start a de novo review of a new AVLIS or some system that we've never licensed before. So, I don't think we've thought that -- at least I haven't thought that thing through. You got somebody that's thought it through?

DR. RATHBUN: The team wants to answer.

COMMISSIONER ROGERS: Would you use a microphone?

MR. THOMPSON: Identify yourself, John.

MR. PELCHAT: Good morning. I'm John Pelchat with the core team. What we see as being the tool to maintain consistency amongst the teams will be the centralized licensing manual that will place all the information and all the policy that the teams need in order to perform their function in one place and at one time. It's the use of this up-to-date, dynamically maintained manual that will allow us to be consistent.

COMMISSIONER ROGERS: Well, it will help certainly. But I'd like to hear more on that. I don't expect to hear it all from you right now, but it does seem

to me that you'll have this dilemma of how much you put in the manual to make it a totally prescriptive system and then, of course, there's not much judgment involved by the teams. The self-management questions become much less significant. On the other hand, it's a very rigid system then. If you really want to open up things a little bit to provide a somewhat less prescriptive approach, which is what we're trying to do in some other areas of regulation, then you do have the problem of how do you communicate from team to team in such a way as to maintain a reasonable level of consistency.

MR. PELCHAT: One other thing that we were -- if I may, Commissioner. One other thing that we were looking at too, especially at the onset of the new process, is we were looking at a 100 percent quality assurance audit program where we would be looking at each action and we would have active feedbacks into the licensing process when we found things that we thought needed to be shared with the staff and with the teams. That was a mechanism that is part of the design, intrinsic to the design.

DR. PAPERIELLO: I think there's two different things here. The day to day work and actually reviewing licenses is not going to be drastically different than it is now. When I make a change -- for example, you've approved setting up a spent fuel program office. We're going to have

to develop a way of reviewing the multi-purpose cask. In my mind, getting the people who have reviewed casks in the past and say, "Okay, this is a somewhat different animal and we have very tight constraints." You make a proposal on how we're mechanically going to do that review. That is a self-directed team. Management maintains oversight of the whole thing and the like. But the actual day to day work is going to be done no different. Once you developed the product and management endorses the product, then it's no different than we do now.

COMMISSIONER ROGERS: Well, I think you picked a bad example because that clearly is a unique situation. What I'm concerned about is routine matters that come before self-managed groups and how to maintain consistency. That's really my question, not one-of-a-kind situations where I wouldn't have any trouble with your description at all. But I don't think that's the kind of problem I'm asking about.

DR. PAPERIELLO: Commissioner, I don't have any routine things that I right now plan on giving to a self-directed team. So, maybe that's part of the -- no, but I'm looking at them for using these on these one -- you know, it's something you're going to do once. You want innovation, you want ideas, you want people doing it. It's not a way of doing business on a routine. Once they come up with a product and we memorialize it, then it becomes a

routine thing and it's managed away and, depending on the significance, it gets raised to the Commission's level for approval and that becomes the agency's way of policy.

I'm suggesting that we use the intelligence and the skills of our staff and not just a handful of managers to come up with new and innovative ideas to present to you.

MR. THOMPSON: I think John Madera from Region III, a section team, a member of the team also, wants to add --

DR. RATHBUN: This is a self-managed team.

COMMISSIONER ROGERS: That's becoming very apparent.

DR. RATHBUN: This is an example.

MR. MADERA: Hello. I just want to state that self-managed teams is a concept that requires management involvement. It isn't just people working together in a group to do a specific action. Management has to be fully behind self-managed teams and, in fact, management's role is basically just to mentor and help the team accomplish the goals that are identified by management and the leaders of the particular teams. But teams will be working toward the mission or the goal mandated by management, but they will be doing it themselves, not so much overseen by managers as we do it today. So, it's a unique concept and it's really, I feel, the way we need to go to be able to utilize all of the

expertise in the agency.

COMMISSIONER ROGERS: Fine.

CHAIRMAN SELIN: Commissioner de Planque?

COMMISSIONER de PLANQUE: One of the questions that occurs to me is that some of the things that are now in our regulatory framework have come about because of GAO reports or blue ribbon committees or groups looking at specific problems and items get added to license conditions or they get added to rules in response to those types of things. How are you capturing those previous mandates, shall we say, as you go about this new process?

DR. PAPERIELLO: We have found some of them and we're going to have to look at it and reconsider. Obviously we have, over the years, created a lot of these. I think of them, frankly, and I've looked at some from the '70s, are out of date. They're just out of date. Circumstances have changed in 20 years. They're just out of date.

COMMISSIONER de PLANQUE: I guess my only thought was at least that needs to be addressed somehow.

DR. PAPERIELLO: We need to consider it.

COMMISSIONER de PLANQUE: And if we are making a change that is different from something that was instituted in response to something like that, we should do so knowingly and be prepared to defend that.

DR. PAPERIELLO: That's correct.

COMMISSIONER de PLANQUE: Okay. Well, I think you've done an absolutely fantastic job with this. There's one part of it that I can't let escape notice in terms of commendation and that is the way you went out to other organizations to see what they've done and tried to learn from them.

DR. PAPERIELLO: Oh, yes.

COMMISSIONER de PLANQUE: As you know, I always ask what other government agencies are doing or what the private sector is doing. So, I was very impressed with what you've done in that regard and I did want to commend you for doing that. So, I think you're on the right track.

CHAIRMAN SELIN: Commissioner Jackson?

COMMISSIONER JACKSON: Just a few checkpoints.

I assume you have internal time lines built in. They aren't explicitly discussed, but that's your --

DR. PAPERIELLO: Yes, we do.

COMMISSIONER JACKSON: Is training meeting included in your investment budget?

DR. PAPERIELLO: Yes, training will be, but I can't explain the concept.

DR. RATHBUN: The buzzword is called "just in time training." Really what this means is we involve the trainers from day one. There is a licensing course coming up in Chattanooga. Two of our team members are

participating in that and I believe that our CSC contractors will be joining. We know we have to have a totally radical way of doing training. We can't take the whole agency and throw them down to Chattanooga and teach them how to do licensing this new way. They have to learn it day by day with us.

We've talked to Paul Bird, who I think is still here. We've talked to Ken Raglin and we know that we have got to incorporate the training modules as we go.

COMMISSIONER JACKSON: In looking again at the investment or your business case, you mentioned that the figures for the new process that you have built in are consistent with or predicated on previous budget decisions. All I wanted to ask is that you have a certain degree of aggressiveness about your budget, consistent with what your regulatory responsibilities are. You don't build up to a budget, but that if there are other opportunities that --

DR. PAPERIELLO: Yes. We're going to apply the technique to the inspection side of the house probably in about another six to eight months. I want to get some things done here and then I want to apply it to inspection. In fact, looking back at it, I would have probably done this more aggressively than I did. But as I said, it was IRM who introduced me into the process and I wasn't -- I was hesitant. I will tell you when I started this process last

November I was very hesitant. I believe in it now because I see what it did, but I want to look at essentially the balance of the materials program starting this fall with the same technique and I believe there will be additional savings. There are going to be necessary savings. If we no longer inspect the licensees performing their own detailed procedures which we have made regulatory requirements, we are going to shorten the inspection process.

Secondly, I can then focus on what I call -- well, we call them output indicators. I call them the fundamental safety indicators, what are dose. Dose, in my mind as a health physicist, dose and potential dose is safety, at least in the materials, byproduct materials. When you deal with fuel you have a different issue. When you deal with reactors, you have a different -- use of byproduct material. We can focus the inspections there. I want to capture the information.

Right now if I want to know the results of an inspection done three years ago, there's a painful hand search. So, I want to establish -- in establishing the materials licensing database, which we already have, but revising it, I want to have space to put in inspection results so if somebody asks me three years from now, "How many cases do people exceed NRC effluent limits?" I would be able to find that information out and I can't do that. So,

the results of the inspection are there, are in our records, but somebody has to go through a lot of paper to fine it. So, there's a whole lot of things that I want to do with the balance of our program.

COMMISSIONER JACKSON: That kind of database restructuring is implied in your budget?

DR. PAPERIELLO: Only for the licensing side, not on the inspection side.

COMMISSIONER JACKSON: Okay.

DR. PAPERIELLO: But my experience with some of the people who are gurus in this area indicates to me it wouldn't be that much extra to add on.

COMMISSIONER JACKSON: Well, database reconfiguration can be a black hole.

Last question/comment. This is beating the dead horse, but it has life in it. Back to the agreement states. Now, I know your focus is on licensees, but the agreement states are not going to go away and I noted in the text of the SECY that you talked about giving telephone briefings, two telephone briefings to the Organization of Agreement States. Again, even with agreement states, we still have ultimate responsibility and I'm just saying you cannot ignore how whatever you develop affects our ability to do what we have to do vis-a-vis the agreement states.

DR. PAPERIELLO: I understand that.

COMMISSIONER JACKSON: Okay.

CHAIRMAN SELIN: Thank you.

I'd like to identify myself with the comments, particularly Commissioner Rogers' summary. I agree with that completely. In fact, you've had some problems this morning, but the problems are that you've done such a terrific job you've raised our expectations a lot faster than you expected when you were preparing the report. I think you ought to take that very seriously in the following sense. You're off to what I think is a wonderful start. So, now is the time to ask some more fundamental questions than you were prepared to ask, why are we licensing gas chromatographs to begin with, that kind of thing.

So, this is the time to ask the big questions before you get too far into your workshop and figure out a more efficient way to do them. It has to do with what do we license. Don't take for granted that because things are messy and done through license conditions they should be in the center. That's how we got into that mess on the fuel facilities. We knew it was a mess, so we said, "Let's regularize it," and we didn't realize how expensive it would be and how little payoff there would be. So, you've got to be careful of those.

This might not be exactly the right place, but a lot of what you've done is sort of affected by our regional

structure and I don't think our regional structure for materials makes any sense. I think you alluded to it a little bit. Why do we have well loggers inspectors in Region I when we don't have well loggers in Region I? Maybe this isn't quite the right place, but you ought to be rethinking quite fundamentally how we should be distributing resources, material resources in the regions.

Now, I realize licensing is the least of the things that materials people do in the region. So this may be not the right tail to wag the dog, but don't take the structure as a given either as you go into it.

On the agreement states, you had something in your chart, but you didn't repeat it. That is we have a lot to learn from them as well as them from us. We have 29 independent experiments going out there. They may not be independent, but they are quite different. So, maybe the horse really is dead at this point, but they're not briefings. They have to be interactions and we have to get things back from them, not just one way communications of what we're doing. I'm quite certain that you will give the Commission the last word, Dr. Paperiello. The briefing never ends.

DR. PAPERIELLO: We recognize that, but I have to be honest. When we started off on this, we went hell bent for leather and --

CHAIRMAN SELIN: You started off doing a small thing. You were going to automate some stuff and clean it up and use computers to be more efficient. You've gotten way beyond your original thing.

DR. PAPERIELLO: That's right.

CHAIRMAN SELIN: Now is the time to stand back and say, "What are the potentials that your success has opened for you?" and make sure that you get them right, even if it does slow you down a little bit.

When I was in business, we had the story about this one fellow who made 31 sales calls in one day. The record was 34. We asked him, "How did you do it?" He said, "It was terrible. I would have made 35 but the last guy insisted on giving me an order."

So, don't lose track of what we're really trying to do, just to make your schedule. I assume that although you're worried about, "Let's not write the regs too fast because they're hard to change the software," it should be pretty easy to change though, within given regulations. So, if you figure out new mechanics or better ways to do things, I just take that as a given. If I'm wrong, just tell me some other time that I'm wrong, but not now on this question.

I guess those are the main things. But I do think the agreement state is probably the biggest single issue

because you start out saying, "How can we run the NRC budget more efficiently?" What you're really asking is how can you have the states regulate materials licensees more efficiently. As you've said over and over, the two-thirds of them are under agreement states and the trend is for more and more. You ought to at some point just stand back and see do you want to do things a little differently if you take that as the objective, not just putting it in our budget.

I think it's a terrific job and it's far more than you or I actually expected you to come up with last November. But your success obliges you to take a broader view of what you're doing and had intended to do and I think we'll all be much better off for that.

Thank you very much.

MR. THOMPSON: Thank you.

[Whereupon, at 11:34 a.m., the meeting was concluded.]

CERTIFICATE

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

TITLE OF MEETING: BRIEFING ON BUSINESS PROCESS REENGINEERING FOR MATERIALS LICENSING AREA - PUBLIC MEETING

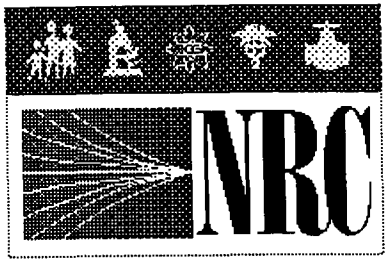
PLACE OF MEETING: Rockville, Maryland

DATE OF MEETING: Thursday, May 11, 1995

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

Transcriber: Carol Lynch

Reporter: Peter Lynch



NMSS Materials Licensing
Business Process Redesign Project

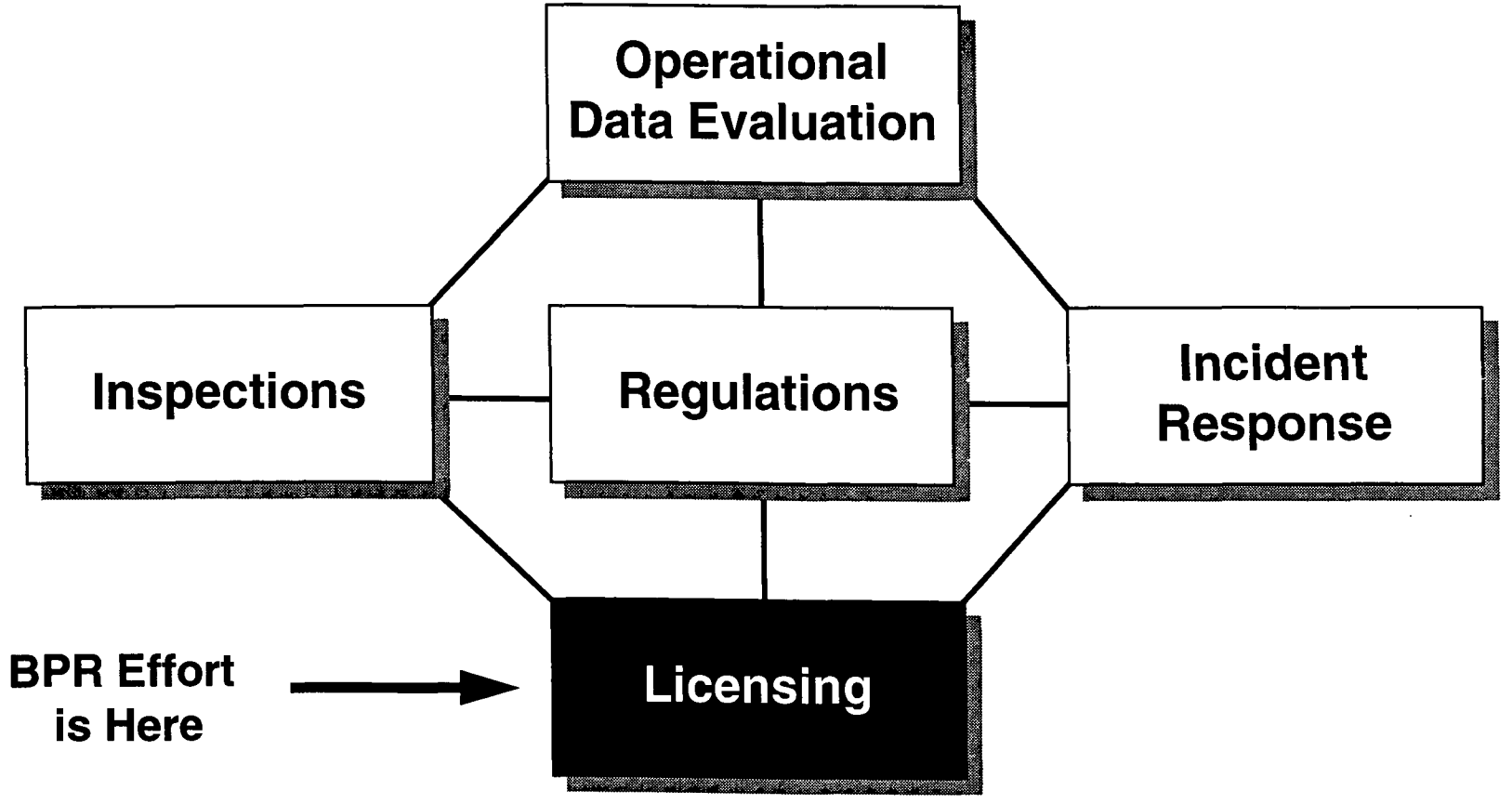
Commission Briefing

by

Carl J. Paperiello

May 11, 1995

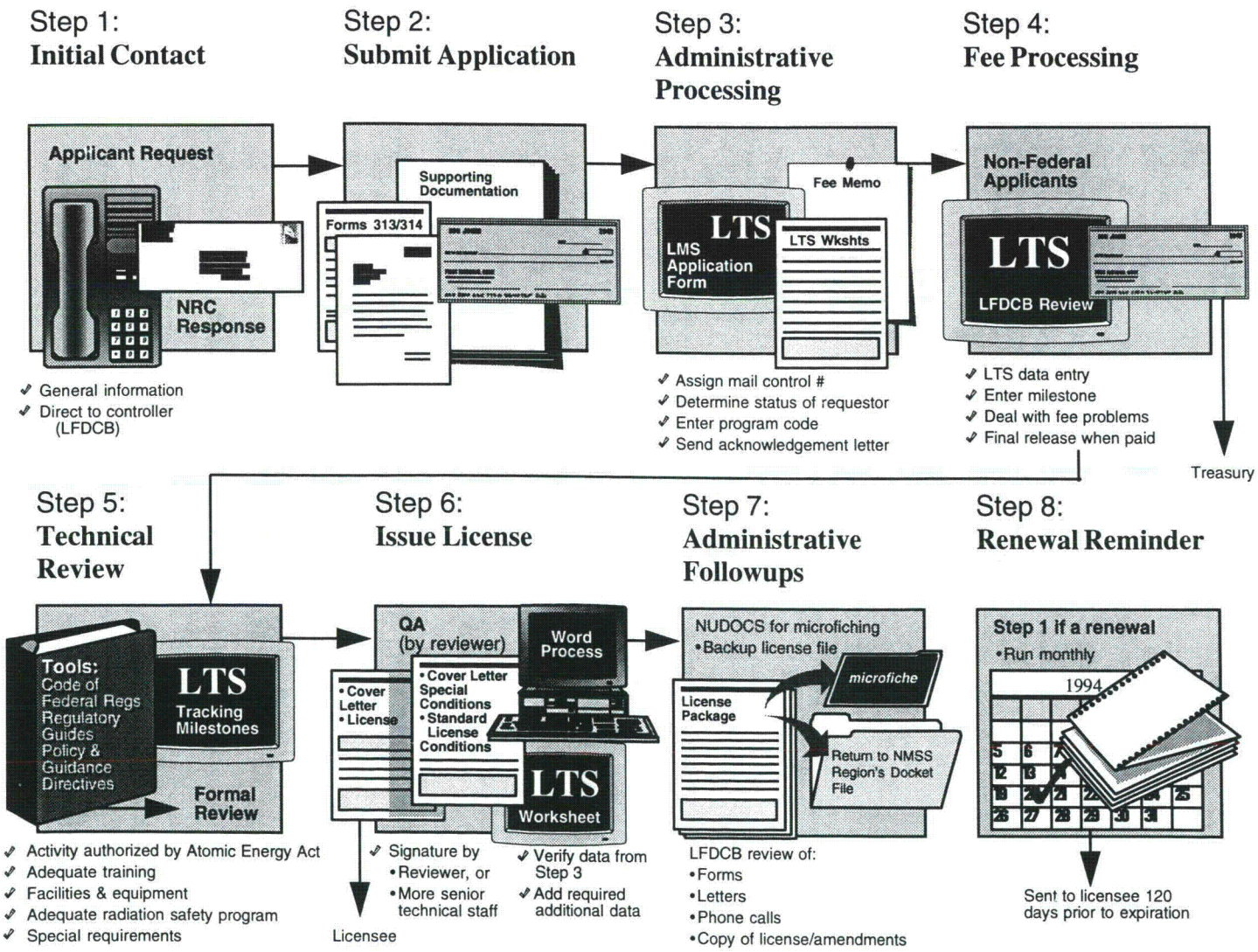
Relationship of Materials Licensing BPR to Other Key NRC Areas



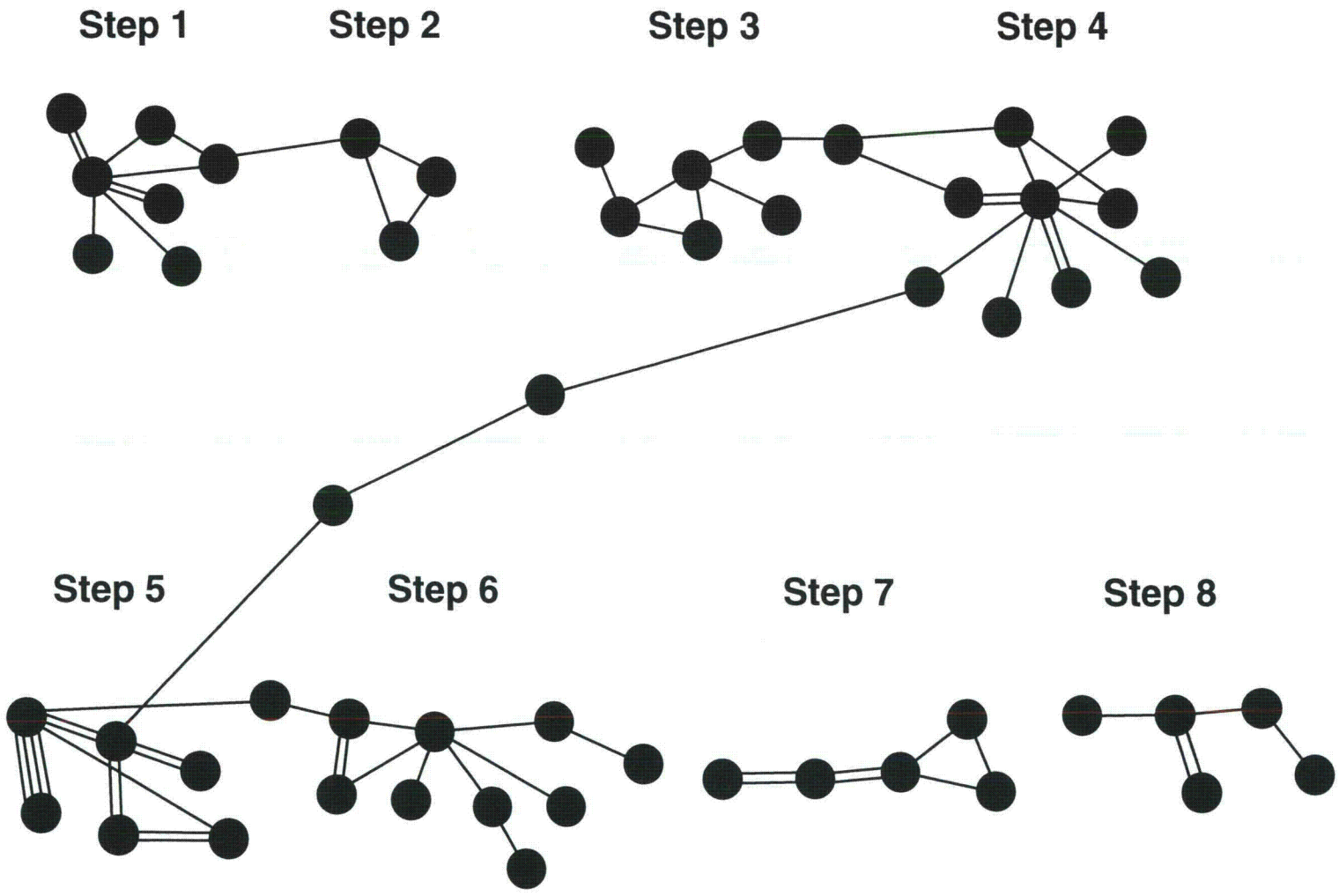
Cross Functional BPR Team Members

Name	Grade Level	Job Title
NRC		
Patricia Rathbun (Tm Ldr)	15	Special Assistant, IMNS/NMSS
Keith Brown	13	Health Physicist, RI
John Madera	15	Section Chief, RIII
Maureen Moriarty	11	Licensing Mgmt System Analyst, NMSS
John Pelchat	13	Health Physicist, RII
William Usilton	15	Senior Computer Systems Analyst, IRM
Patricia Vacca	15	Senior Project Manager, NMSS
Jack Whitten	14	Senior Health Physicist, RIV
CSC Consultants		
Karl Leatham (Tm Ldr)		
David Greenwald		
Johan Margono		

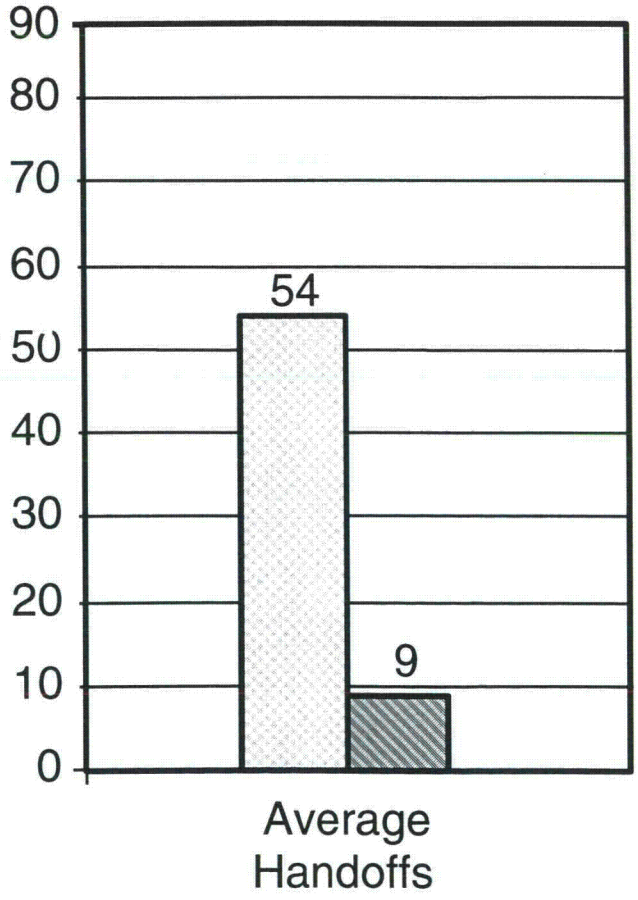
Current 8-Step Materials Licensing Process

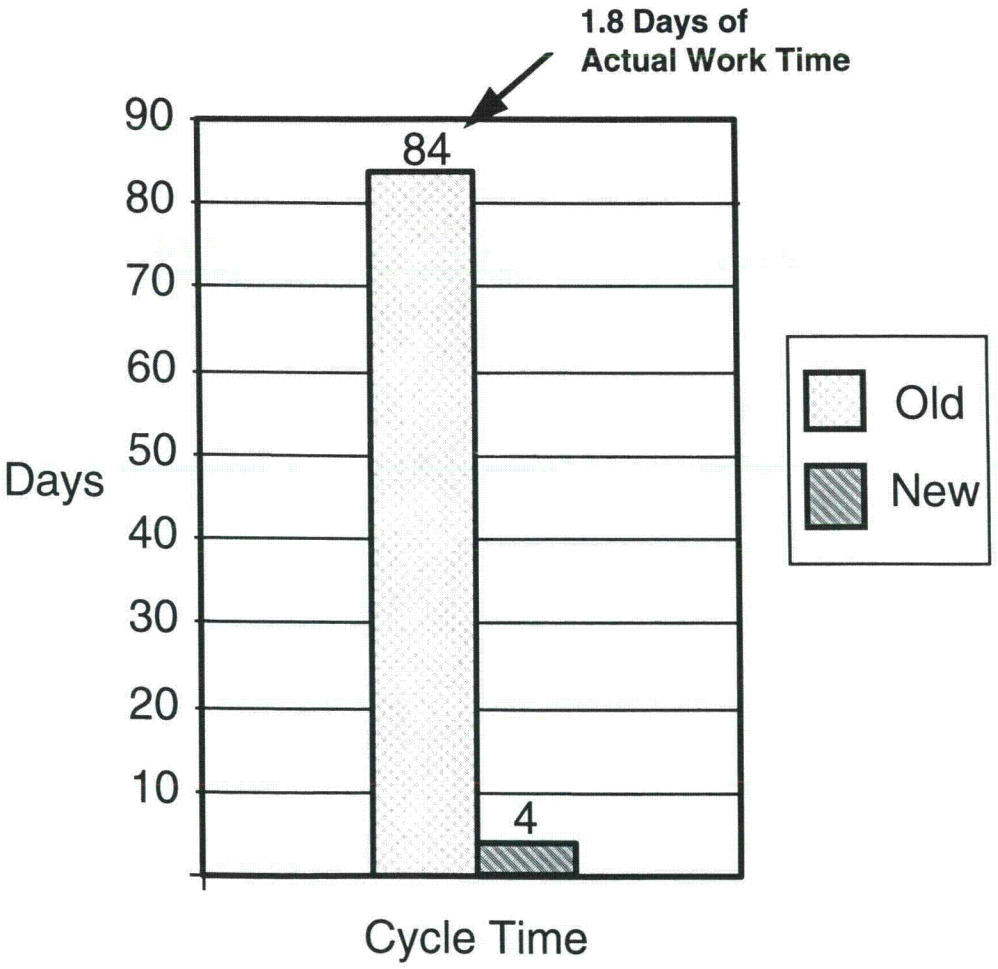


Process Flow in the Current 8-Step Process

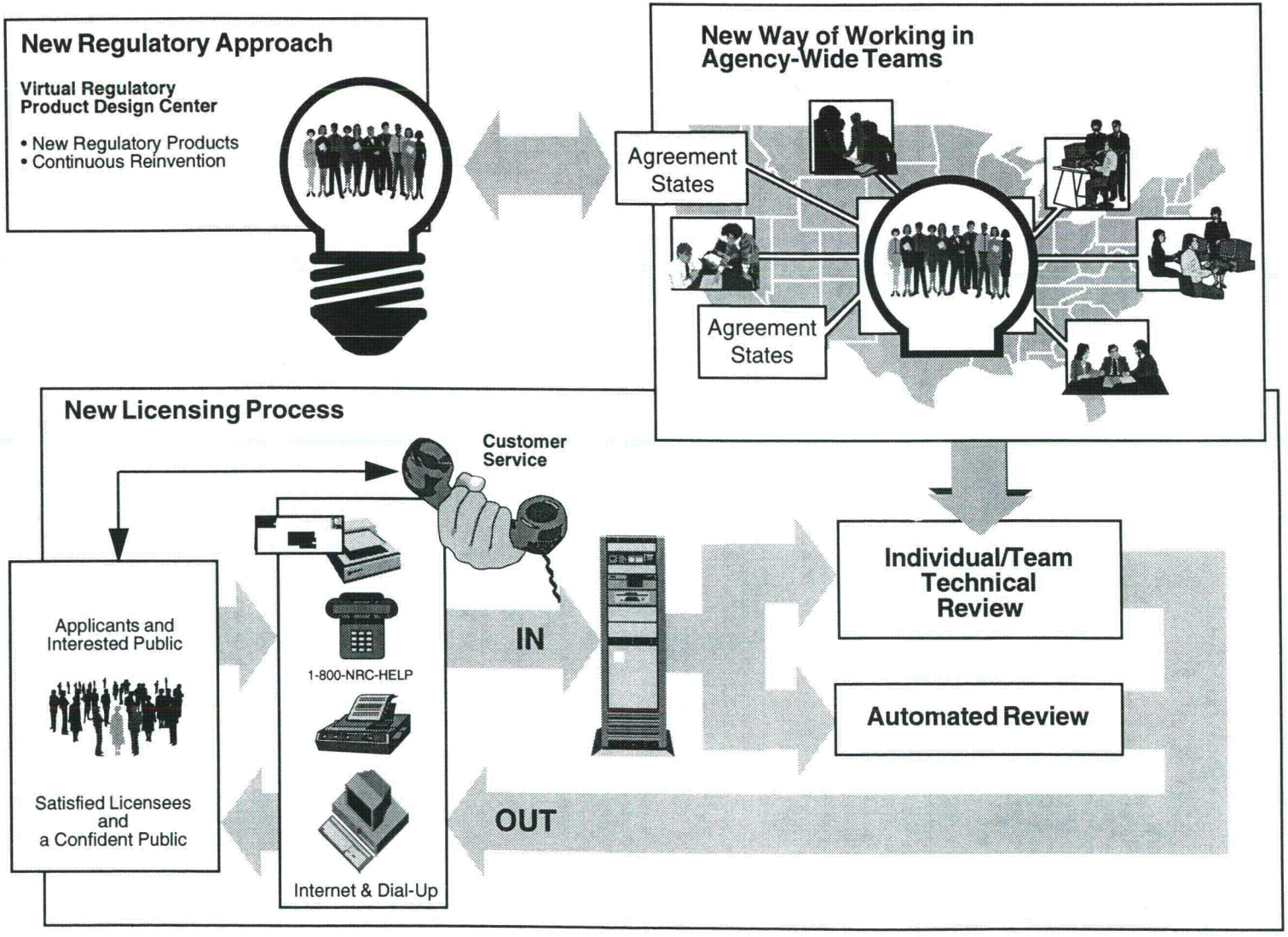


Findings
Efficiency Improvements





The New Materials Licensing Process



Regulatory Basis of the New Materials Licensing Process - "Vision 2000"

✔ Use a graded approach to match review intensity to safety hazard

✔ Automated review if uses are routine and applicant has adequate resources

✔ For routine uses, performance requirements will be codified in NRC's regulations

✔ The NRC will neither review nor make requirements by license condition of practices and procedures that are within the "skill of the craft" of the applicant

✔ Results-oriented regulatory approach

New Process Implementation

For Immediate Implementation

✔ On a one-time basis, extend qualified material licenses by 5 years.

✔ Separate payment of fees from the process of issuing a license and continue to streamline the fee structure for material licenses.

✔ Proceed to Phase II (Prototype Phase of the BPR project) including development of supporting guidance and an integrated automated system

✔ Develop a standard license condition for broadscope licensees functionally equivalent to 10 CFR 50.59

The First Major Implementation Initiative - One-time Extension of Eligible Licenses by 5 Years

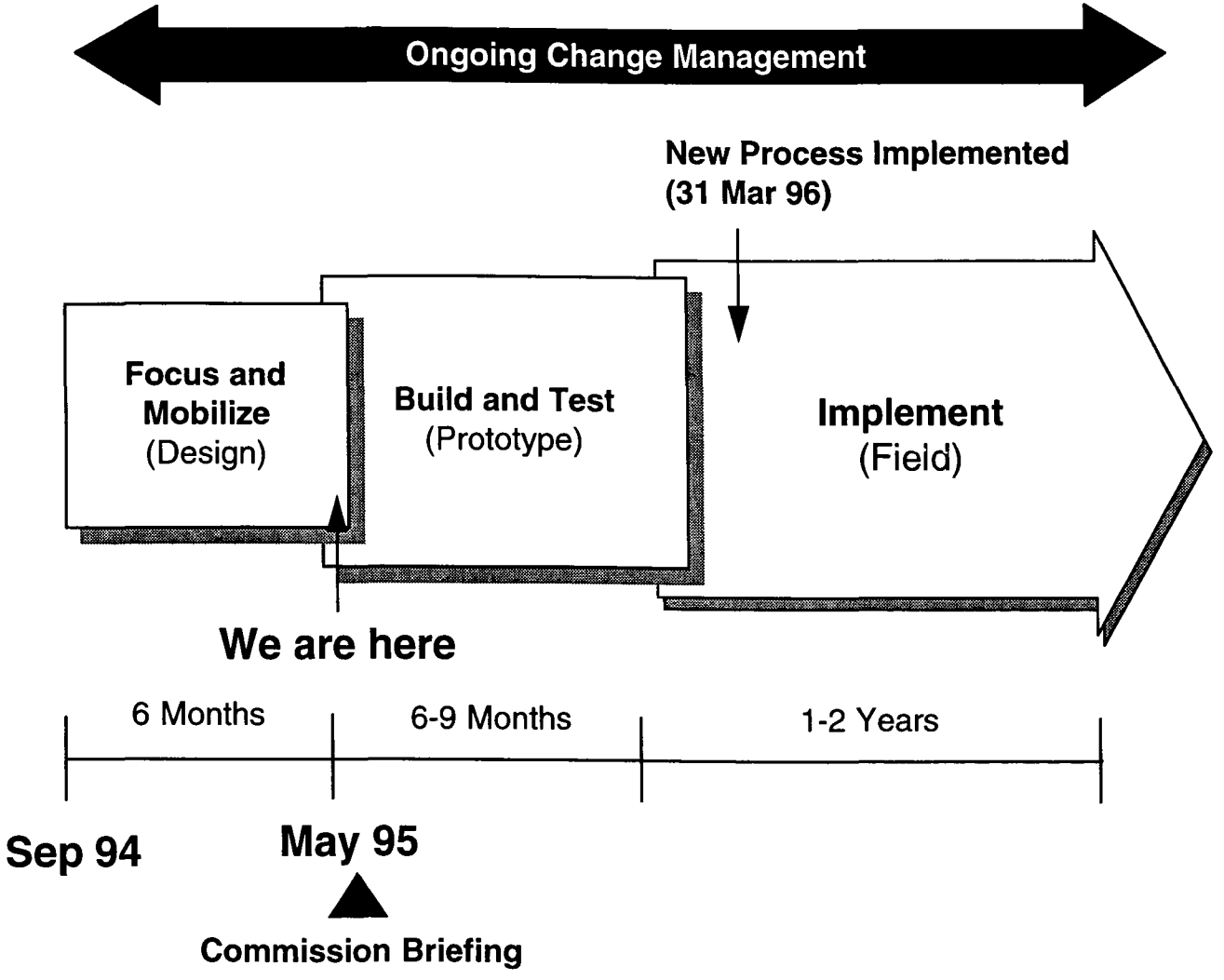
Base Rule

- ✔ On a one-time basis, extend eligible licenses by five years. Disqualify automatic extension based on the following possible criteria:

Disqualifiers

- ✔ Any licensee required to provide an emergency plan for responding to the release of radioactive material
- ✔ Any licensee subject to financial assurance requirements who has not submitted an acceptable decommissioning funding plan or certification of financial assurance
- ✔ Any license currently on the Site Decommissioning Management Plan list
- ✔ Any license for which an Environmental Assessment is needed
- ✔ Any license for which the licensee has received a Severity Level I, II, or III violation, or an order, a CAL, or other significant enforcement action at the last inspection

Where We Are on the Journey



Changes to Fee Structure and Collection

Separate Fees from Licensing

- ✔ Simplifies fee process
- ✔ Removes fee collection from critical path in licensing process
- ✔ Reduces burden on staff

Establish Two Annual Fees

- ✔ One annual fee for first year licenses whose application requires staff review
- ✔ Other annual fee includes average yearly costs and includes first year licenses processed through automated review
- ✔ New license not effective until fee paid

Assess Annual Fee on License Anniversary Date

- ✔ Predictable for licensee and NRC
- ✔ More uniform distribution of NRC workload

New Process Implementation

For Development and Implementation

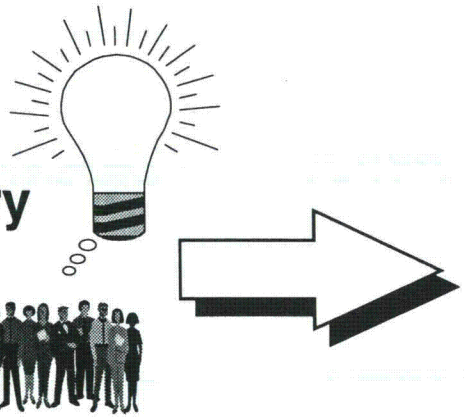
✔ Develop an NMSS policy on license duration based on risk, technological stability, and institutional stability

✔ Fundamentally reexamine the NRC's licensing and regulatory scheme for materials users to implement the regulatory vision

✔ Make needed organizational and administrative changes to implement the above in accordance with applicable agency directives and policies

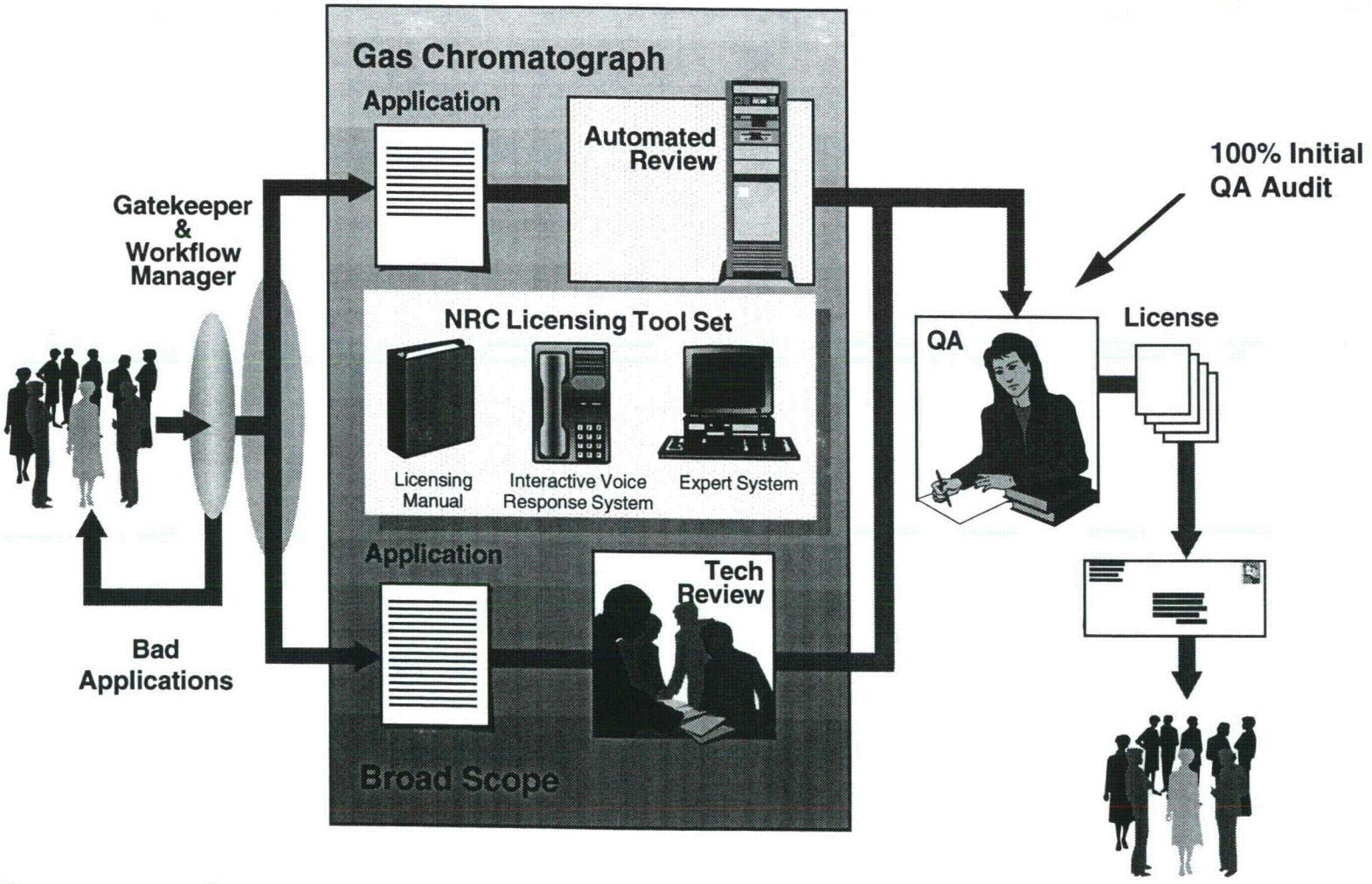
Highlights of the New Process

Virtual Regulatory Product Design Center



- Extended license duration
- Single licensing manual
- Safety-based expert system-aided application review
- 10 CFR 50.59 equivalence
- Introduction of registration concept
- Indefinite licenses
- Education products and requirements

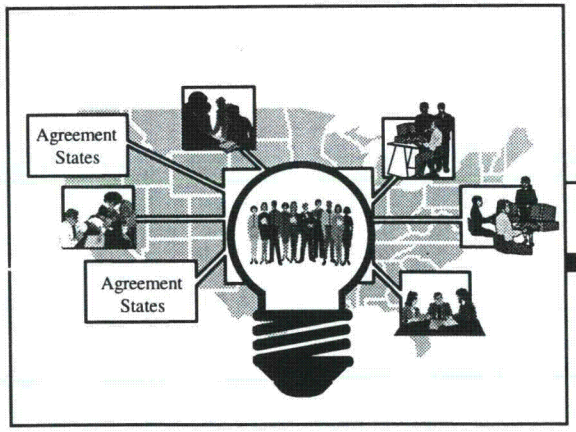
Graded Processing of Licenses



Applicants and Interested Public

Satisfied Licensees and a Confident Public

A New Way of Working in Agency-wide Teams



- ✔ A new partnering culture
- ✔ Collaborative team-based decisions
- ✔ Parallel concurrence
- ✔ Agency-wide goals
- ✔ Transcend regional boundaries
- ✔ NRC skills database
- ✔ Single guidance database
- ✔ NRC-Agreement State cooperation
- ✔ Rapid access to centrally stored data
- ✔ Manage by exception
- ✔ Better worklife

Our Vision Directly Addresses All Four NPR Functional Areas

Cutting Red Tape

- ✔Automated review of licenses through the use of expert systems
- ✔ Participation of Agreement States in NRC regulatory product development
- ✔ Five-year extension of qualified licenses
- ✔ Intra-agency collaboration across geographical boundaries
- ✔ Parallel development, review, and concurrence of regulatory products
- ✔ Separate fees from the issuance of licenses

Putting the Customer First

- ✔Accelerated license issuance without adversely impacting public health and safety
- ✔ Customer service as a single point of contact
- ✔ User-friendly, publicly accessible electronic regulatory products and databases
- ✔ Electronic application process

Our Vision Directly Addresses All Four NPR Functional Areas (cont.)

Empower Employees to Get Results

- ✔ Comprehensive licensing manual available electronically
- ✔ Self-managed work teams
- ✔ Strengthened labor management partnering culture
- ✔ Enhanced job satisfaction through greater professionalism

Cutting Back to Basics

- ✔ Elimination of redundant paper work and overlapping tracking systems
- ✔ Consolidation of regulatory guidance documents
- ✔ Improved productivity through use of new electronic tools
- ✔ Streamlined license review process

Safety Implications of the New Process

Graded Review Commensurate with Potential Risk of Activity

- ✔ Automated review of less complex licenses
- ✔ More complex licenses receive full technical review
- ✔ NRC expertise pooled and focused on issues

Clarify and Codify Regulatory Guidance

- ✔ Licensees gain greater overall understanding
- ✔ Improved Licensee Submittals

Safety Implications of the New Process

Extensive Quality Assurance

- ✔ 100% QA audits in first 6 months of implementation
- ✔ System improvements derived from QA problem analysis

Use Performance Indicators

- ✔ Early inspection results used to validate and improve new process
- ✔ AEOD database analyzed and compared to past licensee performance

Agreement State Liaison

- ✔ Agreement State representatives briefed on BPR project vision, implementation schedule, and future liaison activities
- ✔ New materials licensing process implemented in controlled phases over 2 year time span
- ✔ Ample opportunity to evaluate potential ripple effects on Agreement States
- ✔ Guidance consolidation efforts open to Agreement State participation
- ✔ New technology and process available to Agreement States for potential use
- ✔ Potential use of regulatory tools developed by Agreement States

Principal Near Term Actions

Backlog Elimination

- ✔ Major effort devoted to reduce the existing backlog
- ✔ "Backlog team" formed to get backlog to about 300 cases (1 month's work)

Licensing Manual Development

- ✔ Assemble and review all materials licensing guidance
- ✔ Reduce volume by at least half
- ✔ Produce a single comprehensive licensing manual
- ✔ Published in electronic format as NUREG and will replace all existing guidance. Functionally equivalent to NRR's NUREG-0800, Reactor Standard Review Plan