

ORIGINAL

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

**Title:** **BRIEFING ON CONTROL AND ACCOUNTABILITY  
OF LICENSED DEVICES - PUBLIC MEETING**

**Location:** **Rockville, Maryland**

**Date:** **Wednesday, November 13, 1996**

**Pages:** **1 - 68**

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1 UNITED STATES OF AMERICA  
2 NUCLEAR REGULATORY COMMISSION

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4 BRIEFING ON CONTROL AND  
5 ACCOUNTABILITY OF LICENSED DEVICES

6 \*\*\*\*\*

7 PUBLIC MEETING

8  
9 Nuclear Regulatory Commission  
10 One White Flint North  
11 Rockville, Maryland  
12

13 Wednesday, November 13, 1996  
14

15 The Commission met in open session, pursuant to  
16 notice, at 2:05 p.m., Shirley A. Jackson, Chairman,  
17 presiding.  
18

19 COMMISSIONERS PRESENT:

20 SHIRLEY A. JACKSON, Chairman of the Commission  
21 KENNETH C. ROGERS, Member of the Commission  
22 GRETA J. DICUS, Member of the Commission  
23 NILS J. DIAZ, Member of the Commission  
24 EDWARD McGAFFIGAN, JR., Member of the Commission  
25

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1 STAFF AND PRESENTERS SEATED AT THE COMMISSION TABLE:  
2 ANDREW BATES, Acting Secretary of the Commission  
3 MARTY MALSH, Deputy General Counsel  
4 JAMES TAYLOR, EDO  
5 DR. CARL PAPERIELLO, Director, NMSS  
6 DR. MALCOLM KNAPP, Deputy Director, NMSS  
7 DR. DONALD COOL, Director, Division of Industrial  
8 & Medical Nuclear Safety, NMSS  
9 JOHN LUBINSKI, Co-Chair, NMSS  
10 MR. ROBERT FREE, Co-Chair Texas Department of  
11 Health  
12 RITA ALDRICH, New York Department of Labor  
13 MARTHA DIBBLEE, Oregon Department of Human  
14 Resources  
15 JAMES YUSKO, Pennsylvania Department of  
16 Environmental Protection  
17 JOHN TELFORD, RES  
18 LLOYD BOLLING, OSP

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

[2:05 p.m.]

CHAIRMAN JACKSON: Good afternoon, ladies and gentlemen. Today a Joint NRC Agreement State Working Group and the NRC staff will brief the Commission on improving control over and licensees' accountability for specifically and generally licensed devices.

In June of 1995, the Commission issued a staff requirements memorandum approving the staff's plans to proceed with a Working Group to evaluate this issue. The Working Group completed its tasks and issued a report on July 2, 1996, which included a number of recommendations for improving control and accountability over regulated devices.

Today we look forward to hearing from the Working Group on those specific recommendations. We also look forward to hearing from the staff on its preliminary views of the Working Group's proposal.

The issue of regulatory control over general licensees has a long and complex history. The Atomic Energy Commission created a general license system in 1959 and in the early 1980s the staff first learned of smeltings of radioactive sources in steel mills resulting in costly clean-up for non-licensees and lost plant revenues.

In 1984, the NRC staff initiated a study of general licensees to address device accountability issues.

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1 Over the past decade, the Commission has considered various  
2 options to address this problem, but most proposals have  
3 required an infusion of significant new resources.

4 Today we hope to hear options that address the  
5 limited resource issues, along with solutions to the  
6 regulatory problem.

7 Now, I understand that copies of the staff's  
8 paper, which is SECY-96-213, the Working Group's report, as  
9 well as viewgraphs from Ms. Aldrich, are all available. And  
10 I understand that the order will be the Working Group  
11 report, then Ms. Aldrich would like to make some remarks,  
12 and then we will hear from the NRC staff. Is that correct?

13 MR. LUBINSKI: Yes, that's correct.

14 CHAIRMAN JACKSON: So do my fellow commissioners  
15 have anything they'd like to add at this point?

16 [No response.]

17 CHAIRMAN JACKSON: If not, you may proceed.

18 MR. LUBINSKI: Thank you. I appreciate your  
19 introduction. I'd like to start by introducing the Working  
20 Group members. To my far right is Mr. John Telford with the  
21 Office of Research, NRC, who served on the Working Group.  
22 Next to him, to his immediate left, is Mr. Lloyd Bolling,  
23 who is with our Office of State Programs, NRC.

24 To my immediate right is Bob Free. Bob's with the  
25 State of Texas and served as the Agreement State co-chair on

1 the Working Group.

2 On my far left is Mr. Jim Yusko. He's with the  
3 State of Pennsylvania and served as a CRCPD liaison to the  
4 Working Group.

5 Seated next to Jim is Martha Dibblee from the  
6 State of Oregon. She served as an Agreement State member to  
7 the Working Group.

8 And to my immediate right is Rita Aldrich from the  
9 State of New York. Rita served as an alternate to the  
10 Working Group and attended several meetings of the Working  
11 Group.

12 Two other individuals I'd like to recognize at  
13 this time are Miss Robin Haden, who is with the State of  
14 North Carolina. Robin was an original member of the Working  
15 Group and attended several meetings and provided valuable  
16 input.

17 In addition, Mr. Joel Lubenau served as the  
18 initial chair of the Working Group for the NRC. In March of  
19 '96 I succeeded Joel as the NRC co-chair of the Working  
20 Group when Joel then accepted a position with the Commission  
21 staff.

22 CHAIRMAN JACKSON: I should point out we have a  
23 lot of ground to cover and I think we've allotted about an  
24 hour and a half.

25 MR. LUBINSKI: I'll try to move quickly.

1           CHAIRMAN JACKSON: That's a discipline on us, as  
2 well as on you.

3           [Slide.]

4           MR. LUBINSKI: Starting with slide number 2, the  
5 Working Group's slides, in licensing we deal with two  
6 different types of licensing at the NRC. The special  
7 licensing which requires a pre-approval -- basically the  
8 administrative procedures and training are necessary to use  
9 products under this license. There are industrial gauges  
10 used under this license as well as sealed sources and  
11 unsealed material.

12           The general licensing program is in effect without  
13 a license being issued to a particular individual. It is in  
14 the regulations. It is fairly straightforward. And the  
15 requirements are all spelled out in the regulation.  
16 Therefore, they can receive the material without a license.

17           As stated, the first general license was issued in  
18 1959 with the purpose being to save agency resources. Later  
19 it was expanded out to include a large variety of devices.

20           The bottom bullet indicates that there were 42,000  
21 NRC general licensees and 460,000 devices currently used  
22 under the 31.5 license. I'd like to point out that there's  
23 NRC general licensees and we're still doing, about rule of  
24 thumb, two to one for Agreement States as an estimate. So  
25 we're estimating somewhere on the order of 900,000 devices



1 in Agreement States.

2 CHAIRMAN JACKSON: You're pretty confident in the  
3 numbers relative to the NRC?

4 MR. LUBINSKI: The numbers from the NRC are from  
5 the NRC general license database. Any error would be  
6 misreporting by general licensees into the database. If  
7 anything, there's probably a slight overestimate. To give a  
8 number on what it would be, I could not say.

9 CHAIRMAN JACKSON: But you're saying it's complete  
10 in the sense of capturing the universe?

11 MR. LUBINSKI: Of NRC licensees, yes.

12 CHAIRMAN JACKSON: Okay.

13 MR. LUBINSKI: Next slide.

14 [Slide.]

15 MR. LUBINSKI: In looking at the types of devices  
16 under a general license we say 460,000. I need to point out  
17 that the majority of these devices are fairly low risk. In  
18 looking at this slide you can see that 72 percent are exit  
19 signs, tritium gas, relatively low hazard, both during use  
20 and under accident conditions.

21 Other devices of lower risk on the pie chart are  
22 shown as the chromatographs and static eliminators, so we're  
23 talking about 84 percent of the devices being relatively low  
24 risk under the current general license. Next slide.

25 [Slide.]

1           MR. LUBINSKI: Under the general license, as I  
2       stated earlier, the requirements for the general licensee  
3       are spelled out in the regulations. This is a listing of  
4       the current requirements, fairly simple and straightforward.  
5       Basically, the general licensee receives "a black box."  
6       They can use the device, cannot service the device, are  
7       basically given a list of do's and don'ts. Do's, such as  
8       testing the device, maintain the device, maintaining the  
9       labeling. Don'ts, don't throw it in the trash, make sure it  
10      goes back to someone authorized to receive it. Don't  
11      service it yourself. Make sure you have someone who knows  
12      what they're doing to service it. Next slide.

13           [Slide.]

14           MR. LUBINSKI: The reason we can do this under the  
15      general license falls back on the distribution of the  
16      product. The device itself needs to meet certain safety  
17      criteria. This is ensured during the manufacturing and the  
18      design of the device and this is reviewed during the  
19      licensing process by NRC.

20           There's an inherent safety to the device and this  
21      looks at use conditions, as well as likely accident  
22      conditions for use of the device.

23           The second bullet lists instructions and what  
24      we're saying here is the fact that the general licensee does  
25      not have to contact the NRC prior to receiving a NRC, they

1     need to be aware that they are a licensee and what  
2     requirements they have.

3             This is done through the vendor. The vendor would  
4     provide them instructions, precautions and licensing  
5     information -- again, the list of do's and don'ts that they  
6     need to do.

7             The last item is the reporting requirement. This  
8     is a reciprocal agreement with Agreement State licensees,  
9     that is, Agreement State distributors, where they will tell  
10    us which NRC general licensees they distribute to and our  
11    licensees will tell the Agreement State which devices. This  
12    allows the regulator to know who the general licensees are  
13    and what devices are being used under a general license.

14            CHAIRMAN JACKSON: How often is the database  
15    updated?

16            MR. LUBINSKI: The reports are required to be  
17    submitted on a quarterly basis. They are immediately  
18    updated and again, there's a 30-day grace period on the  
19    reporting.

20            The current regulatory oversight. For specific-  
21    licensed distributors, there's a good track record,  
22    according to the information we have on inspections of these  
23    licensees. They do provide information to the general  
24    licensees. They do provide reports to the Commission. The  
25    designs that they have have been preevaluated and they are

1 manufacturing these devices in accordance with those  
2 specifications.

3 They are also subject to inspections, as well as  
4 application and annual fees.

5 For the general license users, we're dealing with  
6 a much different situation here. We maintain -- that is,  
7 NRC, the regulators -- maintain a listing of the general  
8 licensees and what types of devices they have. However, we  
9 do not subject them to routine inspections and we only  
10 inspect basically for cause, if we have information such as  
11 violations, safety concerns or an allegation.

12 In addition, they're not subject to fees, which  
13 basically means a general licensee may never come in contact  
14 with the regulatory authority -- that, NRC in our case --  
15 through the entire life of the device. They may receive it,  
16 follow the regulation and then, when they transfer it back  
17 to a specific licensee, provide a report to NRC stating that  
18 they did such.

19 CHAIRMAN JACKSON: So the distributors are  
20 specific licensees?

21 MR. LUBINSKI: The distributors are specific  
22 licensees, go through the licensing process and are subject  
23 to the inspections.

24 Status of the current program. As I stated, we  
25 started in 1959. Only a small number of modifications were

1 made since 1959 to the actual general licensing program.

2           However, in looking at the problems that you  
3 stated earlier in the early '80s, devices showing up in  
4 scrap streams, as well as some follow-up studies of  
5 compliance of general licensees, NRC determined that we  
6 needed to increase our oversight and a proposed rule was in  
7 the form of a registration system for general licensees.

8           What's important to note about this registration  
9 system is it applied to all general licensees. That would  
10 be the entire 42,000 licensees, along with their 460,000  
11 devices.

12           That became a big problem when we tried to  
13 retrofit the system to all these devices. We had to follow  
14 up on reports of loss, follow up on miscommunications where  
15 a vendor may have given us information and the licensee  
16 didn't report and now we have to track down was there an  
17 authorized disposal?

18           The registration system did include annual mail  
19 contacts, where we would contact the licensees as to whether  
20 they did have their material.

21           The rulemaking was published as a proposed rule in  
22 1991. Extensive comments were received and resolved.  
23 However, in 1993 the rulemaking was put on hold. Basically,  
24 the issue of resources came back up as the major problem and  
25 the major problem with the resources, again, was the



1 retrofitting of the rule to all existing devices.

2 The rule continues to be on hold, again because of  
3 the low risk with the current devices and the resources  
4 needed to backfit the program, retrofit the program.

5 However, we have continued -- and I say we, NRC  
6 staff -- in the area of looking at some of these problems.  
7 Specifically, we have tried to address the problem of  
8 baghouse dust disposal, which has resulted from devices  
9 accidentally being smelted, and other initiatives, such as  
10 the formation of the Working Group, the formation of the  
11 Working Group to get a national perspective, as well as  
12 input from the Agreement States on the process.

13 At this point I'd like to have Bob Free go over  
14 the next few slides and discuss some of the involvement of  
15 the states in the process some of the preliminary  
16 conclusions.

17 [Slide.]

18 MR. FREE: Thank you, John.

19 The Working Group, of course, felt that there  
20 definitely was a problem but needed to identify, if they  
21 could, the scope of the problem. In order to do that,  
22 public meetings were held and a public workshop. There was  
23 a public meeting in October, one in December, and the public  
24 workshop was held here in January of this year.

25 The Working Group determined or identified that

1     there had been a number of smeltings over the course of the  
2     past 13 years. About 20 smeltings had occurred in steel  
3     mills and they ranged in cost to the mills anywhere from 3  
4     to 23 million dollars.

5             Also, there were devices turning up in scrap yards  
6     and other locations that states either had to decide to  
7     collect themselves, locate a licensee responsible or to get  
8     the finder to dispose of them.

9             A survey was conducted by the NRC in 1990 of 3,000  
10    general licensees that indicated there was a problem in that  
11    area, that is that about 60 percent did not respond  
12    initially and eventually determined some number less than 1  
13    percent of the devices couldn't be located. Those are small  
14    percentages, but when you look at the large numbers of  
15    devices we're dealing with, they can be significant.

16            COMMISSIONER DICUS: Was this survey of general  
17    licensees only for gauges or was it all the general  
18    licensees, a representative number of all the general  
19    licensees?

20            MR. FREE: There were 3,000 general licensees that  
21    were surveyed.

22            COMMISSIONER DICUS: I know but --

23            MR. LUBINSKI: If I can answer that, there were  
24    actually three categories of general licensees and  
25    approximately 1,000 per. That was industrial gauges,

1 analytical devices and exit signs. The results varied a bit  
2 across each type of license. However, for the analytical  
3 gauges and the industrial gauges, the results were fairly  
4 similar -- the same numbers not responding, the same numbers  
5 having difficulties locating.

6 It appeared in the area of exit signs that there  
7 was actually more persons who could not account for gauges.  
8 However, it was a lower risk item where there's not as much  
9 concern.

10 MR. FREE: Thank you, John.

11 I mentioned public meetings and the public  
12 workshop that were held. Throughout the process, the  
13 Working Group attempted to identify as many stakeholders as  
14 possible. Joel Lubenau, who was co-chair at the beginning  
15 of the process, spent a lot of time and effort attempting to  
16 identify stakeholders.

17 Participants at the meetings included Agreement  
18 State representatives, members of the steel manufacturing  
19 industry, licensees, vendors, manufacturers of the devices.

20 The Agreement States provided the three Working  
21 Group members and an alternate and conducted a survey to get  
22 some consensus among Agreement States so that there was  
23 agreement that at least there was a problem and the extent  
24 of the problem. All of the Agreement States agreed that  
25 there was a problem.

1           The Working Group, in its discussions, identified  
2           initially seven areas of concern and then another four. I  
3           won't try to list or discuss each of those, but  
4           compatibility was one of the major ones. Cost and fee  
5           considerations. Changes in device manufacturers or changes  
6           to regulations affecting devices that are already in  
7           possession, versus newly acquired.

8           Device disposal. One of the categories that we  
9           discussed quite a bit under disposal had to do with orphaned  
10          devices. We had defined orphaned devices as devices that  
11          turn up in the private sector and someone trained to handle  
12          them would be required to take responsibility.

13          Eventually the Working Group came up with a straw-  
14          man proposal identifying problems and solutions. One of the  
15          problem areas was regulatory oversight. The Working Group  
16          felt that some enhanced regulatory oversight needed to be  
17          conducted in order to control or contain these devices so  
18          that they weren't lost or improperly disposed of.

19          Increased contact between users and regulators and  
20          attempts to identify early warning signs through possibly  
21          self-inspection reports that would go out to the users.

22          Control and accountability was another problem  
23          that was addressed. Solutions proposed were require devices  
24          to have labels or tags containing certain information and to  
25          have a certain durability. Also, the proposal would

1 recommend that a person responsible for the device and a  
2 back-up person be identified.

3 CHAIRMAN JACKSON: Let me ask you a question, in  
4 terms of control and accountability. Inherent in this has  
5 to do with requirements that Agreement States might impose  
6 versus what we might. Should there be separate databases?  
7 I mean, did you consider that issue specifically?

8 MR. FREE: At the workshop in January a proposal  
9 was put on the table by -- we call it the Jack Dukes  
10 proposal. He worked for ABB and at the time suggested a  
11 national database of devices -- or sources. And there was a  
12 lot of agreement with that.

13 Subsequently, we did a survey that was mailed out  
14 and also handed out at the CRCPD meeting. A number of  
15 states agreed with that. The states seemed to be split  
16 about 50/50 in terms of agreeing with the utility of the  
17 national database.

18 An additional problem that the Working Group  
19 delved into was improper disposal of devices and suggestions  
20 there or the recommendations include methods to increase  
21 knowledge on the part of the users as to what devices they  
22 have, where they are and maintaining some sort of  
23 accountability for those, communicating between the user and  
24 the regulator and also the vendor so that when a device is  
25 put in motion, there's something in place so that a back-up



1 system, if you will, exists to track it.

2 CHAIRMAN JACKSON: Before you go on, let me ask  
3 you this question. Again, and I'm asking you because you  
4 represent one of the Agreement States, some Agreement States  
5 do not have civil penalty authority. So in looking at this  
6 first bullet as part of the solution, did you consider what  
7 types of nonmonetary penalties could those Agreement States  
8 impose that do not have civil penalty authority?

9 MR. FREE: My understanding is that there are a  
10 number of different situations existing in states,  
11 regardless of whether Agreement States or non-Agreement,  
12 relating to civil penalty authority, and some of the non-  
13 Agreement States do have some regulatory responsibility for  
14 non-byproduct material. They would also be affected by some  
15 of these recommendations if they chose to use them.

16 I've been told on one occasion that a state didn't  
17 have any authority to levy civil or administrative  
18 penalties. In Texas we use administrative penalties. We  
19 also have a system for using our attorney general's office  
20 for civil penalties. Other states do use civil penalties.

21 I don't have numbers that would indicate how many  
22 could or how many could not use some sort of penalty system.

23 CHAIRMAN JACKSON: Okay. At this point, then, you  
24 haven't really had the opportunity to consider real  
25 mechanisms for implementing this kind of a solution.

1 MR. FREE: Not for civil penalties. The members  
2 of the Working Group represent states who have regulatory  
3 processes in place now that address the other regulatory  
4 controls that were suggested.

5 One of the reasons for recommending a method for  
6 penalizing persons for improper disposal is that it's  
7 another way to get people, persons who are responsible for  
8 the devices, to use whatever they have available, whatever  
9 means they have available to maintain accountability for the  
10 device and to dispose of them properly.

11 I think what happens on a number of occasions is,  
12 though, that companies go bankrupt and then, in the transfer  
13 of properties, these devices become lost.

14 CHAIRMAN JACKSON: Do you have any data that  
15 tracks the handling and disposition of the devices as a  
16 function of the regulatory authority of the states in which  
17 different improper disposals take place?

18 MR. FREE: Not in terms of the type of --

19 CHAIRMAN JACKSON: What I'm trying to get at is in  
20 terms of a remedy, the issue has to do with effectiveness of  
21 the remedy and that, then, tracks into some kind of  
22 regulatory space. And you have some of these devices that  
23 may be improperly disposed in Agreement States, as you point  
24 out, some in non-Agreement States.

25 Even in some of the non-Agreement States, the

1 states have certain regulatory responsibilities nonetheless  
2 and the issue is to try to get some coherent picture of  
3 what's out there relative to what we might do, whether it's  
4 in terms of a direct oversight or in terms of what might  
5 happen vis-a-vis adequacy and compatibility of Agreement  
6 States programs.

7 MR. FREE: I see. We had a lot of discussion  
8 about compatibility issues and --

9 CHAIRMAN JACKSON: I'm going to ask you a question  
10 about that.

11 MR. FREE: I think that your question is leading  
12 into that and right now a number of -- well, states  
13 generally have various means of coping with general-licensed  
14 devices. That was the initiating problem that the Working  
15 Group was based on.

16 When we began our discussions it became apparent  
17 that a number of states had different means of coping with  
18 these problems. Some have taken it on their own to either  
19 specifically license GL devices; others have taken other  
20 approaches. In Texas we have what we call a general license  
21 acknowledgement program.

22 So to answer your question, I think there's a wide  
23 range of methods out there that are currently being used.  
24 What we tried to do as a Working Group was come up with  
25 something that we could reach consensus on that could at

1     least form a foundation to build on adequate control,  
2     regulatory control of the devices.

3             Another item on that issue also has to do with the  
4     Working Group recommending that vendors provide disposal  
5     information to users prior to transfer, or along with the  
6     transfer of the device. That is, the Working Group felt  
7     that with that, vendors could be made aware of the cost of  
8     disposal, the potential cost of disposal, and know their  
9     concerns related to properly handling of devices after  
10    they're through using them.

11            And the last issue or problem that we addressed  
12    had to do with orphaned devices. I say last because it's  
13    last on this list. It's something that we discussed and  
14    agonized over throughout our meetings.

15            Orphaned devices is a situation that I find  
16    troublesome personally because among my responsibilities is  
17    responding to incidents and recovering or retrieving some of  
18    these devices. And, as a regulatory person attempting to  
19    identify the ownership, many times that's impossible.

20            I've found that there's a variety of ways of  
21    handling orphaned devices around the country. Some  
22    regulatory bodies leave these devices in the possession of  
23    the finder, with some sort of mechanism for tracking it and  
24    assuring that it's adequately stored. Others take  
25    possession of them and still others try to find a licensee

1     who's willing to take possession of it until some  
2     arrangement for disposal can be maintained.

3                 Now, these finders generally, when we're talking  
4     about these types of devices, small gauging devices, the  
5     disposal costs of these things can range upward to \$20,000.  
6     For a small entity, a person who makes his or her living  
7     handling scrap, that's a very significant cost. Many of  
8     them have concerns over spending \$800 for a radiation  
9     detector.

10                So the Working Group felt that some method needed  
11     to be developed so that there was adequate means of taking  
12     possession of these devices, putting them under adequate  
13     control and disposing of them.

14                CHAIRMAN JACKSON: How many such devices are  
15     there?

16                MR. FREE: Orphaned devices?

17                CHAIRMAN JACKSON: Right.

18                MR. FREE: I don't have a clue. I think we  
19     estimated at one point in our discussions regarding just  
20     gauges, cesium gauges, perhaps 80,000 in existence across  
21     the country, and that was a wag.

22                But we also discussed, in our recommendations for  
23     enhanced regulatory programs, what types of situations  
24     should we address. I think there are three situations.

25                We have devices that are already lost that are



1 going to turn up somewhere. We have devices that are in  
2 someone's possession now and may be in jeopardy of becoming  
3 lost, for whatever reason. And then we have devices that  
4 are going to be manufactured and produced in the future.

5 I don't think it would be adequate to simply  
6 address future manufactured devices. There are too many out  
7 there already that I feel are in jeopardy of becoming lost  
8 and becoming a problem.

9 CHAIRMAN JACKSON: I think the Working Group's  
10 paper recommended NRC funding for the ultimate disposal of  
11 orphaned devices that are not the responsibility of DOE or  
12 the EPA.

13 So the question I would have for you, whether you  
14 considered it, if the NRC funds that ultimate disposal of  
15 orphaned devices, being orphaned in the sense that you say,  
16 given that we're a fee recovery agency, how would you  
17 suggest that NRC recover those disposal costs?

18 MR. FREE: The Working Group didn't feel adequate  
19 to really address --

20 CHAIRMAN JACKSON: You punted it to us.

21 MR. LUBINSKI: If I can expand on that, we did go  
22 into a lot of discussion on the subject. Maybe the end  
23 result, as you said, was we definitely punted at that point.

24 However, in the recommendations, the first part of  
25 that recommendation for orphaned devices and ensuring proper

1 disposal was that DOE and EPA definitely have some  
2 responsibilities in this area.

3 We weren't sure, because there are not definite  
4 agreements in place, to say whether or not there will be a  
5 "piece of the pie" left that would not be covered by those  
6 two agencies. Our statement was that from a health and  
7 safety standpoint and protection of property, we needed  
8 these devices to be controlled.

9 We looked at funding and considered where we would  
10 go for funding. We threw around the ideas of recommending  
11 that NRC go to Congress and ask for a fund to be set up as  
12 part of our funding -- that is, NRC's funding coming from  
13 Congress for this, as part of DOE's funding coming for this,  
14 as part of a surcharge over all general licensees and all  
15 specific licensees, as being a possible solution.

16 Because of this issue of fees and it being such a  
17 volatile situation, we decided at that point instead to  
18 recommend that not necessarily NRC provide the funding but  
19 NRC ensure that the funding is available. Where it would  
20 actually come from, whether or not it would come from  
21 Congress or another agency or whether or not there would  
22 need to be a surcharge along the line somewhere would need  
23 to be a final decision, a policy decision made by NRC, and  
24 we could not bring ourselves to make that kind of  
25 recommendation.

1 MR. FREE: I didn't mean to imply that I was  
2 finished.

3 [Laughter.]

4 MR. FREE: That's true. In fact, one thing that  
5 we did do at the Vancouver-Washington meeting was invite a  
6 representative from the Northwest Compact to hear our plea  
7 and find out what he might have to add or suggest.

8 I've talked to our low level waste authority in  
9 Texas and frankly, a lot of people are concerned among the  
10 waste disposal industry that certain individuals might take  
11 advantage of the situation if compacts simply agree to take  
12 these devices when they were found.

13 So there are a lot of complicating features  
14 involved in trying to persuade a compact or a waste site to  
15 accept the disposal of these devices.

16 COMMISSIONER DIAZ: Is there an estimated cost for  
17 programming on a yearly basis?

18 MR. FREE: If they're found by someone who has no  
19 knowledge of radiation protection, safety or waste disposal,  
20 they're going to have to rely on someone to come in and  
21 survey, package, ship, deliver, and then the waste site to  
22 dispose of it. Estimates, if one of the waste site  
23 contractors takes it from cradle to grave, are up to  
24 \$20,000.

25 COMMISSIONER DICUS: Along those same lines, do

1 you have any information about individual states in the  
2 situatoin of orphaned devices and when one would show up in  
3 the private sector with an innocent bystander, the state, in  
4 effect, ultimately became the proud owner of this device.  
5 Do you have any data on that? I know of at least one state  
6 that did have to go out and bring them in and did have to  
7 dispose of them, at a cost of about \$100,000 when several of  
8 them were sent off at one time.

9 So I just wonder because it's a case where the  
10 states assume the responsibility, and I know there are one  
11 or two or three. I know there's more that one state that  
12 assume the responsibility and the cost of doing this. I  
13 just wondered if you had data on that.

14 MR. FREE: Only anecdotal information. In Texas  
15 we have storage facilities for devices. And what we've done  
16 is collect these and store them. We haven't actually had to  
17 pay disposal costs yet. And every year we go through an  
18 agonizing discussion over whether we're going to continue to  
19 collect them. And it goes beyond byproduct material to the  
20 realm of radium and other NARM materials.

21 I know that some states are not able to collect  
22 these because they don't have the facilities to store the  
23 devices in the first place. To me, that's a whole new  
24 Working Group operation.

25 MR. LUBINSKI: At this point I'd like to talk

1 about the recommendations that were specifically identified  
2 in the Working Group report. Bob has given basically a  
3 skeleton of what the recommendations are.

4 The first recommendation we call increase  
5 regulatory oversight and we left it as that for the fact of  
6 the compatibility issue. We talked about that already or  
7 touched on it.

8 Our recommendation for this type of oversight  
9 would be a compatibility 2 recommendation, the reason being  
10 that there are certain aspects of the program that would  
11 need to be in place, and that's what we identified as our  
12 increased oversight program -- annual contact with  
13 licensees, licensees doing inventory. These are essential.

14 The method in which a state would do that we  
15 didn't think was important. If a state would like to go out  
16 and do inspections every year, fine. Why should we limit  
17 them and say it needs to be a computerized database?

18 However, with that said, we felt the most  
19 efficient way of doing this would be a computerized  
20 registration system. The idea, we'd like to be able to say  
21 it's a great new idea that we came up with. However, as  
22 already stated, the 1991 rulemaking talked about  
23 registration. A proposal from one of the vendors referenced  
24 registration.

25 We basically tweaked it a bit. The one major



1     thing we did is we said that this registration would not  
2     apply to all generally licensed device. It would only apply  
3     to those that contain certain isotopes that we felt were of  
4     concern, specifically cesium, cobalt, strontium and all  
5     transuranics.

6             The reason we picked these were based on health  
7     and safety concerns when these items are released to the  
8     public; in addition, what they could cause as far as  
9     property damage. Ten millicuries of cesium, as an example,  
10    may not be a major health and safety concern if found by  
11    someone on the street. However, that same source smelted in  
12    a steel mill could cause millions of dollars worth of  
13    damage. Therefore, we felt from the property standpoint,  
14    that that needed to be included.

15            In addition to this, we included certain specific-  
16    licensed devices. Basically these gauges were lower  
17    priority on the inspection scale currently; that is, five-  
18    year inspection cycle, may get bumped back to six or seven  
19    years. We said this would be a more efficient way to  
20    regulate these devices and ensure that they are actually  
21    maintained and controlled.

22            We looked at the resources that are currently used  
23    in the inspection program and said they could be used to  
24    actually maintain this registration system. These devices  
25    have shown up at scrap dealers, steel manufacturers, both

1 specific- and general-licensed devices.

2 The meat of the program is more of a time factor.  
3 Over time, if someone gets a device, they don't lose it  
4 immediately. It's over time, five years from now. They  
5 forget that they're a general licensee. They forget that  
6 the device exists because the product line has been shut  
7 down.

8 Therefore, an annual contact would again keep our  
9 presence known, let them know that yes, you are a general  
10 licensee, give them knowledge.

11 In addition, we found that the people who maybe  
12 had the original general license are no longer with the  
13 organization. Maybe they moved on in the organization and  
14 this was very much a low priority in their annual duties.

15 Therefore, with this annual contact, it's a  
16 reminder. Let us know who your responsible person is. Let  
17 us make sure they know they have a general license.

18 We also said from this registration we'd be able  
19 to verify disposal, ensure it went to either a proper  
20 disposal site or back to a specific licensee.

21 And the last item that we felt was important to  
22 address but could not be addressed on a compatibility issue  
23 with the states was the fee per device. We need to fund the  
24 program somehow. The fee should come from the users.

25 States that have programs such as this in place

1 have indicated that it's better to do it on a per device  
2 basis. It gives someone a reason to go out and check if  
3 their device is there. Well, I'm not just going to send in  
4 the check. I'll go check and make sure the device is here  
5 first.

6 So it's an annual contact. Does the person still  
7 have the device? Do they still know they are a general  
8 licensee?

9 The second item we talked about in proposing  
10 penalties, many people made the statement, you need to put  
11 teeth into your program, and that was a statement made by  
12 the stakeholders in the process.

13 The penalty -- we said, as Bob has already  
14 indicated, disposal could cost as much as \$20,000 for one  
15 device. If you're issuing someone a \$2,000 civil penalty  
16 when authorized disposal of their device could be \$20,000,  
17 that hardly keeps them from doing an unauthorized disposal.

18 Therefore, we said that the penalty should really  
19 be based on what the authorized disposal would be. And  
20 again, \$20,000, that was for a 1 curie cesium source. There  
21 may not be that many of those out there but it's an example.

22 For the states, the question came up earlier about  
23 civil penalties. Again, we call it a penalty system in the  
24 recommendations because states may need to do it in another  
25 way -- administrative. Martha made many comments that she

1 is able to put administrative penalties on her licensees  
2 that sometimes have much better effect than any type of  
3 civil penalty she could issue to them.

4 We felt that the increased civil penalty was  
5 justified based on one, the disposal cost but also the  
6 consequences. As I said earlier, if you're talking millions  
7 of dollars of damage to a steel mill and you're only  
8 charging someone a civil penalty of \$2,000, it really  
9 doesn't have much of an effect.

10 The third item with the orphaned device, and we've  
11 touched on this so I'm going to go quickly, is the fact that  
12 no program could be 100 percent effective, so they're going  
13 to exist in the future.

14 In addition, we've said there are 42,000 general  
15 licensees, 460,000 devices. Many of these are already lost.  
16 They were distributed over 20 years ago. We feel that they  
17 may either be lost or waiting to be lost in a storage closet  
18 somewhere, getting ready to go out with a load of scrap.

19 And again, we've talked about that, that we need  
20 to get other agencies involved in this and basically make a  
21 clear distinction of where the responsibility comes.

22 The question of what happens when someone finds a  
23 device really needs to be answered, as well. It's  
24 inconsistent across state lines. Some states will take  
25 possession of the device. Other states say, "You took

1 possession of it; you're stuck with it; you pay for the  
2 disposal costs." Hardly an incentive for someone to state  
3 that they have a device. What's going to happen? They're  
4 going to just pass it along to the next person.

5 The last two recommendations are recommendations  
6 for not NRC but really for NRC to pass along. NARM devices  
7 have the same problems. We feel we should recommend to  
8 CRCPD that all the states look at this and implement similar  
9 programs for NARM.

10 In addition, nonlicensees, we have no jurisdiction  
11 at this point. But if they're going to get a device, let's  
12 give them information to educate them and allow them to  
13 educate themselves, especially in the area of what do you do  
14 when you find an orphaned device or any type of radioactive  
15 material.

16 Of course, the most important thing is probably  
17 the cost of implementing the system, as well as the  
18 benefits.

19 [Slide.]

20 MR. LUBINSKI: The next slide indicates a  
21 "cost/benefit analysis" that we did based on \$2,000 per  
22 person-rem. I'm going to start with the costs first.

23 Initial set-up cost. The majority of this cost  
24 goes into retrofitting the system. Again we're talking  
25 about going back, finding devices. You may need to send

1 inspectors out to facilities when someone says they lost a  
2 device or cannot find it.

3 This is a one-time cost. If we elected to do this  
4 over a three-year period, that is start and do one-third of  
5 the retrofit and then the next third, it could be amortized  
6 over three years, or however many years to do that.

7 The annual operating cost again is based on a  
8 computerized registration system, the idea being here that  
9 with a compatibility 2 system you could not have one  
10 national database. You would need to have 30 different  
11 databases. Even in a smaller state, this may be the most  
12 effective way and we estimated a cost based on that.

13 Cost to licensees, we feel, if anything, it may be  
14 a bit of an overestimate for the fact that licensees are  
15 already required to do leak testing of devices. They're  
16 already required to do servicing and maintenance of devices.  
17 Therefore, to fill out an extra piece of paper when they're  
18 doing that to do their accountability and to make sure that  
19 they have an inventory record shouldn't be much of a burden.

20 The annual benefits were much more difficult to  
21 calculate in this case. Steel manufacturers -- we looked  
22 here basically at property. We said that they're causing  
23 property damage, the devices, once they get into a steel  
24 mill.

25 This is based on what we have at this point from

1 small steel mills that have smelted devices, based on an  
2 average cost of \$8 million per device, which included  
3 downtime of the facility.

4 The reason we put "could approach" is that if we  
5 cleared it up and never had another lost device, we could  
6 say yes, we're going to save \$12 million. The effectiveness  
7 of our system we can't put an exact number on, to say that  
8 it's definitely going to be a total of \$12 million.

9 Exposure savings came from a report that was  
10 provided to us by NRC. Pacific Northwest Labs did a report  
11 and indicated that for cesium sources that are currently  
12 used under general licenses, the exposure savings when  
13 converted \$2,000 per person-rem could be as much as \$2  
14 million. And that again is based on a population dose, the  
15 number of people involved, but, on the average, could be  
16 about \$14,000 per year.

17 CHAIRMAN JACKSON: Let me ask a question in terms  
18 of how those estimates were arrived at. Did they consider  
19 the following three probabilities? The probability of loss  
20 of the device, the probability of breach of containment and  
21 the probability of external or internal radiation exposure  
22 for a given event.

23 MR. LUBINSKI: P&L considered those indirectly.  
24 What they did is they went back and studied all cases where  
25 incidents have occurred involving radioactive material

1 getting into the public domain. Then they did an analysis  
2 of that to determine what were the most likely  
3 representative cases of people being in a proximity to the  
4 device and the time they were in that proximity.

5 Based on that information they looked at what the  
6 internal dose would be, as well as the external dose, based  
7 on cesium sources, those numbers.

8 From the limited amount of data that P&L did, they  
9 were within an order of magnitude on their estimates. From  
10 a limited number of cases -- I don't have the number they  
11 looked at -- what they'd indicated is it was a good enough  
12 estimate that they thought additional work in this area,  
13 with time and proximity factors, should be performed. At  
14 this point this was what they called a preliminary estimate  
15 for cesium sources.

16 That concludes the Working Group's recommendations  
17 and report. At this time what I'd like to do is ask Rita  
18 Aldrich to provide her views on the report. Rita was  
19 involved in some of the meetings of the Working Group.

20 CHAIRMAN JACKSON: Am I understanding this is  
21 going to take about 10 minutes?

22 MS. ALDRICH: Yes.

23 MR. LUBINSKI: I just want to note that Rita was  
24 not involved in the final writing of the Working Group  
25 report. Therefore, Rita submitted a separate letter to the



1 Commission stating what her views were and she's going to go  
2 over those now.

3 MS. ALDRICH: Some of what I have in my overheads  
4 we've gone through already some I'll kind of whip through  
5 them.

6 One of the basic premises that we were working  
7 with from New York's perspective, we've had a steel mill in  
8 New York that's melted two sources, the same mill,  
9 unfortunately, at 10-year intervals and it's cost an awful  
10 lot of money. So this is a topic that's very close to --

11 CHAIRMAN JACKSON: Do these mills put any kind of  
12 detection devices?

13 MS. ALDRICH: Yes. After the first smelting, the  
14 mill put in a portal monitor. After the second smelting,  
15 the mill has also put in a monitor at the scrap bucket, so  
16 it'll be looking at smaller quantities.

17 But the monitor was working when the second source  
18 was received and it didn't necessarily protect them from it.  
19 If it comes in in the middle of a load of scrap and it's in  
20 it containment, the monitor won't pick it up, if it's in its  
21 original shielding. So they do the best they can but it  
22 doesn't mean that they're always going to be able to detect  
23 them.

24 In my opinion and in our opinion, I guess, in New  
25 York, the general licensing of sealed sources and devices is

1 a basically flawed concept. It tries to establish a middle  
2 ground between exemption and specific licensing. And it  
3 fails because, in essence, it results in too little control  
4 of hazardous sources -- curie quantities of cesium sources,  
5 500 millicuries of americium, things on that order.

6 And it invites overregulation of sources that  
7 don't pose a realistic hazard if they're lost or stolen,  
8 such as microcurie quantities of beta emitters in small  
9 gauges.

10 We regulate them all right now as if they had  
11 equal hazard. As long as we continue to combine sources  
12 with such different hazards in one category, we can't solve  
13 the present problems. Any increase in regulatory oversight  
14 on the GLs will just shift the imbalance a bit, continue the  
15 underregulation of the hazardous sources and the  
16 overregulation of the less hazardous sources.

17 Our proposed solution was to divide the general  
18 license into those that should be specifically licensed and  
19 those that should be exempted preferably from regulation  
20 because what we're doing right now is not adequately  
21 regulating anything in the group.

22 We differ from the Working Group in this respect.  
23 This is sort of a fork in the road here. One of them is to  
24 say, well, we'll take the general license and we'll try to  
25 improve it. The other is to say that the general license

1 hasn't worked for these more serious sources and that we  
2 need to go to another system that we have demonstrated does  
3 give us adequate control.

4 The states have complained about the general  
5 license for quite a while and at one of our meetings an old  
6 memo from -- I'm sorry; I haven't called for any of the  
7 slides. Excuse me. We're now on the fourth overhead. Oh,  
8 it is up there.

9 At any rate, this is excerpted from a 1981 memo,  
10 so this concern goes back quite a ways. And in the memo it  
11 states that at a recent All Agreement States meeting, which  
12 is an annual meeting between NRC and the Agreement States,  
13 the states commented that "NRC should reevaluate the GL  
14 device distribution licensing concept and seriously consider  
15 rescinding the GL concept of licensing gauges."

16 [Slide.]

17 MS. ALDRICH: The next slide is just the second  
18 part of that memo and just goes on to say that the states  
19 have seen a number of incidents involving this use of GL  
20 sources and it would be beneficial to discuss this. Next  
21 overhead, please.

22 [Slide.]

23 MS. ALDRICH: If an agency has a problem with a  
24 class of specific licensees -- that's the case in which you  
25 have issued a specific document to a specific company,

1 they've applied for a license, they have made commitments  
2 ahead of time, they've told you who the radiation safety  
3 officer is going to be -- if you have a problem after the  
4 license is issued, you use the specific license as a way to  
5 address the problem.

6 It must be issued before the sources can be  
7 applied. It must be amended if the person responsible for  
8 radiation safety changes. It must be periodically renewed.  
9 Next overhead, please.

10 The proper control over and disposal of sources  
11 are the subject of periodic inspection of the licensee.  
12 Improper disposal of all sources must be proven before the  
13 license can eventually be terminated.

14 And a question that the Chairman had asked a while  
15 ago about nonmonetary penalties, the specific license also  
16 gives you a way to impose nonmonetary penalties. You can  
17 amend restrictively the license, you can suspend the  
18 license, you can make them put all sources in storage  
19 because you think they have an accountability problem, or  
20 you can revoke the license for cause.

21 So with a general license, there's no way to do  
22 that. It's given in the regulations. You have no control  
23 over -- it seems to me, at any rate, you have no control  
24 over the person after they acquire the source.

25 The philosophy behind the regulation of GLs is

1 very different from the specific licenses. The sources can  
2 be acquired with no prior approval by a regulatory agency,  
3 by any company or person that can afford them.

4 I also think it's important to think about what a  
5 company might think if they can order a source, to them, a  
6 gauge -- they don't think of it as a radioactive source --  
7 out of a catalogue and receive that with no prior regulatory  
8 questions or approval? How much of a hazard are they going  
9 to regard that object as presenting? Very little, it seems.

10 And I think that in that sense, we're failing  
11 because in making it that easy to acquire something that is  
12 hazardous, could cause a very extensive personal property  
13 problem, we are sending that message, that this isn't that  
14 important.

15 So in the absence of issuing a specific license,  
16 there isn't any prior designation of a radiation safety  
17 officer, there's no licensing document that can be used to  
18 enhance control, there are no periodic inspections and  
19 almost complete reliance on source vendors for the records  
20 of receipt and disposal.

21 Basic inequities -- overhead, please. Specific  
22 licenses, and very often there's no difference between a  
23 specific-licensed gauge and a generally-licensed gauge of  
24 the same activity, except for the labels. You can get a  
25 curie under one kind of licensing or a curie under another

1 kind of licensing. It's cesium 137 and it's a curie.  
2 There's really very little difference between them in many  
3 cases.

4 But the specifically licensed ones are subject to  
5 all code requirements. Many of our code requirements really  
6 don't make sense for a simple type of license like this.

7 On the other hand, the GLs, as they're currently  
8 regulated, are exempt from everything except the few  
9 requirements in the segregated part of the regulations, plus  
10 requirements for proper disposal.

11 And keep in mind that the only knowledge that the  
12 general licensee has of their requirement very often is what  
13 the vendor tells them about because they're often not  
14 contacted by a regulatory agency. In New York we have  
15 always registered GLs and we require them to do semi-annual  
16 inventories. We're working towards the point where we're  
17 going to have them on a database so that we can contact them  
18 on a regular basis.

19 But because of the concept that they've always  
20 been a different kind of animal, they've never been recorded  
21 on computer, at least in New York. We kept paper records,  
22 so now we're creating -- in the last few months we've been  
23 creating a computer database so that we can regulate them  
24 more effectively with direct contact.

25 The specific-licensed fixed-gauge licensees, our

1 experience with them -- these are the equivalent or the  
2 parallel to the generally-licensed gauge licensees -- that  
3 they perform as well as any other licensee of ours, as long  
4 as the same degree of regulatory oversight is exercised.

5 I agree that we need to look at our resources.  
6 Next overhead, please. We need to reexamine how our  
7 resources and our licensees' resources are being used to  
8 regulate these various objects. As I said before, many of  
9 the GLs are similar or identical to the specifically-  
10 licensed items.

11 Our conclusion in New York is that we are  
12 underregulating the GLs and overregulating the SLs and our  
13 experience demonstrates that we can achieve good control of  
14 both with a few basic concepts. Next overhead, please.

15 One is to require a licensee commitment to  
16 oversight of sources and proper disposal before the sources  
17 are allowed to be acquired. There will be companies that  
18 won't choose to undertake the responsibility and may not  
19 wish to look at the down-the-line cost of disposal. I think  
20 that should be an up-front decision. You can't have that  
21 unless there's some previous contact and explanation on the  
22 part of the regulatory agency.

23 Second, require the licensees to maintain good  
24 records of receipt and disposal and of current source  
25 inventory. Next overhead, please.

1           Third, require prompt notification to the  
2 department of loss of control of a source. Four, regularly  
3 scheduled inspections. These don't have to be lengthy.  
4 Ours we're trying to keep to an hour. We have a four-page  
5 form. It just hits the high topics. Basically, where's  
6 your inventory? They'll spot-check what you have in the  
7 facility against your inventory because an inventory, by  
8 itself, is worth the paper it's written on unless you have  
9 some confidence that it reflects the reality in the  
10 facility.

11           And regular license renewals to reinforce the  
12 licensee commitments. I think one of the important concepts  
13 is that the recipient of one of these gauges makes that  
14 commitment up front that they're prepared to care for it,  
15 that they're prepared to pay eventually to dispose of it,  
16 that they're going to do all of the check tests and leak  
17 tests that required.

18           So what I am suggesting is that to conserve  
19 resources, that we can do a streamlined version of a license  
20 to cover both the generally-licensed and the specifically-  
21 licensed sources that fall into this category of concern, as  
22 I think we're calling them. We can guarantee 10-day  
23 turnaround. We have a mini-license application form that's  
24 four pages long, not too onerous.

25           It explains what the responsibilities are. It



1 requires the licensee to enter just the basic information -  
2 - their name, their address, who's going to be the radiation  
3 safety officer, the person responsible for carrying out the  
4 radiation safety responsibilities. I think it can be done  
5 at least as cheaply as what's being proposed in adding some  
6 refinements to the general license, but I think it gives us  
7 the essential concept, which is that we have contact with  
8 the applicant before they receive a source over which we are  
9 concerned and we would like them to be concerned.

10 That's really about it. Thank you.

11 CHAIRMAN JACKSON: Thank you. I just have one  
12 last follow-on question. If I look at the recommendations  
13 that the Working Group made, and to the extent that you want  
14 to comment on Ms. Aldrich's recommendations, you mentioned  
15 the suspended rulemaking; to what extent were any or all of  
16 these recommendations addressed at that earlier rulemaking?

17 MR. LUBINSKI: The first comment is that Ms.  
18 Aldrich's letter that she'd sent in -- the Working Group  
19 has all seen a copy of a letter. As a Working Group, the  
20 Working Group has not gotten together and commented on the  
21 report, so I think at this point we don't want to have any  
22 comments except to say that many of the conclusions or bases  
23 for what Rita has stated are the same as what the Working  
24 Group says.

25 From the point of the suspended rulemaking, the

1 current rulemaking that was in place in 1991, that is, the  
2 proposed rulemaking, besides the registration system, did  
3 have some other essential elements that are needed for the  
4 program and are things that we basically addressed.

5 For example, providing disposal information to a  
6 licensee up front, that was included in the rulemaking.  
7 Tying up some loose ends on what a general licensee can do  
8 and what they should do, such as inventory systems and  
9 disposal of devices and providing proper notification of  
10 disposal.

11 However, the way the current rulemaking is set up,  
12 it only addresses generally-licensed devices. We felt that  
13 was one shortfall of the current rulemaking.

14 The second would be the current rulemaking was  
15 designed to address all general licensees. However, the  
16 wording in the rulemaking is not such that it would require  
17 all general licensees to comply with the registration  
18 program. It put the burden on NRC to contact the licensee.  
19 The burden on the licensee was to respond to NRC and  
20 requests for information.

21 So the implementation could be modified; however,  
22 the proposed rulemaking that did go out addressed all  
23 general licensees and told the public that's what we were  
24 going to do. What we would have to do to revive that would  
25 be an issue.

1           However, the fee situation would need to be  
2     addressed as part of that, as well. The current rulemaking,  
3     with it only applying to licensees responding to NRC  
4     requests, may have some problems in the fee area. You're  
5     trying to collect fees from someone at that point and set up  
6     an equitable billing system for those types of licensees.

7           So we did look at the rulemaking. We pulled the  
8     parts out that we thought were good and we agreed with that  
9     along our process. However, from this standpoint we would  
10    probably recommend that new rulemaking be developed along  
11    the same lines that would include specific licensees and  
12    would clearly address just those devices that we're  
13    concerned with in the regulation, not as a policy issue.

14           CHAIRMAN JACKSON: And what about this issue of  
15    equity of treatment of general licensees and specific  
16    licensees?

17           MR. LUBINSKI: We feel that the equity would take  
18    place in that case with the class of general license we're  
19    concerned with because we would also recommend the specific  
20    licensees that are doing the same operations. As Rita said,  
21    some devices are identical except for the labeling, whether  
22    they're used under a specific or general license. If you  
23    put them into the same registration system, they would be  
24    treated equally.

25           Currently, many of these are gauge licensees with

1 prior number 5, which is inspection every five years.  
2 Instead of going through that type of method, instead, put  
3 them under a general license. Make that the requirement,  
4 that they're under the general license registration system.

5 The general licensees that we did not address --  
6 that is, exit signs, chromatographs -- we, at this point,  
7 would say we don't see where we would need to look at those.  
8 Maybe in the future, as an expansion of the general license  
9 registration system, it may be something to consider, but at  
10 this point we would say leave them as they are.

11 If you want to say there's inequitable treatment  
12 between them and the current SLs, there probably is, from  
13 the standpoint of fees and the amount of oversight.  
14 However, it is valid based on the risk associated with each  
15 of those devices -- during use, during accident conditions,  
16 and during loss conditions.

17 CHAIRMAN JACKSON: I guess I'm really more  
18 referring to specific licensees and general licensees who  
19 may de facto have the same kind of device.

20 MR. LUBINSKI: We would say put them under the  
21 same registration system, and that's part of our  
22 recommendation. Put them under the same criteria, same fee  
23 system, same system of requirements and take them out of  
24 their current licensing system as we see it and the current  
25 inspection system that they're under and put them into this

1 registration system.

2 CHAIRMAN JACKSON: Commissioner Rogers, do you  
3 have any questions?

4 COMMISSIONER ROGERS: No.

5 CHAIRMAN JACKSON: Commissioner Dicus?

6 COMMISSIONER DICUS: Yes, one quick one. You said  
7 that you thought that the cost of what you're proposing or  
8 what the State of New York is proposing is about the same as  
9 what the Working Group is proposing and I wonder if you had  
10 actually run the numbers on a cost/benefit basis.

11 MS. ALDRICH: No, we haven't, but I think that  
12 what the Working Group is starting with is really kind of  
13 soft numbers. I'm just thinking of it qualitatively in  
14 light of what actions you'd be taking. You would have a  
15 one-time contact with the applicant in the licensing  
16 process. The basic requirements would stay the same. The  
17 other activity that would require time and money would be  
18 this annual contact. I'm not sure that that's absolutely  
19 necessary if you put them on a regular inspection schedule.

20 There are a lot of differences between what the  
21 states do now and what NRC is doing. Our fixed gauges are  
22 inspected on a three-year interval. They're quick  
23 inspections but they're there. You get there and show the  
24 flag so that they know that you exist and that you're  
25 actually going to look at what they have.

1 I'm in complete disagreement with saying we're  
2 going to equalize the playing field by taking these fixed  
3 gauges we now specifically licensed and put them into a  
4 level of control that I consider to be inadequate as it  
5 stands, even with the improvements. To me, this is  
6 illogical. We're going in the wrong direction.

7 CHAIRMAN JACKSON: Commissioner Diaz?

8 COMMISSIONER DIAZ: Precisely that was my point.  
9 It seems to me like we might have an issue of concern that  
10 although it might have little health benefit impact right  
11 now, it could have at any one point, in any one area, become  
12 an issue, like it has happened in other places in the world.

13 And putting the system on the same basis seems to  
14 me like it would be actually decreasing control, rather than  
15 if we're going to go to a registration system, have a  
16 registration system that's very specific and designates  
17 which isotopes according to those and according to a risk  
18 basis analysis, which ones should actually be done.

19 MR. LUBINSKI: I would argue the point of less  
20 efficient system going under a registration and the reason I  
21 would say that is there's one aspect to the registration  
22 system that we currently don't have under a specific  
23 licensing program. When a specific licensee is inspected,  
24 we can check records of transfers at that facility but  
25 there's really no cross-check done against what a

1 distributor may have said.

2           So with the registration system you would have a  
3 real-time, per device check of what a licensee has. You  
4 would get the reports from the distributor that says a  
5 licensee received a device. When you did your annual  
6 contact you could specify that device by serial number,  
7 verifying that it is indeed there.

8           When you go to someone's facility every three  
9 years, every five years, and you look back at some of the  
10 records, the license may say you can have any type of  
11 gauging device containing cesium, americium or cobalt. You  
12 don't know, as an inspector when you go there, exactly what  
13 devices are supposed to be at that facility until you look  
14 at transfer records at that facility.

15           So if the licensee does not have the transfer  
16 record that he received it, you're not going to look for the  
17 device. Therefore, you never check to see if the device was  
18 there. Through the registration system you can do that  
19 cross-check.

20           COMMISSIONER DIAZ: But taking a devil's advocate  
21 position, what is the incentive for a licensee to switch  
22 from a general license to a specific license or  
23 registration? It's always the fact that it will be more  
24 economical to be under the general license and that could  
25 actually be a fact that would deregulate them, rather than

1 increasing regulation.

2 MR. LUBINSKI: That would be something, as far as  
3 the costs we could see, as being a benefit to the licensee  
4 that would push them to say yes, I'd rather be under the  
5 registration program rather than the specific licensing  
6 program.

7 We also considered the -- and I'm going to use the  
8 word inequity again -- when we're talking about the exact  
9 same device being used under either a specific license or a  
10 general license and it being the choice of the recipient.  
11 They decide how they want to use it.

12 If they are only using it and possessing it and  
13 not doing any additional services to it, we would say that  
14 we should structure the program such that they are required  
15 to have it under this registration system.

16 If, for other reasons, such as they want to have  
17 training and be able to do servicing of that device, now  
18 they say they want to put it under the specific license  
19 instead, well, now we're dealing with someone who has a  
20 higher level of training and knowledge of the consequences  
21 in dealing with this device.

22 But if they're just dealing with the straight  
23 possession and use of the device, we would look at that as  
24 being in the regulation as a requirement to go under the  
25 registration system.



1 CHAIRMAN JACKSON: Commissioner McGaffigan?

2 COMMISSIONER MCGAFFIGAN: Could you comment on the  
3 1 millicurie standard that Ms. Aldrich is proposing as the  
4 category of general licensees that we would think about  
5 moving to specific license, the amount of activity that  
6 would relate both to the industrial problem and the public  
7 health and safety problem. Is that in the right ballpark,  
8 from your perspective?

9 MR. LUBINSKI: It is in the ballpark. If you look  
10 at the numbers that the Working Group proposed, we were  
11 talking 1,000 times the exempt quantities in Part 30, which  
12 would range anywhere from .1 millicuries up to 10  
13 millicuries, depending on the isotope, and we also picked a  
14 1 millicurie for the transuranics, which were not listed in  
15 the exempt quantity table. So we're in the right ballpark.

16 As far as the different types of isotopes, we had  
17 determined -- that is, the Working Group had determined --  
18 with the input from the stakeholders, which isotopes should  
19 be included based on what the effects would be if lost,  
20 handled by members of the public, in addition to making it  
21 into a steel mill or a scrapyard and causing damage to  
22 property.

23 Miss Aldrich indicated that she was looking at the  
24 gamma emitters -- is that correct? -- 1 millicurie --

25 MS. ALDRICH: And the transuranics.

1           MR. LUBINSKI: And the transuranics, so we're very  
2 close right there. We're talking cobalt cesium; she's  
3 talking all gamma emitters. Our strontium we felt needed to  
4 be added more for the health and safety risk if it is lost,  
5 because of the high doses someone could get.

6           This was based on experience of the members who  
7 are involved in these working sessions, members of the  
8 public as well as licensees on their experience.

9           To say that we did a risk assessment at that  
10 point, it was a type of risk assessment, but very much along  
11 the lines of disposal problems, half-life of the isotopes,  
12 internal and external exposures, as well as cost of damage.

13           So it's not far off when you talk about this  
14 category.

15           COMMISSIONER McGAFFIGAN: I might ask Ms. Aldrich,  
16 what is the matter with the isotope-specific range that  
17 they're talking about as an approach?

18           MS. ALDRICH: I don't think it brings us any more  
19 precision because as John said, we're still just making  
20 qualitative comparisons. I think it's preferable to keep  
21 things simple and not to pretend to precision that we don't  
22 really have. That's all.

23           So I would prefer the 1 millicurie across the  
24 board, making it easier for everybody concerned, both the  
25 recipients and the manufacturers.

1           CHAIRMAN JACKSON: Although, in fact, the kind of  
2 emitter you have relates to what the biological damage is.  
3 Is that not correct?

4           MS. ALDRICH: Well, we're talking about sealed  
5 sources and I have no incidents in New York, at least, that  
6 I can recall where the sources themselves were breached.  
7 They're very sturdy. So we're talking about external dose,  
8 so it seems to me that a millicurie is precise enough.

9           CHAIRMAN JACKSON: I think we'd better move along  
10 and hear from the staff. Thank you very much.

11          MR. LUBINSKI: Thank you.

12          CHAIRMAN JACKSON: Mr. Taylor?

13          MR. TAYLOR: The staff will now give its  
14 preliminary views based upon what was in the SECY paper.  
15 This will be given by Don Cool.

16          DR. COOL: Good afternoon. I'll try to move  
17 things along quickly. We'll go ahead and go to slide 2.

18          [Slide.]

19          DR. COOL: Just a couple of observations with  
20 regard to the risks. When you talk about the category that  
21 is generally licensed today -- all the devices, all that  
22 entire range -- under ordinary conditions, those kinds of  
23 devices do not represent a high risk to health and safety.  
24 That's the kinds of environments that they were particularly  
25 designed and used for.

1           For the majority of those devices and, as we saw  
2 earlier in the Working Group slide which had the pie chart  
3 on the kinds of devices, exit signs and a variety of things,  
4 even most of those, the vast majority of those under  
5 accident conditions, loss conditions and otherwise, don't  
6 pose a significant hazard, even if they are lost and out  
7 there in the environment.

8           However, it is true that some of those devices do  
9 not account for the radiation exposure, property damage.  
10 That's an area which this agency has not looked at in terms  
11 of assessing public health and safety. We've looked at it  
12 in terms of dose. We've looked at it in terms of the  
13 collective doses and risks in a traditional sort of analysis  
14 in terms of a regulatory analysis that would be done with a  
15 rulemaking.

16           Heretofore, rightly or wrongly, property damage  
17 and some of those issues associated with a nonhuman health  
18 effect type of analysis have not been considered as part of  
19 the activities.

20           [Slide.]

21           DR. COOL: Basically, the options -- next slide --  
22 that we look at fall into sort of three major types of  
23 categories. We could maintain the status quo as it  
24 presently exists today. You could go back and simply  
25 reinitiate and move forward the rulemaking plans and

1 activities that were in place a couple of years ago,  
2 recognizing some of the resource considerations that were  
3 associated with those. Or we could, as a third option, go  
4 back and take a look again at those rulemaking activities  
5 but attempt to readjust them in light of what has been  
6 learned with the Working Group report, some of the other  
7 activities, and some of the other issues that have arisen.  
8 If I can go ahead and go to the next slide.

9 CHAIRMAN JACKSON: No, not quite.

10 DR. COOL: Okay. Trying to keep it moving.

11 Sorry.

12 CHAIRMAN JACKSON: If you're assuming you're  
13 tracking to option 3 --

14 DR. COOL: I am tracking to option 3 on the next  
15 slide.

16 CHAIRMAN JACKSON: What further evaluation do you  
17 need? How long would it take to develop such an action  
18 plan? And when would it be finished, with the existing  
19 resources?

20 DR. COOL: That's exactly what I hope to address  
21 in just a moment, if I can.

22 CHAIRMAN JACKSON: Good. Okay.

23 DR. COOL: Because the answer to that depends on  
24 the component of the action. For some of it, in terms of  
25 moving forward, I think we can move forward on a couple of

1 fronts relatively quickly.

2           The rulemaking that was previously on the books,  
3 as the Working Group indicated to you, was a rulemaking that  
4 covered all generally licensed devices. In retrospect, in  
5 looking at the hazards associated with those devices, that's  
6 probably not necessary. We really don't see just simply  
7 attempting to go forward with that with all of the  
8 implications that would be associated with that.

9           On the other hand, as they also noted, it doesn't  
10 deal with some of the inequities and some of the sources  
11 that are out there under a specific license category, which  
12 are really kinds of identical sources.

13           And what we would like to do is go back and look  
14 at it in terms of reracking the entire system. Here I think  
15 perhaps we have maybe a slightly different view from the  
16 Working Group that might actually end up sounding a little  
17 bit closer to where Ms. Aldrich was in the sense that rather  
18 than perhaps being still considered a generally licensee  
19 that you would, in fact, create what would amount to perhaps  
20 a fourth category right in the middle which bears some of  
21 the characteristics of a specific license, in terms of  
22 contacts, in terms of fees and billings and other sorts of  
23 things, but which was a much simplified process and which  
24 perhaps might involve a different kind of touch, if you  
25 will, to the licensee.

1           If the issue, as the Working Group pointed out,  
2 was a matter of contact and accountability, we believe you  
3 could achieve that through an annual sort of registration  
4 approach where you ask them to certify certain things. You  
5 ask them to provide points of contact. You ask them to  
6 certify that they've, in fact, done a proper leak test, that  
7 it has the right kind of signage, that they've eyeballed it,  
8 they have inventory control over the thing, that they  
9 provide evidence of disposal if they have disposed of the  
10 device, and limit perhaps then an inspection program to  
11 those situations where you don't get back a satisfactory set  
12 of answers to that.

13           That, in fact, would be more like a variation of a  
14 specific license than a registration of a general licensee,  
15 although the semantics get to be rather fine, depending on  
16 how you particularly cut the process.

17           We believe that we could probably move forward to  
18 put some of that in place and start to test the system. One  
19 of the things I think we're trying to learn here is that you  
20 don't try to go and conquer the entire universe in one large  
21 bite chunk. Certainly some of the states have done it and  
22 there's been some different approaches which the states have  
23 used.

24           As part of our business process reengineering  
25 going along on separate tracks, we've been looking at some

1 of the ways that people have been doing registration and  
2 licensing in other sectors. And, in fact, there are federal  
3 agencies out there who issue enormous numbers of licenses --  
4 the Federal Communications Commission -- who use processes  
5 like this and, in fact, have systems already developed,  
6 which we may be able to take advantage of.

7 Our proposal would be to try and implement and try  
8 and implement within the next year a test pilot, our thought  
9 being perhaps those generally licensed devices which were  
10 distributed in the last year or perhaps 1995 and 1996. That  
11 would be something on the order of 1,000 gauging devices.

12 CHAIRMAN JACKSON: How would you limit the sample?

13 DR. COOL: Test the system. That has a couple of  
14 advantages as we see it, just in our preliminary thinking,  
15 in that those are most likely to be the ones which we'd have  
16 the best records on, the most recent records on, and the  
17 fewest number of those that we won't find on the first pass  
18 because the real issue, as has been pointed out a couple of  
19 times already, where you really get into the resources is  
20 how long and how far and how many times do you chase the  
21 device that doesn't come back when you sent that letter to  
22 XYZ locality and it comes back undeliverable, no person  
23 here, don't know what you're talking about. Then you maybe  
24 get the standard sort of skip trace.

25 From there you start to send out inspectors and



1     how far down do you pursue those, recognizing, as the  
2     Working Group indicated, that there are some which are  
3     already lost. They are sitting in somebody's scrapyard  
4     someplace and the only way those will ever be found is if  
5     they show up on a detector sometime as the metal continues  
6     to move about the process.

7             So we believe we could move forward relatively  
8     rapidly in that arena.

9             Likewise, we would like to go ahead and start  
10    moving forward to revise the rulemaking, move that into  
11    production, to address some of the issues that have been  
12    dealt with here, to look at a rerack of the system -- that  
13    is, to take some of the things which are specifically  
14    licensed now and put them into this new category, to put in  
15    some new requirements with regard to looking at property  
16    damage in terms of an evaluation. It will take some period  
17    of time and almost certainly require a reproposal of the  
18    package, rather than simply bringing back the package that  
19    was brought up before.

20            That has a probably two-year time frame for total  
21    completion of analysis, proposed rule, public comment  
22    period, final analysis and bringing those sorts of things  
23    closer.

24            CHAIRMAN JACKSON: Two years from now?

25            DR. COOL: Roughly two years or so from now, given

1 those sorts of circumstances.

2 CHAIRMAN JACKSON: And how long a test  
3 registration period would you be having, a pilot test  
4 registration?

5 DR. COOL: Off the top of my head, and this is  
6 only the preliminary planning, I'd like to get that in place  
7 within the next year, run that for a year and start the  
8 expansion the year after that.

9 CHAIRMAN JACKSON: Let me just get to the bottom  
10 line. If we don't push you, when would you have come back  
11 with a plan?

12 DR. COOL: I would have come back with a plan  
13 within a few months.

14 CHAIRMAN JACKSON: Okay. You've had the Working  
15 Group report since July, correct?

16 DR. COOL: That's correct.

17 CHAIRMAN JACKSON: So a few months, meaning the  
18 beginning of next year, with a plan?

19 DR. COOL: With a plan. And --

20 CHAIRMAN JACKSON: If we don't push you on it.

21 DR. COOL: And if this Commission would give  
22 approval, that plan would indicate when the test would  
23 actually be getting off the ground.

24 CHAIRMAN JACKSON: Commissioner Rogers?

25 COMMISSIONER ROGERS: No, I don't think I have any

1 questions.

2 COMMISSIONER DICUS: I'll wait. No, I do need to  
3 ask it.

4 You are going to do these at the same time but  
5 some of the information you get out of registration is going  
6 to be necessary for the rulemaking, is it not? It seems  
7 like the two are not necessarily tracking together, is my  
8 point, that the registration program, I think you said  
9 upwards of three years, and, if I heard you right, on the  
10 rulemaking, maybe two years. Now, maybe I'm missing  
11 something.

12 CHAIRMAN JACKSON: Yes, how does one inform the  
13 other?

14 DR. COOL: Preliminarily, if we were to have a  
15 registration running by the time you got to the comment  
16 period, within the next year or so, then you could be  
17 gathering data in that year which could also inform a final  
18 rulemaking activity.

19 What I meant to imply was that in the third year  
20 you could then be looking to move it, with the rulemaking  
21 final, towards those specific licensees, to bring them into  
22 part of the program if you wished to do that, and to begin  
23 to go back, depending on how far back and how much resource  
24 you want to put in it, to capture previous years, '94 and  
25 '93, the older cases.

1           So I believe roughly they could time-out. Part of  
2   it would depend on the speed with which the rulemaking  
3   activity could proceed and the speed with which we could get  
4   a first cut registration system off and get them signed out  
5   and see what kind of response we got.

6           CHAIRMAN JACKSON: Commissioner Diaz?

7           COMMISSIONER DIAZ: I'm probably a little confused  
8   but let me see if I can express my confusion. We seem to be  
9   always worried about a series of sources of radiation to the  
10  public from many things and our control or lack of control  
11  over them. Here we have in a specific case, hundreds and  
12  thousands of sources which we have been dealing with for  
13  many years, and I think we have now concluded that we need  
14  to take additional action on it.

15           I haven't seen, and maybe it exists and maybe you  
16  have done it, what is an overall risk assessment of all of  
17  these sources, static and moving, in this country, and what  
18  is the potential for any of those sources, in the curie  
19  range, for example, to really have an impact on health and  
20  safety?

21           Second, I didn't see a staff number of how much  
22  would be the incremental cost to put a program that would  
23  actually, in a short period of time, address the issue. I  
24  think the issue has been standing around and it might very  
25  well be that it's an issue of resources. I think that we

1 should consider addressing the issue in as short as possible  
2 time.

3 So I have a statement, that being about risk  
4 assessment, and cost and implementation.

5 DR. COOL: Okay. With regard to the first piece  
6 of it, we do not have a formal PRA or similar risk analysis  
7 which addresses all moving or static sources within the  
8 United States, as I think you have outlined. What we do  
9 have is the operational experience here in the United  
10 States, which indicates that we have not had significant  
11 sources which have caused major exposures to the population.

12 COMMISSIONER DIAZ: You mean you believe you have  
13 not had significant exposure.

14 DR. COOL: The data which we have available --

15 COMMISSIONER DIAZ: The data which you have  
16 indicates that but you're not sure that you have not.

17 DR. COOL: I would have to say that I do not  
18 believe that there have been significant exposures of  
19 individuals within the United States.

20 COMMISSIONER DIAZ: The data indicates that there  
21 is --

22 DR. COOL: That's correct.

23 COMMISSIONER DIAZ: Okay.

24 DR. COOL: With regard to the second case, actual  
25 costs, the previous cost estimates in FTEs are probably not

1 bad in terms of what it would take to try and move  
2 relatively rapidly and to try and recover, to the extent  
3 that you could recover and recapture sources which are out  
4 there and which you can find.

5 Our reason for trying to move in a pilot test in  
6 terms of the system and then to bring it on line is really  
7 driven by two purposes: one, to make sure that what we  
8 develop will work before broadening it and two, to gain some  
9 experience with the capture rate for those that we believe  
10 the capture rate should be low on, and to gain some measure  
11 of understanding of how far we would wish to push the topic  
12 of pursuit.

13 I really believe that the issue of the resources  
14 that the agency would spent is really a function of, from a  
15 policy standpoint, how far and how long we wish to pursue  
16 old sources which we could not find, recognizing that there  
17 is some number of them which we will never find except as  
18 they show up on a portal monitor or a scrap line monitor  
19 within the actual systems.

20 COMMISSIONER DIAZ: Should we reduce the  
21 uncertainty that surrounds the issue?

22 DR. COOL: You're trading those off. That's  
23 correct.

24 COMMISSIONER McGAFFIGAN: I may also be confused.  
25 It strikes me that the test program you're proposing, it

1     isn't really a very good test because it's the part that we  
2     understand, you know, the devices that have been distributed  
3     in the last year or two, whereas the problem is those  
4     things -- it strikes me that a better test would be to go to  
5     find everything half a curie and above that might have been  
6     generally licensed ever. I don't know how many of those  
7     there are. I'm just making that up, but that's a real test.

8             That would tell us how hard it is to find, how  
9     many things we're going to have to go beat the bushes to try  
10    to find, whether there's a real concern. But the test  
11    program doesn't sound to me like it's going to tell me  
12    anything, other than we can find what was done in the last  
13    year with close to 100 percent accuracy without very much  
14    sweat.

15            CHAIRMAN JACKSON: And it's not necessarily  
16    referenced to public health risk.

17            COMMISSIONER McGAFFIGAN: Right.

18            CHAIRMAN JACKSON: Which is what our jobs are.

19            COMMISSIONER McGAFFIGAN: So my big problem with  
20    this, and I join Nils in not understanding, is if the  
21    concern is -- and I also differ -- I got the briefing a week  
22    ago from Joel and there is a Texas case where one of these  
23    devices ended up in a home and people were exposed to decent  
24    exposures. Wasn't that in Texas?

25            DR. COOL: I believe what you're referring to is

1     what we refer to as the Larpin event, which was a  
2     radiography camera, specifically licensed, in fact, under  
3     relatively tight control. Texas was swinging by every few  
4     weeks and the device was stolen.

5             So it doesn't really exactly fit the mode that  
6     we're talking about here but it certainly demonstrates what  
7     happens when people sort of forget and other things happen  
8     around the source which sort of leave it sitting there all  
9     by itself.

10            COMMISSIONER McGAFFIGAN: I know we have to get on  
11     to other things but my suggestion is the pilot you've  
12     discussed really wouldn't inform me very much in a  
13     rulemaking, I don't think.

14            DR. COOL: One brief comment. You're correct.  
15     The test, as proposed right now in its interactive thinking,  
16     would not be a good test in terms of the difficulty of  
17     finding older cases. That's very true. The test would, I  
18     think, be a reasonable test of the actual registration and  
19     operation of such a system, a computerized system that mails  
20     out the returns and that interaction set with licensees  
21     which needs to be ironed out before you would expand it.

22            So for part of it I believe it would work.  
23     Certainly for the part of trying to capture all the old  
24     sources, no, it was not intended to go try and capture all  
25     the old sources at one pass, at least within the resources



1     that we had available to us in the present budgeting cycle.

2             CHAIRMAN JACKSON: Thank you. The Commission  
3     would like to thank the members of the Working Group and the  
4     NRC staff for an informative briefing on the Working Group's  
5     report and the staff's response to that.

6             The Working Group presents a number of  
7     recommendations that would improve control, they believe,  
8     over and licensee accountability for regulated devices and I  
9     commend the Working Group for your structured approach to  
10    designating which devices require increased regulatory  
11    oversight. I also compliment you for seeking wide  
12    stakeholder input and participation.

13            The Commission further would like to thank all of  
14    the individuals, regulators, organizations and all  
15    stakeholders who, in fact, participated in the Working  
16    Group's meetings, including the Organization of Agreement  
17    States, the Conference of Radiation Control Program  
18    Directors, affected industries and the public.

19            The Commission does value your input in helping to  
20    develop solutions. And your views, in fact, as you can see,  
21    influence our thinking and decisions and strengthen our  
22    actions to resolve what's been a longstanding issue.

23            So the issue, then, before the Commission seems to  
24    be whether a significant amount and how much of agency  
25    resources must or should be redirected to resolving the

1 problem of device control and accountability. The staff  
2 recognizes this dilemma and seem to be suggesting a moderate  
3 approach. Included in that is a potential action plan.

4 So the Commission wishes to consider more  
5 specifically the staff's recommendation relative to the  
6 Working Group's recommendations, specifically this putative  
7 action plan, to weigh the resource implications and to make  
8 a decision accordingly.

9 So we will ask you to accelerate the development  
10 of the action plan with elements included of the plan,  
11 schedule relative to the elements and resource implications.  
12 You'll hear from us on what that accelerated date is going  
13 to be.

14 Do my fellow commissioners have anything they  
15 would like to add?

16 [No response.]

17 CHAIRMAN JACKSON: If not, we're adjourned.

18 [Whereupon, at 3:37 p.m., the briefing was  
19 concluded.]

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CERTIFICATE

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

TITLE OF MEETING: BRIEFING ON CONTROL AND ACCOUNTABILITY  
OF LICENSED DEVICES - PUBLIC MEETING

PLACE OF MEETING: Rockville, Maryland

DATE OF MEETING: Wednesday, November 13, 1996

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: Susan Harris

Reporter: Susan Harris

# **DISCUSSION POINTS**

Rita Aldrich  
Principal Radiophysicist  
Radiological Health Unit  
New York State Department of Labor

November 13, 1996

## **Premises:**

- 1) "General Licensing" of sealed sources/devices is a basically flawed concept that tries to establish a middle ground between exemption and specific licensing. It fails because it results in too little control of hazardous sources, and invites over-regulation of sources that do not pose a realistic hazard if lost or stolen.**

**2) As long as we continue to combine sources with such disparate comparative hazards in one regulatory class, we will not solve the current problems. Any increase in regulatory oversight will simply shift the imbalance a bit -- continuing under-regulation of the hazardous sources and increasing over-regulation of the others.**

**Solution:**

- 1) Divide current "generally licensed" sources/devices into those that should be specifically licensed and those that should be exempted.**

## **11/23/81 MEMO TO NMSS FROM OSP**

**At the most recent All Agreement States meeting, the States made the following comment:**

**"The NRC should reevaluate the G.L. device distribution licensing concept and seriously consider rescinding the G.L. concept of licensing gauges."**



**The States also reported they have seen a number of incidents involving misuse of G.L. devices. I believe it would be beneficial to include this matter as a discussion item of the next IOWG meeting.**

If the regulatory agency has a problem with a class of *specific licensees*, it can address the problem with a license amendment. The license is a vehicle for control: it must be issued before sources can be acquired; it must be amended if the person responsible for radiation safety (radiation safety officer or RSO) changes; it must be periodically renewed;

proper control over and disposal of sources are the subject of periodic inspection; and proper disposal of all sources must be proved before the license can eventually be terminated.

The philosophy behind regulation of *GL's* is entirely different: sources can be acquired with no prior approval by a regulatory agency, by any person or company that can afford them.

**Therefore, there is no prior designation of a radiation safety officer, no licensing document that can be used to enhance control, no periodic inspections and almost complete reliance on source vendors for records of receipt and disposal.**

## **BASIC INEQUITIES**

- a. SL's are subject to all code requirements (whether they make sense for a simple gauge licensee or not), while GL's are exempt from everything except the few requirements in their segregated part of the regulations, plus disposal requirements.**

## **SL FIXED-GAUGE LICENSEES**

**Our experience shows that these licensees perform as well as any other SL (sealed source or loose material), as long as the same degree of regulatory oversight is exercised.**

**Primarily, however, we need to reexamine how our resources, and our licensees' resources are being spent to regulate section 31.5 GL devices, versus similar (or identical) devices that are specific-licensed. Our conclusion in New York is that we are underregulating the GL's and overregulating the SL's. Our experience demonstrates that this has resulted in very good control of SL's, but that this control results from a few basic concepts:**

- 1. requiring a licensee  
commitment to oversight of  
sources and proper eventual  
disposal, before sources are  
allowed to be acquired;**
- 2. requiring licensees to maintain  
good records of receipt and  
disposal of sources, and of  
current source inventory;**



- 3. requiring prompt notification to this Department of loss of control of a source;**
- 4. regularly scheduled inspections to reinforce these requirements; and**
- 5. regular license renewals to reinforce licensee commitments.**

**We have begun a regulatory initiative to create equity between the regulation of GL's and SL's. This will improve control over GL's, while conserving both our resources and our licensees'. It will also assist licensees that have acquired sources under both SL and GL, in establishing one integrated program for equal oversight of all of their sources.**

**This involves creating a subset of GL's that will require a specific license to possess in the future. We would differ from the working group in recommending that one simple activity limit be used to define this subset (1 millicurie). It also involves relieving SL gauge licensees from the same code sections that GL's are currently exempt from.**

**Improving Control Over,  
and Licensees' Accountability For,  
Specific- and General-Licensed Devices**

**November 13, 1996**

**Staff's Preliminary Views**

**Donald Cool, NMSS**

## **Preliminary Conclusions on Risks**

- **Under ordinary conditions, general- and specific-licensed devices do not represent a high risk to health and safety of users or members of the public.**
- **Under conditions associated with loss of control, the majority of devices used under a general license do not represent a risk to health and safety of users or members of the public even**
- **The current general and specific licensing programs do not account for radiation exposure or property damage as a result of loss of control of licensed material.**

## **Options**

- 1. Maintain status quo.**
- 2. Continue with previous plans.**
- 3. Develop and implement an action plan to address the Working Group's recommendations and the other issues identified by NRC staff.**

## **Plan Components**

- **Move forward with previous rulemakings, deal with related issues, and work with the Agreement States.**
- **Pilot test registration approach.**
- **Reexamine device review criteria in 10 CFR 32.51.**
- **Address licensing, enforcement, and implementation concerns.**
- **Address disposal of orphaned devices.**

**Improving Control Over,  
and Licensees' Accountability For,  
Specific- and General-Licensed Devices**

**November 13, 1996**

**Joint NRC-Agreement State Working Group  
Report and Recommendations**

**John Lubinski, NMSS  
Robert Free, Texas**

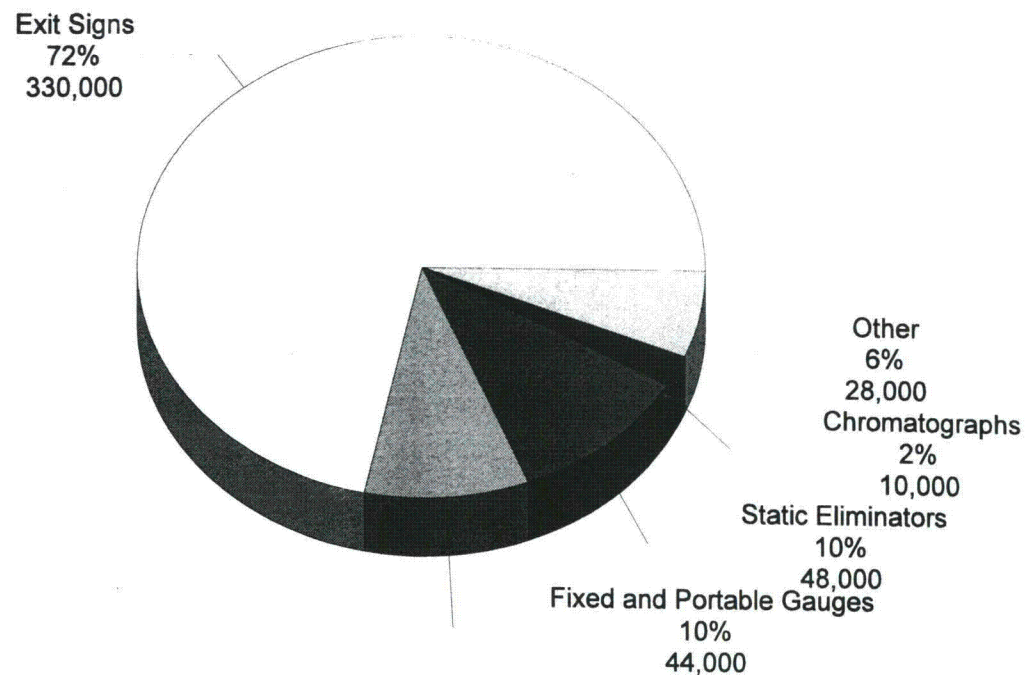


## **Licensing**

- **A Specific License is issued to named persons upon applications submitted to NRC. Review and pre-approval by NRC staff.**
- **A General License is effective without the filing of an application with the Commission or the issuance of a licensing document to particular persons. All requirements are in the regulations.**
- **A General License was first issued in 1959 to save Agency resources.**
- **Approximately 42,000 NRC general licensees possessing 460,000 devices under 10 CFR 31.5.**

# Types of Devices Used Under the 10 CFR 31.5 General License

Approximately 460,000 Devices



## **General-Licensed Users Must**

- **acquire devices from an authorized distributor**
- **maintain labeling**
- **operate devices in accordance with instructions**
- **periodically test for leakage and operation**
- **have service performed by a specific licensee**
- **suspend operation if the device is damaged**
- **not abandon the device**
- **transfer the device to a specific licensee**
- **may transfer to another general licensee if it remains at the same location of use**
- **report transfers, damage, theft, or loss to NRC**
- **keep records**

## **Distributors of General-Licensed Devices Must**

- **Develop and maintain designs to meet specific safety criteria**
- **Provide instructions, precautions, and licensing information to general licensees**
- **Report to regulatory authorities transfers of devices to general licensees**
  - **information is maintained in the General License Database (GLDB). The GLDB is updated with information from both distributors and users**

## **Current Regulatory Oversight**

- **Specific-Licensed Distributors:**
  - **Evaluate device designs**
  - **Distribution requirements verified through licensing**
  - **Inspect for compliance**
  - **Application and annual fees**
- **General-Licensed Users:**
  - **Maintain general licensee information**
  - **Are not subject to routine inspections**
  - **General licensees are inspected to resolve issues such as allegations, incidents, or indications of unsafe practices**
  - **No fees**

# **Status of Actions**

## **General License Registration Program**

- **Proposed rulemaking published December 27, 1991.**
  - **Applied to ALL 10 CFR 31.5 general licensees and distributors.**
  - **Annual mail contact between NRC and general licensees.**
- **Final rule put on hold 1993.**
  - **Staff notified the Commission on December 29, 1993.**
  - **Resource decision based on risk.**
  - **Continues to be on hold because of low risk; efforts have continued in the area of baghouse dust disposal and other initiatives.**

## **Is There a Problem?**

- **U.S. Steel manufacturers (relatively small mills) have smelted radioactive sources (20 over 13 years). The costs to industry has been approximately \$8 million per smelting. Costs are based on industry reports and include decontamination, material disposal, and down-time.**
- **Through monitoring programs, recyclers have discovered sources in scrap metal.**
- **Licensees have reported loss of devices and losses have been discovered as a result of inspections.**
- **1990 Survey**
  - **3000 general licensees surveyed.**
  - **6% did not respond to the contractor.**
  - **Initially, many users could not account for their gauges.**
  - **<1% of the devices were never located.**

## **Stakeholder Involvement**

- **Held public meetings and a public workshop**
- **Participants included Agreement State personnel, Licensed Users and Vendors, non-Licensed Recipients (Metal Recyclers and Manufacturers), and other Government Agencies (DOE, EPA).**
- **Agreement States:**
  - **Experienced Agreement State Personnel as Members of the Working Group**
  - **Two Surveys**
  - **Organization of Agreement States' Technical Workshop**
  - **Conference of Radiation Control Program Directors**



## **Issues & Concerns**

- **NRC and AS Compatibility**
- **Cost and Fee Considerations**
- **Radiation Exposure Savings**
- **Device Design**
- **Changes That Affect All Devices Versus Only Newly Acquired**
- **Device Disposal**
- **Device Identification**
- **Devices Requiring Increased Oversight**
- **General-Licensed versus Specific-Licensed Devices**
- **Identification of Current Users and Devices**
- **Imposing Restrictions on Portable Devices and Storage of Devices**

# **The Problem and Components of the Solution**

## **Problem:**

**Regulatory  
Oversight**

## **Solution:**

- **Increase contact between users and regulators**
- **Identify early warning signs**

## **The Problem and Components of the Solution (cont.)**

### **Problem:**

**Control Over &  
Accountability  
For Devices**

### **Solution:**

- **Require devices to have labels or tags that contain certain information and maintain durability**
- **Require users to perform inventories (six month)**
- **Require users to maintain current inventory records**
- **Require users to assign Responsible Individual and backup**

## **The Problem and Components of the Solution (cont.)**

### **Problem:**

**Improper  
Disposal of  
Devices**

### **Solution:**

- **Require users to demonstrate evidence of proper disposal or face significant penalty (include an initial grace period for enforcement)**
- **Require vendors to provide disposal information prior to initial transfer of the device.**

## **The Problem and Components of the Solution (cont.)**

### **Problem:**

**“Orphaned  
Devices”**

### **Solution:**

- **Define responsibilities for DOE and EPA acceptance of orphaned devices.**
- **Ensure that all orphaned devices are disposed of properly.**
- **Recommend training to non-licensed stakeholders**
- **Require devices to have permanent labeling that indicates that the device contains radioactive material.**

## **The Problem and Components of the Solution (cont.)**

### **Problem:**

**“Orphaned  
Devices”**

### **Solution:**

- **Define responsibilities for DOE and EPA acceptance of orphaned devices.**
- **Ensure that all orphaned devices are disposed of properly.**
- **Recommend training to non-licensed stakeholders**
- **Require devices to have permanent labeling that indicates that the device contains radioactive material.**

## **Recommendations**

- **NRC and Agreement States increase regulatory oversight for users of certain devices**
- **NRC and Agreement States impose penalties on persons losing devices**
- **NRC and Agreement States ensure proper disposal of orphaned devices**
- **NRC encourage States to implement similar oversight programs for users of NARM**
- **NRC encourage non-licensed stakeholders to take appropriate actions, such as instituting programs for material identification**

## **Costs & Benefits for Increased Oversight**

### **Costs:**

<b>Initial Setup</b>	<b>\$3,385,000</b>
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### **Annual Operating:**

<b>NRC and Agreement States -</b>	<b>\$738,000</b>
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<b>Licensees -</b>	<b>\$4,305,000</b>
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### **Annual Benefits:**

<b>Steel Manufacturers -</b>	<b>could approach \$12,320,000</b>
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<b>Exposure Savings -</b>	<b>\$14,000-\$2,106,000</b>
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