

1 UNITED STATES OF AMERICA  
 2 NUCLEAR REGULATORY COMMISSION  
 3 \*\*\*  
 4 BRIEFING ON  
 5 NRC INTERNATIONAL ACTIVITIES  
 6 \*\*\*  
 7 PUBLIC MEETING

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

13  
 14 Friday, June 18, 1999

15  
 16 The Commission met in open session, pursuant to  
 17 notice, at 9:40 a.m., Shirley A. Jackson, Chairman,  
 18 presiding.

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 20 COMMISSIONERS PRESENT:

- 21 SHIRLEY A. JACKSON, Chairman of the Commission  
 22 NILS J. DIAZ, Commissioner  
 23 GRETA J. DICUS, Commissioner  
 24 EDWARD McGAFFIGAN, JR., Commissioner  
 25 JEFFREY S. MERRIFIELD, Commissioner

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1 STAFF AND PRESENTERS SEATED AT THE COMMISSION TABLE:

- 2 ANNETTE L. VIETTI-COOK, Secretary of the  
 3 Commission  
 4 KAREN D. CYR, General Counsel  
 5 JANICE DUNN LEE, Director, Office of International  
 6 Programs  
 7 MALCOLM KNAPP, Deputy Executive Director for  
 8 Regulatory Effectiveness  
 9 ROY ZIMMERMAN, Deputy Director, NRR  
 10 ASHOK THADANI, Director, NRC  
 11 CARL PAPERIELLO, Director, NMSS

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

2 [9:40 a.m.]

3 CHAIRMAN JACKSON: Good morning and welcome to the  
 4 last Commission meeting I will chair. If I am correct, this  
 5 is more or less Commission meeting number 311 since I took  
 6 over as Chairman of the NRC in July of 1995. I noted that  
 7 in Inside NRC they talked about fewer Commission meetings  
 8 since I've been Chairman than under some previous chairmen.

9 As you know, I'm focused on outcomes and not outputs.  
10 As I told a reporter today, the metric is what  
11 have we done since I've been Chairman and not how many  
12 meetings. As Commissioner McGaffigan has pointed out, the  
13 issue has to do with the content of the meeting we have and  
14 the stakeholders who are involved.

15 COMMISSIONER MERRIFIELD: Chairman, if the meeting  
16 we had yesterday is any indication of our concern about  
17 making sure we thoroughly investigate issues, I think that  
18 is a pretty good piece of evidence.

19 CHAIRMAN JACKSON: Thank you.  
20 I think this is actually the very first meeting of  
21 this type, the first annual summary of NRC international  
22 programs involving not only the Office of International  
23 Programs but the other cognizant offices that also have  
24 international activities and are part of our overall  
25 international program.

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1 I might begin the meeting by congratulating  
2 Ms. Janice Dunn Lee on her recent appointment as the  
3 Director of the NRC Office of International Programs.  
4 Congratulations, Janice.

5 As many of you know, I have taken an active  
6 interest during my tenure as Chairman in the role of the NRC  
7 internationally. I believe that we provide a truly vital  
8 service that is a benefit not only to the mature and the  
9 developing countries with whom we interact, but also of  
10 tremendous benefit to the United States and to our  
11 licensees.

12 We help to ensure the U.S. common defense and  
13 security in our review of export and import licenses.

14 We learn by watching the practices of other  
15 regulatory programs.

16 We maintain our knowledge of the state of the art  
17 by our participation in technical standards committees.

18 We leverage our research resources by entering  
19 into joint programs with our foreign counterparts.

20 And we serve as a role model to our counterparts  
21 in many foreign nuclear regulatory programs, helping to  
22 strengthen the independence, the effectiveness, and the  
23 programs of developing national nuclear regulatory bodies.

24 In point of fact, I had occasion to visit  
25 Australia and visit a uranium mine and a site where some

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1 activity was going on that in fact supports our work in high  
2 level waste. As we were traveling there, which was in the  
3 Northwest Territory in Australia, the head of the regulatory  
4 group in that part of Australia had an NRC paper that he had  
5 just gotten, that had been faxed to him and had been  
6 downloaded from the net.

7 We should not underestimate that influence, but  
8 also, those of you who participate in the nuclear energy  
9 agency, who work with countries, both western and eastern  
10 Europe and in Asia, you know that it is a two-way street.  
11 So the benefit that these interactions provide in terms of  
12 the net increase in global nuclear safety is of significant  
13 and enduring value to the United States, to the United  
14 States domestic nuclear energy industry. Not simply because  
15 of what we learn nor simply because of the safety benefits  
16 to the residents of other countries -- all of those go  
17 without saying -- but because of the simple truth that  
18 public confidence is one of the single largest factors that

19 will influence the future viability of nuclear power, and  
20 unsafe nuclear practices, wherever they occur, negatively  
21 impact that public confidence.

22           So I am pleased at the opportunity to preside over  
23 this meeting and Commission briefing on NRC international  
24 activities, and I particularly am pleased because the  
25 representation of NRC managers at the table today from NRR,

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1 from NMSS, from Research, as well as obviously the Office of  
2 International Programs emphasizes that our international  
3 activities are not simply matters of OIP focus but of  
4 benefit and interest to all of our program offices.

5           I would only caution all of us today that this is  
6 an open meeting and we need to be careful not to engage in  
7 discussions that might involve sensitive or classified  
8 information.

9           With that, unless my Commission colleagues have  
10 any opening comments they wish to make, I would invite you  
11 to proceed. Ms. Janice Dunn Lee.

12           MS. LEE: Chairman Jackson and members of the  
13 Commission, as Director of NRC's Office of International  
14 Programs, I am very pleased to be here today to discuss NRC  
15 international activities.

16           International programs at NRC represents a low  
17 cost, high impact investment which has achieved much under  
18 the Commission's guidance and which has benefited from  
19 stakeholder and public input. I want to thank the  
20 Commission for giving the staff the opportunity to discuss  
21 this program in a public forum.

22           As Chairman Jackson noted, it is the first public  
23 meeting of this kind. I ask you to forgive me, because it  
24 is also a first for me. While it is a first for me, it is  
25 the last for Chairman Jackson in her tenure as Chairman of

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1 the NRC. I would just like to take this opportunity to  
2 publicly thank you for your service and commitment to NRC  
3 and to this important program.

4           I am pleased to have at the table with me  
5 representatives from the major program offices which support  
6 the agency's international work. With me is Dr. Malcolm  
7 Knapp, Deputy Executive Director for Regulatory  
8 Effectiveness; Mr. Roy Zimmerman, Deputy Director, Office of  
9 Nuclear Reactor Regulation; Mr. Ashok Thadani, Director,  
10 Office of Nuclear Regulatory Research; and Dr. Carl  
11 Paperiello, Director, Office of Nuclear Material Safety and  
12 Safeguards.

13           In the spirit of the phrase "they who stay behind  
14 still serve," I would like to acknowledge the other offices  
15 who contribute significantly to the work of the  
16 international programs that are not formally represented at  
17 this table. These include the Office of the General  
18 Counsel, the offices of Congressional and Public Affairs,  
19 and also our regional offices. Their absence is better  
20 recognition that given the time available this presentation  
21 will only focus on our major activities and will try not to  
22 encompass our entire program.

23           I will also try to be as concise and brief as  
24 possible in the interest of time, and also because most of  
25 you are familiar with our international activities.

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1 My objective today is to provide a snapshot of our  
2 current activities and to outline how the program will be  
3 managed. I will begin with an overview and then describe  
4 some of our major programmatic areas. I will be emphasizing  
5 current achievements and future challenges.

6 I will close my presentation by discussing what I  
7 believe our future challenges are and how we might address  
8 them. I believe the future of NRC's international programs  
9 can be summed up as follows:

10 We should hue to our fundamental responsibilities  
11 while we are meeting the challenges posed by change. In  
12 addition, it is particularly important that we not let  
13 funding issues shape our programs. I will discuss this in  
14 more detail at the end of my presentation, and then I will  
15 turn to my colleagues who will discuss their individual  
16 program activities.

17 If there are no objections, I will begin.

18 [Slides shown.]

19 MS. LEE: Our international activities are based  
20 on legal authority set forth in statutes, executive orders,  
21 presidential decision directives, multilateral U.S.  
22 Government commitments and agency to agency exchange  
23 agreements. There are far too many to name individually,  
24 but they do form the legal and the policy basis for NRC's  
25 international role.

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1 A compilation of these can be seen in Reference  
2 Chart No. 1 at the back of the briefing book.

3 The Commission decides on policies and programs  
4 related to all international activities. The Office of  
5 International Programs facilitates relations with other  
6 nations, multilateral organizations, and other U.S.  
7 Government agencies. OIP proposes policy issues to the  
8 Commission and provides implementing guidance to program  
9 offices.

10 The Commission staff offices implement our program  
11 and maintain the technical, regulatory, research, and  
12 safeguards context.

13 Although some significant programs are externally  
14 funded through the U.S. Agency for International  
15 Development, substantial resources for NRC international  
16 activities derive from licensee fees. Determining the  
17 appropriate level of NRC's international involvement takes  
18 cost into account. The interests of licensees are  
19 considered as are the broader interests of the nation and  
20 the global community.

21 While we have not formally engaged with Arthur  
22 Andersen on the planning, budget and performance management  
23 process, OIP has begun to focus international activities on  
24 the NRC strategic goals and outcomes. These include  
25 maintaining safety, increasing public confidence, reducing

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1 unnecessary regulatory burden, and increasing the  
2 effectiveness, efficiency and realism of NRC activities and  
3 decisions.

4 Some of the criteria we use for setting  
5 international priorities include improving the safety and  
6 security of NRC licensed facilities, enhancing U.S. national  
7 security, supporting foreign policy objectives, achieving  
8 improved financial and personnel resources, supporting U.S.  
9 reliability as a supplier of goods and services, and  
10 developing and maintaining NRC influence and institutional

11 capabilities.

12 Our next slide is our budget slide. I just want  
13 to point out that there is an error in the last column under  
14 the travel. We are policy people, not mathematicians in  
15 OIP. So I apologize for that. It should read 499K in the  
16 very last column.

17 As the chart indicates, NRC international  
18 resources are relatively level from FY 1999 to FY 2000. In  
19 FY 1999, 6 FTE are reimbursable from AID funding for the  
20 workload associated with our assistance program. Please  
21 note that the FY 2000 budget request is for 6 FTE in the  
22 general fund off the fee base. As part of the total NRC  
23 budget it is pending congressional approval. If the general  
24 fund FTE are not approved, staff is working with AID to  
25 continue to have AID reimbursement for some FTE in FY 2000.

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1 The next slide provides a little road map of the  
2 areas that I am going to be discussing.

3 NRC licenses exports and imports of nuclear  
4 material and equipment which are defined in 10 CFR Part 110.  
5 The departments of Energy, Commerce, and State exercise  
6 control over exports of related technology, equipment and  
7 commodities, including dual use items. NRC has a  
8 consultative role in the review of these exports.

9 U.S. agreements for peaceful nuclear cooperation  
10 provide the basis for our exports and applications are  
11 approved only if export control requirements of the Nuclear  
12 Non-proliferation Act of 1978 are satisfied.

13 A benefit to having NRC as the primary export  
14 licensing authority is that NRC provides a technical  
15 independent perspective, and decisions are a matter of  
16 public record.

17 I will not dwell on the accomplishments or the  
18 future challenges on the briefing slide except to conclude  
19 by saying that the export licensing process is fairly  
20 routine now, but it may face some serious tests in the  
21 future. Examples that come to mind are potential exports to  
22 North Korea and China.

23 Now I am going to speak about our other nuclear  
24 non-proliferation activities.

25 The Nuclear Non-proliferation Treaty is the most

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1 widely adhered to multilateral arms control treaty in  
2 history, with 185 parties. We participate in the  
3 inter-agency working group formulating U.S. policy, and we  
4 are currently preparing for the review conference in the  
5 year 2000.

6 We also provide technical assistance to the IAEA  
7 in support of NPT Article 4, Assistance Obligations, which  
8 were designed to reward developing countries adhering to NPT  
9 obligations.

10 Under safeguards initiatives, I'm not going to  
11 speak to this issue in particular because Dr. Paperiello  
12 will mention most of them in his presentation, but I just  
13 want to say that we do have an extremely significant,  
14 important role in safeguards.

15 In core conversion, NRC provides technical  
16 assistance in implementing the U.S.-Russia agreement for  
17 permanently halting the production of plutonium for nuclear  
18 weapons. Specifically, we provide technical assistance to  
19 GAN, the Russian nuclear regulatory authority, to look at

20 the safety aspects of converting the cores. DoD reimburses  
21 us for this work.

22 This project allows two important national  
23 objectives to be brought together, and these are nuclear  
24 safety and non-proliferation, which are two sides of the  
25 same coin.

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1 Under plutonium disposition, we have been involved  
2 in DOE's dual track program for plutonium disposition,  
3 including the vitrification and the MOX options. Our  
4 primary interest is in monitoring what the Russians are  
5 doing and identifying regulatory issues.

6 In Fissile Material Cut-off Treaty, we have been  
7 asked to participate in inter-agency working groups  
8 developing U.S. negotiating positions on the treaty. NRC's  
9 technical assistance during negotiation and implementation  
10 of the treaty are important because some of its provisions  
11 could affect NRC facilities.

12 An underlying benefit to NRC participating in  
13 these non-proliferation activities is that NRC contributes  
14 an independent technical viewpoint to determinations for  
15 which other agencies have primary responsibility.

16 I am next going to focus on some of our  
17 multilateral nuclear safety exchanges. As you can see from  
18 the list, there are several here which I will very briefly  
19 mention.

20 At the June 1992 G-7 Economic Summit in Munich a  
21 major initiative was introduced to improve the safety of  
22 Soviet designed reactors. Three nuclear safety institutions  
23 were developed. They are the G-7 Nuclear Safety Working  
24 Group; the G-24 Nuclear Safety Assistance Coordination  
25 Mechanism, which we call NUSAC; the Nuclear Safety Account

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1 administered by the European Bank for Reconstruction and  
2 Development; and in 1998 the Chernobyl Shelter Fund was  
3 added to these institutions. Each of these groups has a set  
4 of responsibilities and a process for coordination.

5 Under accomplishments, I want to note that Russia  
6 is now including GAN representatives in official delegations  
7 to the G-7 Nuclear Safety Working Group, which helps to  
8 increase their stature and visibility.

9 Under future challenges, I think a significant one  
10 is the implementation of the NSA grant agreement closure  
11 conditionalities. Decisions will be very difficult for  
12 certain countries as they weigh plant closure against  
13 possible extended operation based on improvements that have  
14 been derived from assistance programs, as well as national  
15 energy production needs, replacement energy costs, and  
16 issues such as the nuclear policies of the European Union  
17 and national intentions for accession into the EU.

18 Under treaty implementation, I just want to say  
19 that after four years before the U.S. Senate the Convention  
20 on Nuclear Safety was finally ratified this spring. In  
21 spite of our limited participation in the first review  
22 conference meeting in April, the U.S. was able to submit the  
23 U.S. National Report, including a supplement describing our  
24 changing regulatory program.

25 Two other conventions are currently pending.

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1 One is the Joint Convention on Radioactive Waste  
2 and Spent Fuel. While DOE has the primary lead for this

3 convention, the convention focus is on safety. Therefore  
4 NRC should actively participate in its implementation.

5 There is also the Supplemental Convention on  
6 Liability, which is under Executive branch review.

7 The IAEA is one of the primary multilateral  
8 organizations where we play a significant role. The budget  
9 of the IAEA is about \$290 million, to which the U.S.  
10 contributes approximately \$73 million. OIP provides  
11 centralized programmatic liaison on nuclear safety issues  
12 and activities. We also play a significant role in the  
13 safeguards arena, which NMSS will later address in this  
14 briefing.

15 COMMISSIONER MERRIFIELD: Madam Chairman.

16 CHAIRMAN JACKSON: Please.

17 COMMISSIONER MERRIFIELD: I have a clarifying  
18 question. I know there has been some question by a number  
19 of our stakeholders about the monies which the NRC spends on  
20 various international programs. My understanding is that no  
21 money from the NRC directly goes towards that \$72 million  
22 you mentioned, the U.S. contribution to the IAEA.

23 MS. LEE: The money is not directly funded from  
24 NRC; it's funded through the State Department.

25 COMMISSIONER MERRIFIELD: No licensee fees pay for

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1 those activities, correct?

2 MS. LEE: Correct.

3 COMMISSIONER MERRIFIELD: Thank you.

4 MS. LEE: That's a very good point.

5 I'm not going to dwell on the accomplishments but  
6 just to note that one additional one that is not noted on  
7 the sheet is that the NRC is cosponsoring with the IAEA, the  
8 EPA, and the Department of Energy the Symposia on  
9 Restoration of Environments with Radioactive Residues in  
10 November of this year.

11 A future challenge for us would be to maintain and  
12 strengthen NRC support for IAEA activities, given reduced  
13 financial and staff resources.

14 The Nuclear Energy Agency member states represent  
15 the most advanced nuclear countries, with approximately 85  
16 percent of the world's installed nuclear energy capacity.  
17 The agency's regular budget is on the order of \$12 million  
18 to which the U.S. contribution is approximately \$3 million  
19 per year. NRC is represented on five main committees, and  
20 the individual program offices will address their work  
21 through the NEA during their presentations.

22 COMMISSIONER MERRIFIELD: Madam Chairman, may I  
23 ask the same question regarding the NEA? Are there any  
24 monies that directly go from the NRC to that \$3 million the  
25 U.S. contributes towards the NEA?

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1 MS. LEE: No. The State Department also funds  
2 directly that contribution for the U.S.

3 COMMISSIONER MERRIFIELD: So none of the fees from  
4 our licensees go towards that funding?

5 MS. LEE: Correct.

6 COMMISSIONER MERRIFIELD: Thank you.

7 MS. LEE: In the area of accomplishments, former  
8 Commissioner Rogers was a U.S. representative on the OECD  
9 high level advisory group which considered the future of the  
10 Nuclear Energy Agency. They produced the so-called  
11 Birkhofer Report, which had many recommendations and

12 suggestions. Some of these have been implemented, which  
13 includes the development of a mission statement and a  
14 strategic plan.

15 The future challenges that remain to be worked on  
16 are the restructured committee system and also an MOU with  
17 the IAEA to reduce overlap and duplication.

18 CHAIRMAN JACKSON: Are there any actions that you  
19 think the Commission or the NRC staff should be taking  
20 relative to preserving our interests with respect to NEA  
21 committee structure or focus?

22 MS. LEE: Many of our NRC staff serve at very high  
23 levels on these committees. The committees will be tasked  
24 by the NEA director general to look within their own  
25 structures to find methods and ways to streamline and become

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1 more effective.

2 This issue was discussed at the last NEA Steering  
3 Committee. The results of that meeting were that it was too  
4 difficult for a steering committee to pick and choose which  
5 committees should survive and which shouldn't, that it was  
6 better to ask the committees themselves how they might  
7 become more effective.

8 MR. THADANI: Chairman Jackson, in fact the  
9 individual committees have already initiated moves to look  
10 at how they can be more effective and efficient. In the  
11 committee I'm active in, CSNI, Committee for Safety of  
12 Nuclear Installations, we are working very hard to see how  
13 we can reduce the number of working groups and be more  
14 efficient and focus on the goals that we have been talking  
15 about.

16 MS. LEE: I want to talk next about the  
17 International Nuclear Regulators Association. As you know,  
18 this is a forum for our senior-most regulators to discuss  
19 nuclear safety policy issues. It was established in 1997;  
20 it meets twice a year. The U.S. just completed chairing the  
21 first INRA sessions and has passed the chair on to the UK,  
22 who will act as chair for the following year.

23 Some of the accomplishments of the INRA include  
24 development of some policy papers that were distributed in  
25 different forums. There was a Key Elements of Nuclear

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1 Safety paper. There was also a statement on Y2K and the  
2 development of five fundamental concept papers was recently  
3 completed.

4 A future challenge will be whether the U.S.  
5 continues to participate and possible member expansion.

6 COMMISSIONER MERRIFIELD: Madam Chairman.

7 CHAIRMAN JACKSON: Please.

8 COMMISSIONER MERRIFIELD: I know the General  
9 Accounting Office is currently in the process of conducting  
10 an analysis or a report to be delivered back to the Senate  
11 sometime soon. I am wondering if you have any sense of the  
12 timing and where that analysis is at this point and whether  
13 we have gotten any reaction yet. I know I was interviewed  
14 as were other Commissioners.

15 MS. LEE: My understanding is that they are  
16 wrapping up their audit of the INRA. I don't have an exact  
17 date and time when the report is going to be delivered, but  
18 it will be a written report. That's my understanding, and  
19 it will be in the near future.

20 COMMISSIONER MERRIFIELD: Will they be sharing  
21 that with us prior to it being published?



22 MS. LEE: Absolutely.  
23 The next area I'm going to cover is the bilateral  
24 nuclear safety exchanges. With regard to the binational  
25 commissions, let me just say that we participate in two

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1 binational commissions.  
2 The first is the U.S.-Russia Binational  
3 Commission, which is co-chaired by Vice President Gore and  
4 his Russian counterpart. Over the past 18 months the  
5 Russian side has been represented by Prime Ministers  
6 Chernomyrdin, Kirienko and Primakov.

7 The second is the U.S.-South Africa Binational  
8 Commission, which is led by Vice President Gore and  
9 Mr. Mbeki, who was recently elected to succeed President  
10 Mandela.

11 For us the meetings provide useful high level fora  
12 to advance nuclear safety and security objectives. However,  
13 given that the year 2000 is an election year, it is  
14 difficult to predict if these commissions will continue or  
15 what form they may take.

16 COMMISSIONER MERRIFIELD: Madam Chairman.

17 CHAIRMAN JACKSON: Please.

18 COMMISSIONER MERRIFIELD: I don't mean to put you  
19 on the spot. Do you have any kind of count on the number of  
20 visits that the commissioners receive on a yearly basis from  
21 some of our international partners related to these?

22 MS. LEE: Related specifically to in general?

23 COMMISSIONER MERRIFIELD: In general and in terms  
24 of our bilateral agreements we have with some of those  
25 nations.

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1 MS. LEE: I don't have a number for you here at  
2 the table, but I'm happy to provide that for you after the  
3 meeting.

4 COMMISSIONER MERRIFIELD: If you had it, that  
5 would be great, but the fact you don't is fine too. The  
6 point I'd like to make for the benefit of the audience and  
7 the public is to share with them -- we as a Commission  
8 frequently have individual meetings with participants from  
9 all over the world. This week we hosted the president of  
10 the Korean Institute for Safety. It seems like on a weekly  
11 basis we are having visits from these folks.

12 For me, having been here seven of eight months, it  
13 has been a very valuable tool and opportunity to gain a  
14 variety of experience and knowledge about where our fellow  
15 regulators are and how their programs are progressing, and  
16 similarly, it also provides a terrific opportunity for us to  
17 explain to them where we are and the changes that we are  
18 making in terms of our programs.

19 I think people who look at some of the activities  
20 undertaken by the Commission relative to visits that we make  
21 abroad or activities where we are involved with IAEA and NEA  
22 may not have an appreciation for the vast number of visits  
23 that we have on a yearly basis. So perhaps next year or the  
24 next time we have this briefing you may want to include some  
25 synthesis and show the degree of those kinds of visits.

22

1 MS. LEE: I would be happy to do that. I could  
2 probably give you a ballpark figure right now that we would  
3 receive on the order of maybe 25 high level visits. That's

4 just Commission visits. But there are a number of exchanges  
5 that go on at the technical level. They happen almost on a  
6 daily basis with different countries. I'll get you a better  
7 number, though.

8 COMMISSIONER MERRIFIELD: Thank you.

9 MS. LEE: International arrangements establish  
10 NRC's regulatory information exchange and cooperation  
11 program. Five-year arrangements are signed with regulatory  
12 organizations in 31 different countries plus Taiwan. At  
13 Reference Chart No. 2 you can see a list of all the  
14 arrangements that we have.

15 These arrangement provide NRC with direct access  
16 to safety-significant information. They set the framework  
17 for NRC technical advice and assistance. They support U.S.  
18 foreign policy objectives.

19 I would like to move on to talk about the mature  
20 countries with which we have exchanges. I'm going to do  
21 this by way of the comparative study that was done with the  
22 U.S., French, Japanese, and UK regulatory authorities.

23 A Tim D. Martin and Associates report was  
24 referenced at the June 1999 hearing before the U.S. Senate  
25 Subcommittee on Clean Air. The report implied that the U.S.

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1 NRC had proportionately far more regulatory personnel than  
2 other countries. NRC was requested to review this issue,  
3 and the Commission asked the staff to prepare an apples to  
4 apples comparison.

5 We found that aggregate comparisons are not  
6 meaningful because they do not compare like programs. Not  
7 only are they not apples to apples; they are really more  
8 like comparing fruits and vegetables.

9 Our programs are conducted in substantially  
10 different ways because of different infrastructures and  
11 regulatory approaches. NRC's regulatory approach is largely  
12 shaped by expectations of the U.S. public, the Congress,  
13 past operational experience, and Commission policy.

14 Let me just say that I thought that the activity  
15 itself was very, very useful in that it brought the staff  
16 together and provided for in-depth knowledge of three major  
17 foreign partners. It validated what we knew, but it also  
18 identified areas which we did not know.

19 From the point of view of immediate access to  
20 reliable information, the study also affirmed the benefits  
21 of our international arrangements.

22 COMMISSIONER MERRIFIELD: Madam Chairman.

23 CHAIRMAN JACKSON: Okay.

24 COMMISSIONER MERRIFIELD: I happened to have the  
25 opportunity to travel internationally for the first time.

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1 On behalf of the Chairman I signed a bilateral arrangement  
2 between ourselves and Slovenia. Although they are not one  
3 of the major countries that were in this comparative study,  
4 I think it's instructive that I had some very positive  
5 discussions with the chief regulator there. It became  
6 readily apparent to me the degree and the knowledge that he  
7 had of our regulations was reflective of the fact that they  
8 take them almost verbatim.

9 I think there is something instructive here, that  
10 there are a number of countries out there, even the mature  
11 countries, which heavily rely on the rulemaking capacity of  
12 this agency to develop their own programs. Obviously that  
13 inures to their benefit. They are obviously adopting health

14 and safety practices that are the highest -- ours. But it  
15 also makes it difficult to make international comparisons  
16 since we are the lead in terms of making these safety  
17 decisions. To the extent that others can borrow those  
18 without having to have the research capability and the  
19 capability in their own equivalent of NRR does make a  
20 difference there, and I think that needs to be pointed out.

21 MS. LEE: Thank you very much for that.

22 Next I'm going to turn to our relations with what  
23 we call transitional countries.

24 COMMISSIONER MCGAFFIGAN: Madam Chairman, I think  
25 the study that we did was a very important study. I commend

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1 the people who worked on it, and Jim Blaha, who is not at  
2 the table. I believe that we really do have a lot to learn  
3 from the mature countries. They really are our benchmark.

4 One of the benefits that you had on your chart was  
5 the in-depth knowledge of major foreign partners. I think  
6 we have to increase our knowledge of these major countries.  
7 As Ashok, I'm sure, will say later, the French have a larger  
8 research program now than we do. We are still working off  
9 of 45 years of leadership in this area, but especially with  
10 mature countries, with mature programs at this point we have  
11 a lot to learn. They are still learning from us.

12 The French are going through a major effort, which  
13 the Consul d'Etat threw a little bit of roadblock into  
14 recently, raising some constitutional issues. They are  
15 creating a body very similar to us. There is a question  
16 whether under the French constitution we are constitutional,  
17 but luckily we are under the American Constitution.

18 I think we have an awful lot to learn. I would  
19 actually encourage the staff on an ongoing basis, both in  
20 international programs -- and I guess I will raise this with  
21 the individual program offices later. I fear hubris on our  
22 part. I fear that because we always were in front that we  
23 will not learn. I don't think that's true, but I think it's  
24 something we have to guard against.

25 We've had conversations here with the ACRS about

26

1 the Europeans as a group having greater desire to have very  
2 little early release because of the density of their  
3 populations. So they impose things like corium spreaders  
4 and containment liners, et cetera, on their new reactors  
5 which we don't impose on ours. We have to understand the  
6 differences so we can justify the differences to the public,  
7 and I think sort of constant benchmarking against the mature  
8 programs is one of the most important elements of our  
9 international programs.

10 CHAIRMAN JACKSON: For the record, would you say  
11 what those three countries are? I think we know them.

12 MS. LEE: The three countries are the French, the  
13 UK, and the Japanese.

14 COMMISSIONER MCGAFFIGAN: I might even add that  
15 many in NEI would look at this study and say, well, gosh, if  
16 we had only lost the Revolutionary War, we would have the  
17 British system, and they are the least expensive regulator.  
18 I'm putting words in their mouth.

19 I talked to a British licensee recently who liked  
20 the structure that we had under our decommissioning rule.  
21 In Britain, when we were working on Westfall we were trying  
22 to figure out what are you doing with Dounreay. You've got

23 the same problem there and they'll know it when they see it.  
24 We, for better or for worse, recently said we will apply our  
25 decommissioning rule. This particular licensee liked the

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1 structure of having a rule under which they would operate as  
2 opposed to the more flexible system. So I think constantly  
3 trying to think about the differences is very helpful.

4 Sorry for the delay.

5 MS. LEE: Thank you.

6 Next I'm going to talk about the transitional  
7 countries. I'm going to specifically mention Russia and  
8 Ukraine but also note that the CEE countries fall into this  
9 category, Central and Eastern Europe, and also Armenia and  
10 Kazakhstan.

11 NRC has been providing regulatory assistance to  
12 Russia and Ukraine since 1992. The program is intended to  
13 enhance the independence and capability of the nuclear  
14 regulators.

15 The areas covered include both technical and  
16 managerial assistance. Our programs have succeeded not only  
17 in providing tools of regulation, but also infusing the  
18 concept of safety culture.

19 The greatest challenge for us remains in the area  
20 of funding and continuing a positive momentum. However,  
21 with regard to Russia, there are three additional  
22 challenges.

23 The first is to continue to make positive  
24 contribution to GAN despite the 50 percent cut in funding  
25 imposed by Congress.

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1 Second, to assure that the momentum started in  
2 1992 does not dissipate, our continued presence is necessary  
3 to protect our investment.

4 Third, the stability of the government and the  
5 country's economic health are continuing problems.

6 COMMISSIONER MCGAFFIGAN: Could I again raise a  
7 question or two here? Maybe it's going to be addressed  
8 later by Carl.

9 One of the challenges is clearly in the materials  
10 control accounting area with the Russians. We have a recent  
11 Academy of Sciences report that Mr. Hearn and Mr. Meserve  
12 and others worked on that suggested that we needed to  
13 continue the program and not declare victory because there  
14 is not a lot more to do. But this is also an area where DOE  
15 has the clear lead, for better or for worse, and all funds  
16 are appropriated to DOE. The last time I checked with you  
17 all, ten months into the fiscal year we were still waiting  
18 for DOE to tell us what it is that they thought we could  
19 contribute to the MPCNA efforts. This may be embarrassing,  
20 but it's not classified. Could you tell us where this  
21 stands, or was this going to be part of Carl's presentation?

22 MS. LEE: I can address that unless Carl would  
23 prefer to. We might say two different things.

24 MR. PAPERIELLO: We are really not getting very  
25 far. We received a letter from them on May 20th which says,

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1 yes, we are going to fund you but we still haven't figured  
2 out how we are going to do it, and maybe it will just be  
3 another contractor. Which doesn't make us very happy.

4 On May 28th we sent them a letter, basically  
5 sending them a reimbursable agreement, saying that we need

6 to hear from you by the end of June.

7 We have spoken to them this week. They are still  
8 trying to structure their own agreement. If we don't hear  
9 from them by the end of June, we will be sending the  
10 Commission a paper with possible options, including just  
11 terminating the program.

12 COMMISSIONER MCGAFFIGAN: I think that would be  
13 unfortunate. It may be reality, but I believe -- and you  
14 guys can correct me -- I'll ask a question rather than  
15 making a statement. Isn't it true that our work in this  
16 program, our little piece of it, has been uniformly praised  
17 for the quality of the work?

18 MS. LEE: Yes.

19 COMMISSIONER MCGAFFIGAN: Is it true that GAO is  
20 currently looking into the program again?

21 MS. LEE: Yes. They are doing an update of a  
22 review they began three years ago.

23 COMMISSIONER MCGAFFIGAN: Would we have been  
24 better off had the Congress given us a piece of a mission in  
25 this area initially?

30

1 MS. LEE: Yes.

2 COMMISSIONER MCGAFFIGAN: And giving us,  
3 therefore, presumably some general fund appropriations to go  
4 with it?

5 MS. LEE: Yes.

6 COMMISSIONER MCGAFFIGAN: This annual going hat in  
7 hand to DOE has served no one well but certainly has not  
8 served the one little piece of the program that I think has  
9 been uniformly considered excellent.

10 MS. LEE: That's correct.

11 CHAIRMAN JACKSON: It has been noted that we have  
12 had GAO reviews and others that have indicated the quality  
13 of the NRC contributions in this arena, but the  
14 arrangements, particularly via-vis the funding, have made  
15 it particularly difficult for us.

16 MS. LEE: That's correct.

17 COMMISSIONER MCGAFFIGAN: Let me go one step  
18 further in case there is a GAO person in the audience or  
19 they read the tape. I honestly think GAO in its current  
20 analysis should consider whether it should make a  
21 recommendation to Congress in this area. Not to put words  
22 in their mouth, but something for them to consider would be  
23 to give us a statutory role here and a very small amount of  
24 money for the part of the program that GAO believes that we  
25 can make a contribution to. We would clearly coordinate

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1 with DOE; we would clearly not go off on our own; but the  
2 current arrangement doesn't seem to be working.

3 MS. LEE: That's correct. I think we would be in  
4 a much better position if that were to occur. I just don't  
5 know the likelihood of that happening in the Congress.

6 I would like to move on to talk about our  
7 relationships with the developing countries. We find in  
8 this area that the IAEA is really the most cost effective  
9 way to facilitate assistance.

10 I'm just going to talk a little bit about one area  
11 where I think it has been particularly useful, and that is  
12 the area to address orphan sources in member states. The  
13 IAEA has a model project for upgrading radiation protection  
14 and waste safety infrastructures. The project focuses on

15 five regional areas: Latin America, Europe, Africa, and  
16 East and West Asia.

17 The IAEA also has several assistance projects to  
18 help countries such as Georgia, Turkey, Peru respond to  
19 emergency lost source incidents. I think they have been  
20 very effective in this area.

21 Moving on to the foreign assignee program, this  
22 program started in 1974 in response to requests from  
23 developing countries for on-the-job regulatory experience  
24 and training in the U.S. From 1974 to now NRC has hosted a  
25 total of 270 foreign assignees from 32 countries. Your

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1 Reference Chart No. 3 in the back provides a list of  
2 assignees by country and by year.

3 Applicants for the program are proposed by their  
4 employing regulatory organization or by the IAEA fellowship  
5 program. The assignees are expected normally to be given  
6 duties and responsibilities similar to those of regular NRC  
7 employees, and subsistence expenses and cost of travel are  
8 paid for by the IAEA or the sponsoring foreign government.

9 Security considerations are, of course, first and  
10 foremost. We have a very detailed arrangement. We do  
11 background checks. We provide stand-alone computers and  
12 they are given very limited access to our building.

13 The program enhances regulatory awareness  
14 capabilities and commitment in developing countries.

15 We view the program as an excellent mechanism for  
16 developing quality relationships with key personnel in  
17 foreign regulatory agencies. Some of these individuals now  
18 serve at the office and division director levels in their  
19 regulatory organizations.

20 COMMISSIONER DIAZ: How do you define what is a  
21 mature country and what is a developing country? Is  
22 belonging to OECD the definition of maturity, or is the  
23 definition of maturity something else?

24 MS. LEE: There is no clear-cut criteria that  
25 defines these programs. I would say that we talk about them

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1 in generalities, that the mature programs are the countries  
2 that have what we call significant nuclear power programs,  
3 that have nuclear power reactors, materials regulations,  
4 that type of thing.

5 The categories are just categories that we lump  
6 together. They are not very good ones. It's hard in fact  
7 to define countries that are mature versus some developing.  
8 Numbers of reactors don't necessarily provide definition.

9 COMMISSIONER DIAZ: Not just OECD participation?

10 MS. LEE: I think that is factored in but not  
11 really a criteria.

12 COMMISSIONER DIAZ: So we kind of have a magic  
13 wand.

14 MS. LEE: It's a case by case basis.

15 COMMISSIONER McGAFFIGAN: I would also like to put  
16 in a plug for the foreign assignee program. I think we  
17 benefit in really understanding some of the foreign  
18 programs. There is a very interesting article -- I will  
19 commend our French assignee -- in Control, I think they call  
20 the journal that they have. He was talking about what the  
21 French could learn from the American program and what we  
22 could learn from the French program.

23 I wish every assignee wrote a little article like  
24 that or a larger article at the end of their assignment,

25 because there were some real insights in that. I appreciate

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1 the foreign assignees when they bring that sort of value  
2 added.

3 COMMISSIONER MERRIFIELD: Do we talk to them at  
4 the end of their assignment to get lessons learned?

5 MS. LEE: Yes. They provide an assessment  
6 evaluation to us.

7 COMMISSIONER McGAFFIGAN: This was a broader  
8 assessment evaluation of where is the U.S. regulatory  
9 program and where could it improve. I don't know whether  
10 they do that. If they do that, that would be good. I think  
11 the assessment more is how did the assignment go rather than  
12 what I suggested this French assignee did.

13 MS. LEE: But we could talk to them about that.  
14 We could broaden it. I think that is an excellent  
15 suggestion.

16 As a final piece of my presentation, I would like  
17 now to turn to an examination of the challenges which face  
18 us and my vision for NRC's international programs. I  
19 encapsulate my vision in three phases: keeping to the core,  
20 challenging the process, and fostering cooperation.

21 It is important to remind ourselves what NRC's key  
22 strategic international goal is. It is to support U.S.  
23 national interest in safe and secure use of nuclear  
24 materials and in nuclear non-proliferation. I refer to this  
25 as keeping to the core.

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1 To know if we are achieving this goal, we need to  
2 ask ourselves, are we doing the right things? Is the work  
3 critical to our mission outcomes? Are we doing it  
4 effectively and efficiently? We should not find ourselves  
5 focusing exclusively or primarily on the question, can we  
6 afford to do this?

7 The policy basis for participation in  
8 international activities was set by the Commission in its  
9 1997 Strategic Assessment and Rebaselining Initiative.  
10 Affirming to this end, staff will continue to actively  
11 participate with Executive branch agencies to maintain NRC's  
12 role in policy formulation. We will continue to participate  
13 in exchange activities, and we will continue to provide a  
14 wide but carefully selected range of safety and safeguards  
15 assistance.

16 Staff, with Commission guidance, will measure our  
17 effectiveness through the strengths and the unique  
18 contributions that we bring, in other words, our value  
19 added, and not condition our participation based on what our  
20 resources will allow.

21 Under challenging the process, what I mean by this  
22 is NRC continues to undergo change. It is not business as  
23 usual. I believe any OIP program officer would readily  
24 state that even in the past six months we have increased the  
25 emphasis on how we plan, how we budget, and how we implement

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1 our plans and our budget as individuals, as an office, and  
2 as managers of larger programs. However, we must also  
3 challenge the process to make sure that we do not omit  
4 conducting important emergent activities simply because they  
5 have not been planned for.

6 The Commission itself, interested in the scope and

7 depth of our work, has led us through some of this change.  
8 You have emphasized the need for more thorough and timely  
9 analysis, a better coordinated process, avoiding overlap and  
10 duplication, and demonstrated in-depth knowledge of the  
11 countries with which we interact.

12 I thank you for your feedback and your guidance.  
13 I have communicated your expectations to the OIP staff, and  
14 we are focusing on performance.

15 We need to do a better job at fostering  
16 cooperation internally and externally with our stakeholders.  
17 This cooperation should be based on a shared belief in the  
18 benefits of international cooperation.

19 On the internal front, as we face the challenge of  
20 securing funding, we need to speak with a single voice.  
21 After consultation with the directors of program offices and  
22 the Office of the Executive Director for Operations, we have  
23 agreed to form a council to address international policy and  
24 program implementation. This international council will  
25 meet regularly and will improve information sharing and

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1 coordination of NRC's international programs.

2 I appreciate the support and the enthusiasm with  
3 which my colleagues have agreed to this idea.

4 On the external front, the public and NRC  
5 licensees derive tangible and intangible benefits from these  
6 activities. The public perception of how safely plants are  
7 run as well as how secure they are influences its confidence  
8 in nuclear energy. The U.S. as a major supplier of nuclear  
9 fuel, equipment and technical services depends on an orderly  
10 and predictable export licensing regime to enhance their  
11 marketability.

12 In addition, our safety assistance program allows  
13 U.S. companies to expand their business interests.  
14 Cooperation with foreign countries in nuclear safety  
15 research provides a larger experience base than exists in  
16 the U.S. alone. Together we can identify and resolve safety  
17 issues in an economical manner.

18 Our assistance also helps in the prevention and  
19 mitigation of problems in countries with weak or embryonic  
20 nuclear safety cultures. Given that the operators of  
21 nuclear facilities spend millions of dollars per year on  
22 insurance, imposing a small cost on licensees to support NRC  
23 staff for assistance is on balance a very cost effective  
24 insurance policy.

25 NRC's participation in international safeguards

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1 and non-proliferation helps us assess potential threats  
2 against the U.S.

3 We must remember that NRC's regulatory strengths  
4 influence U.S. credibility domestically and abroad. We  
5 should be ready to emphasize these points, as appropriate,  
6 in our dialogues with the Congress, the domestic industry,  
7 and our relevant stakeholders.

8 This concludes my portion of the presentation. I  
9 would now like to turn the briefing over to Dr. Knapp, who  
10 will introduce the program offices individually.

11 COMMISSIONER MCGAFFIGAN: Madam Chairman. If the  
12 French think it's important to have people come to the U.S.,  
13 and reading Control again, I see the British inspectors  
14 spend some time, and the French inspector, mostly in the  
15 reactor area, do we think it's important to send some of our  
16 folks to France, to England, to Germany, to Spain?



17 MS. LEE: Yes, we do.  
18 COMMISSIONER MCGAFFIGAN: It wouldn't really be  
19 part of our international program. It would be like sending  
20 somebody to Capitol Hill, another foreign country, on a  
21 political science association exchange. We think that is  
22 valuable because it brings us knowledge of that institution.  
23 If we don't have the hubris that we have nothing to learn,  
24 then we should be sending people out and trying to tap and  
25 understand and benchmark ourselves against those regulators.

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1 I ask if that is happening.  
2 MR. ZIMMERMAN: I can give you a recent example.  
3 This last spring we sent a senior reactor analyst over to  
4 France for several weeks to look at the way they do their  
5 inspection planning and process, particularly with regard to  
6 outages. We have found that to be very useful.  
7 We have done it and look for opportunities to  
8 continue to do it, as well as participate in other direct  
9 inspection activities at facilities. So in addition to  
10 taking part in multilateral and bilateral meetings, we are  
11 also looking at having a direct observation of activities in  
12 the field and close working relationships with the  
13 regulator.  
14 COMMISSIONER MCGAFFIGAN: I would be interested to  
15 see how much of that we do and how that is planned into our  
16 programs, but that is something I can explore another time.  
17 MR. THADANI: If I may make a quick comment on  
18 that from Office of Research, it seems to me that we tend to  
19 get more assignees from other countries here than we send  
20 our people. I think France is a very good example. From  
21 the Office of Research we did send one person about two  
22 years ago to France to spend a substantial amount of time to  
23 truly learn from them. But I think we don't do enough, and  
24 we need to think hard if we can get additional benefit from  
25 this.

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1 COMMISSIONER MCGAFFIGAN: Thank you.  
2 MR. ZIMMERMAN: Also sending individuals not only  
3 from the headquarters but from the regions to give them that  
4 opportunity as well.  
5 COMMISSIONER MCGAFFIGAN: Right. At times we do  
6 it. Joe Callan, when we were starting up the program with  
7 the Ukrainians, didn't he spent a significant period of time  
8 there in a sort of assistance mode?  
9 What I am saying is I suspect and the British and  
10 French and other examples indicate that they are going off  
11 in a learning mode, where we are not in assistance but we  
12 are really trying to benchmark and learn.  
13 I'm glad we do some of it, and I would just  
14 suggest to this council that you think about whether that  
15 should be expanded and how to do so cost effectively and  
16 whether there are language issues. I know there may well  
17 be. The Europeans all speak English and can come this way,  
18 but other than Commissioner Diaz we are a little bit short  
19 on our foreign language capabilities.  
20 My main concern is that we not suffer from hubris.  
21 MS. LEE: I would just add one more point. We did  
22 have an NRC individual spend a year in Japan.  
23 COMMISSIONER DICUS: Also, haven't you assisted in  
24 some way or the other state people going to assist in  
25 foreign countries?

1 MS. LEE: I think we have been involved to a  
2 certain degree with that, yes.

3 COMMISSIONER DICUS: Commissioner Merrifield.

4 COMMISSIONER MERRIFIELD: One question. We talked  
5 a lot today about the activities we have under way in Europe  
6 and some of the activities we have under way in Asia. It  
7 has struck me to a certain degree that our relationships in  
8 many ways are sort of east-west related. I would commend  
9 Commissioner Diaz for taking some time with our southern  
10 neighbors in Mexico, Brazil, and Argentina. I believe, I  
11 think as he does, that those are important relations for us,  
12 as well as with Canada, the north-south.

13 I am wondering if you have any thinking in terms  
14 of ways in which we can strengthen those relationships as we  
15 move forward with international programs. That may be some  
16 work that we as Commissioners have to do; it may be some  
17 work we have to do as a Commission.

18 MS. LEE: I think that is an excellent point. We  
19 have had visits to Canada and Mexico that have occurred  
20 throughout the recent years. We have had technical teams  
21 exchange visits and information. I would like to see more  
22 of that, quite frankly. I think we can think about that  
23 area in a better way, and I would like to see that happen.

24 COMMISSIONER MERRIFIELD: That will certainly be a  
25 priority for me in the coming year. Thank you.

1 MR. KNAPP: On behalf of the EDO's office, a  
2 couple of comments on Janice's presentation. We are quite  
3 interested in international and I think that we will be  
4 seeing increased attention at the EDO level in the coming  
5 year.

6 I'm looking forward to working with Janice and  
7 working on the international strategic arena as we go  
8 through the PBPM process and as we agree to and pursue an  
9 outcome-based program. I think we will see stronger  
10 internal coordination and a more outcome-based process  
11 within the next year. I'm looking forward to that.

12 As I turn it over to the office representatives to  
13 talk about their programs, I would note the presentations  
14 this morning in fact will begin with desired outcomes  
15 followed by a discussion of their activities and a  
16 discussion of the benefits which they foresee from each of  
17 the programs.

18 With that, I will turn it over to Roy Zimmerman of  
19 NRR.

20 MR. ZIMMERMAN: Good morning.

21 Our desired outcomes in NRR are clearly to benefit  
22 from our international experiences that contribute to our  
23 four performance goals that Janice mentioned, that are shown  
24 here in the middle of the slide.

25 We recognize that there is a wealth of information

1 that we can gain from the operating experience with our  
2 international peers. We also recognize our responsibility  
3 to assist in the fulfillment of not only NRC's but the U.S.  
4 international nuclear safety obligations. We appreciate the  
5 opportunity to be able to do that as well.

6 With regard to resources, approximately one  
7 percent of NRR's budget goes into the international area.

8 Most of our international activities are designed

9 to gain safety information through bilateral and  
10 multilateral exchanges.

11 For example, over the past four years we worked  
12 closely with our peer regulators from Canada, France, and  
13 the UK to understand the challenges that these countries had  
14 in the area of digital I&C;. We were experiencing both  
15 hardware and software challenges.

16 These insights that we worked with them on helped  
17 us to finalize our SRP in this particular area of digital  
18 I&C;. We then were able to take this SRP and use it to our  
19 advantage with regard to the advanced reactor design  
20 certifications, particularly with the Westinghouse reactor.

21 It also has assisted us in contributing to our  
22 review of the Y2K program. International insights brought  
23 to our attention challenges with regard to embedded chips  
24 that may not necessarily be readily observable to us in  
25 certain systems. We found that very valuable.

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1 Also, the standard review plan for digital I&C;  
2 allows us to complete our reviews of modifications that  
3 plants make as they go from analog to digital systems and  
4 will continue to assist us as we move forward in the license  
5 renewal area.

6 Discussions with peer regulators from Spain and  
7 Taiwan have helped us gain information on safety performance  
8 of high burn-up fuel, and likewise this contributed to  
9 developing our standard review plan and acceptance criteria  
10 for review of extended cycle times. We were able to receive  
11 data from both Spain and Taiwan associated with corrosion  
12 measurement techniques associated with that fuel.

13 With regard to material issues, France provided  
14 extensive data to us on steam generator tube integrity  
15 issues, including crack growth rate, which is useful in our  
16 review of steam generator issues in this country.

17 We have also benefited from exchanges with Spain,  
18 Japan, and Sweden on techniques for examining and repairing  
19 core shroud degradation.

20 The standard review plan associated with digital  
21 I&C; is also going to get an opportunity to get a good test  
22 as the Temelin reactor, which has a Westinghouse digital I&C;  
23 system, comes on line in the fall of next year, as well as  
24 the Lungmen dual unit facility, a GE facility in Taiwan. We  
25 were able to participate in the review with the appropriate

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1 regulators. It assisted us in the development of our SRP,  
2 and now as those two plants go through pre-operational  
3 testing and initial startup of those systems in the fall of  
4 2000, it will be a good operational test of our SRP.

5 Over the past several years we have also provided  
6 assistance to Russia and the Ukraine, the regulatory  
7 authorities there, and we were able to describe for them and  
8 assist in their development of an inspection program  
9 development of a framework for their regulatory process.  
10 Specific areas like fire protection and challenges in their  
11 ventilation systems as well as working in the license  
12 renewal area are some of the primary areas where we are  
13 lending assistance to those countries.

14 We spoke recently to Commissioner McGaffigan's  
15 point associated with our assignees going into the field and  
16 benefiting from extended stays, visiting France where we are  
17 able to gain insights on inspection planning in that

18 country, and we had a number of individuals that visited  
19 Sizewell. It was a mutual benefit as shutdown risk concerns  
20 were discussed associated with that facility.

21 We have also benefited from involvement in a  
22 number of technical groups, such as the Working Group on  
23 Inspection Practices. This is an opportunity for the member  
24 country representatives to discuss and learn from each other  
25 about nut and bolt issues associated with the way

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1 inspections are being conducted.

2 Right now, with the development of our reactor  
3 oversight program, there is heightened interest in that  
4 working group and understanding in great detail and  
5 following with us as we go through our pilots where we stand  
6 in that process. The personal involvement that I've had  
7 with members of that group is that they are very  
8 knowledgeable and up to speed on exactly where we are in the  
9 process and are anxiously following the developments from  
10 our pilots.

11 COMMISSIONER MCGAFFIGAN: I might use this as an  
12 opportunity to ask a question. I think I saw a trip note  
13 that you had written where some of our foreign colleagues  
14 were a little concerned about where we were going because we  
15 weren't going to be doing enough second-guessing of  
16 management. I'm being pejorative. They feel much more  
17 comfortable in Europe as federal bureaucrats evaluating  
18 management of the facilities and making that part of their  
19 program. We as a Commission have decided to do something  
20 different because we saw how Senator Inhofe reacted to the  
21 notion that we could grade management.

22 Could you give us a little more insight into how  
23 those discussions went?

24 MR. ZIMMERMAN: You said it very well. That is  
25 how it went. Our presentation brought out where we were

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1 headed in terms of a process that was more objective, more  
2 scrutable, more predictable, and the benefits of that, and  
3 to move away from the more subjective nature. The  
4 discussion on the performance indicators, supplemented and  
5 coupled with the inspection program, was our presentation.

6 There was a movement among a number of countries  
7 that there was a desire to get a better handle on management  
8 performance. Some of that handle they wanted to receive was  
9 very personal in terms of where they see some weak  
10 management individuals to engage regulator to utility and  
11 address those issues.

12 We came back and indicated that we see a bigger  
13 benefit in being able to identify objectively what the issue  
14 is, and if that leads a reasonable individual to track back  
15 to a particular management individual or management process  
16 or safety culture, then it can take you through the facts  
17 rather than a more direct issue associated with any  
18 particular individual management style per se.

19 COMMISSIONER MCGAFFIGAN: I think this is a good  
20 example of where we have a good discussion with our foreign  
21 colleagues and we end up actively disagreeing. Maybe  
22 because of cultural differences between us and them; maybe  
23 because even they should consider whether they go to that  
24 personal level. I think Towers Perrin had a few examples of  
25 that that didn't look very good when they were shown to the

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1 light of day. We think the right way to go, and  
2 Commissioner Diaz has been at the forefront of this, is to  
3 focus on results and facts and not try to second-guess  
4 management.

5 MR. ZIMMERMAN: We are also participating in the  
6 Technical Committee on Aging Management and License Renewal.  
7 This is a very good opportunity for us to get additional  
8 age-related data to assist us in our reviews. We also share  
9 and benefit from discussions on advances in performing  
10 probabilistic safety assessments.

11 Janice discussed safety. That was an area where  
12 NRR had a significant role. We had 14 of our technical  
13 reviewers during 1998 that did a lot of work in preparing  
14 that draft.

15 COMMISSIONER DIAZ: Excuse me, Mr. Zimmerman.  
16 Following Commissioner Merrifield's lead, who pays for our  
17 participation in the Convention on Nuclear Safety?

18 MS. LEE: I can answer that. We pay for that. We  
19 pay the FTEs that go to review the country reports, to  
20 prepare our own national report. This is a treaty  
21 obligation for which we have made commitments, and we pay  
22 for that. It comes out of the NRC budget.

23 COMMISSIONER DIAZ: Besides the travel costs and  
24 the FTEs, do we pay any contract costs?

25 MS. LEE: I'm not aware of any contract costs, but

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1 we do pay travel and staff costs.

2 MR. ZIMMERMAN: We have looked at the FTE  
3 contribution enrolled in travel costs. It came out to about  
4 one FTE with a very small contribution in the travel area.

5 COMMISSIONER DIAZ: So it's small?

6 MR. ZIMMERMAN: One FTE. It's 14 individuals that  
7 worked on it. It added up to one FTE.

8 COMMISSIONER DIAZ: It certainly is an obligation  
9 that we have as being part of the United States Government.  
10 It could definitely be separated and say this is actually  
11 being paid by us.

12 COMMISSIONER MCGAFFIGAN: This is another one of  
13 these leading questions. I regret that we didn't get to  
14 fully participate in the meeting, because from the press  
15 reports I saw, it sounded like it would have been an ideal  
16 opportunity for some folks from NRR and perhaps NMSS and  
17 Research to have had involvement in those peer discussions.  
18 The document that came out of the meeting, by any standard  
19 I've seen and done with the rapidity with which it was done,  
20 was a very high quality document that the group produced.

21 MS. LEE: We will have an opportunity three years  
22 from now to fully engage.

23 COMMISSIONER MCGAFFIGAN: Right. I think it will  
24 be a worthwhile cost is all I'm saying.

25 MR. ZIMMERMAN: Slide 25 on foreign assignees. We

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1 have had some discussion already on foreign assignees. From  
2 NRR's perspective, we are clearly seeing a benefit, and we  
3 think it is a mutual benefit for the foreign assignees that  
4 we currently have on board.

5 The listing in front of you is in fact foreign  
6 assignees that are currently on board in NRR. The  
7 individuals that are assigned these roles are very competent  
8 individuals. Their up to speed time is very little, and  
9 they are able to make meaningful contributions to assist us

10 in our task and our mission very quickly, and we believe  
11 that they are likewise benefiting from their time here and  
12 getting to better understand our processes.

13 COMMISSIONER MCGAFFIGAN: Again I might note I  
14 believe it's correct that Japan is the first licensing  
15 authority to grant an extension beyond 40 years to an  
16 operating license. I think they did that in the last few  
17 months. Isn't that correct?

18 MR. ZIMMERMAN: I think that's right.

19 COMMISSIONER MCGAFFIGAN: That's based on  
20 Nucleonics Week.

21 MR. ZIMMERMAN: If there are no further questions,  
22 Ashok Thadani will discuss the Office of Research.

23 MR. THADANI: Good morning. You've heard about  
24 the four outcome goals. I think most of the activities that  
25 we are involved in with the international communities are

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1 focused on trying to address the outcome goals that have  
2 been talked about.

3 Central in achieving those goals is the  
4 contribution of the information we get from other countries,  
5 a contribution that makes us able to make sound technical  
6 decisions. It has become more and more important as years  
7 have gone by. Some of the experimental work that is going  
8 on in other countries is very much first-class quality type  
9 of work. It has been of great value to us in understanding  
10 some of the issues. I will come back and give you some  
11 examples of those issues.

12 I think you have said it yourselves at this  
13 meeting that it is not just important to get good  
14 information, but it's equally important to make sure that  
15 information is shared by the countries. There are many ways  
16 we go about doing that. Setting up benchmark international  
17 standard problems just happens to be an example of how we go  
18 about trying to make sure the information is shared.

19 Another area where we are fairly active is the  
20 issue of international standards. In some cases I think we  
21 are getting some very good input ourselves, but nevertheless  
22 to make sure that the best technical information is  
23 utilized. As you have said yourselves again this morning,  
24 light water reactor technology is global, and it is  
25 important to us in terms of safety of plants not just in

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1 this country but as well as in other countries.

2 I will come back and discuss some specific  
3 numbers. We have been working very hard to make sure that  
4 our resources are properly leveraged to take advantage of  
5 what the other countries are doing to help us make the  
6 decisions that we need to make.

7 This is a bit busy. As our budget has gone down,  
8 it really has become important that we increase our  
9 cooperation with international organizations as well as  
10 domestic organizations.

11 I believe this is completely consistent with the  
12 direction we were given in Direction Setting Issue 22 by the  
13 Commission. The current situation is that we have actually  
14 64 bilateral and multilateral research agreements.  
15 Commissioner Merrifield and Commissioner Diaz, I may note  
16 that we do have some agreements with some of the South  
17 American countries as well, and we are in fact attempting to  
18 increase our interaction with them.

19 We have 23 additional agreements under negotiation

20 currently.

21 What is the value of these agreements? There are  
22 two cases I would like to present to you.

23 The first one is we have initiated work in terms  
24 of improving our thermal hydraulic codes. As you know, we  
25 have gone down in terms of the work we do in the severe

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1 accident arena. We have increased our efforts in the area  
2 of risk assessment. We decide what it is that we want to  
3 do.

4 We are fortunate in that we get about \$2 million a  
5 year from other countries to participate in the programs  
6 that we are working on. So this is additional funding that  
7 we utilize to help us get to where we want to get and to  
8 share this information with other countries.

9 Another category where we get great value is we  
10 contribute about \$4 million per year to international  
11 research programs. Some of the research is conducted in  
12 other countries and some is conducted in this country. For  
13 example, the lower head failure work that is going on at  
14 Sandia National Laboratory is supported by a number of other  
15 countries.

16 For this \$4 million the other countries'  
17 contribution is about \$60 million. Many of the programs we  
18 could not support clearly were it not for the fact that  
19 other countries have come forward in many cases and put up a  
20 fair amount of resources.

21 I will come back to this point when I say a few  
22 words about some of our future needs and how that might be  
23 an important element.

24 COMMISSIONER MERRIFIELD: I don't know what the  
25 numbers are, Ashok, but we have obviously had a significant

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1 reduction in the past years in terms of our own research  
2 capabilities and the number of FTE that we have here in the  
3 agency who were engaged in these kind of research  
4 activities.

5 As Commissioner McGaffigan has noted, and I agree  
6 with him, because of that, areas in which we had a lot of  
7 strength previously we don't have the resources to be strong  
8 in everything now. So we will have a greater dependence and  
9 interrelationship with other international countries in  
10 terms of taking benefit of their research. That \$4 million,  
11 it would seem to me, is very critical and a good investment  
12 in leveraging the funds we have in terms of getting the best  
13 value of research out there and sharing in the other  
14 information that these other countries have.

15 MR. THADANI: Indeed, I can say with some  
16 confidence that the U.S. was clearly a leader in many of the  
17 technical areas. We are no longer leaders in all those  
18 areas that we were once, leaders in those categories.

19 You are quite right. It is essential that we stay  
20 in close contact with those countries where they have in  
21 fact gone on in considerable additional work.

22 Commissioner McGaffigan talked about the European  
23 PWR and the idea of core catchers, and so on. In the severe  
24 accident arena, if I may say, the Europeans are doing much  
25 more work, and we are trying to leverage our resources to

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1 get that information.

2 Another major area where we need to catch up is in  
3 the area of fuels. We used to be leaders, but for the past  
4 20 years, roughly, we haven't done very much research. Some  
5 of the new issues are developing, and I will share with you  
6 some of those cases.

7 To go back to respond to part of what you said,  
8 Commissioner Merrifield, since you gave me an opportunity,  
9 five years ago our budget was --

10 COMMISSIONER MERRIFIELD: I don't want to give you  
11 too great an opportunity.

12 [Laughter.]

13 MR. THADANI: In any case, I think as an agency we  
14 are getting tremendous return in terms of our investment in  
15 our international activities.

16 Let me say just a couple of words about our  
17 involvement in IAEA and NEA. I am personally quite active  
18 in the NEA Committee for Safety of Nuclear Installations.  
19 NEA provides us a great forum for making sure we can  
20 leverage our resources, because that provides an opportunity  
21 to bring issues to the table.

22 There is fairly good technical discussion and a  
23 lot of discussion of merit for going forward with doing any  
24 work at all. The recent success we had was the Sandia lower  
25 head failure example I used earlier where NEA has taken the

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1 leadership, and we are getting a substantial amount of  
2 resources from other countries.

3 There is this issue which I think we alluded to  
4 earlier to make sure that within NEA activities are  
5 conducted in an efficient and effective manner. I am  
6 chairing a working group within NEA, CSNI, to make sure that  
7 we are actually being effective and efficient. We hope to  
8 develop some recommendations for NEA in that regard.

9 I think Janice sort of touched on this. We are  
10 assisted GAN and Ukraine regulatory authorities in the area  
11 of risk assessment by developing procedures, guides and  
12 training, and so on, so they can get a better understanding  
13 of the risk.

14 CHAIRMAN JACKSON: Is our degree of participation  
15 in the international communities, including standards review  
16 groups, sufficient for us to keep up with the state of the  
17 art?

18 MR. THADANI: I believe it is sufficient at this  
19 stage. Where we are perhaps lacking a little bit is in the  
20 area of IAEA. The number of standards that IAEA puts  
21 together is quite significant, and we tend to do overview  
22 rather than a thorough review. So there I think we are  
23 probably applying limited resources just because of those  
24 constraints of resources.

25 Let me give you a few specific examples of some of

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1 the benefits that have been derived from our interaction  
2 with the international community.

3 The very first one relates to the AP-600 design,  
4 the passive design that was approved recently. The  
5 experimental programs that were under way by Westinghouse in  
6 Italy and with cooperation with us in this country were  
7 facilities of very small size. There were significant  
8 questions about scaling.

9 Japan had a full-scale facility that we took  
10 advantage of. If we had to do that research in this  
11 country, I'm convinced we would have needed probably about



12 \$30 million to \$60 million to just construct such a  
13 facility. The value of this facility is that it led to  
14 actual changes in design for AP-600.

15 One of the most significant changes was the  
16 capability to depressurize and be able to use long-term  
17 passive cooling system. It was very critical to understand  
18 the pressures and temperatures properly. The Rosa facility  
19 identified some of the problems. That was not the only  
20 design change that resulted. There were others as well.

21 Some of the other examples I like to use is our  
22 effort with the European Commission's network on evaluating  
23 steel components. This is basically a full-fledged  
24 pressurized thermal shock type of effort, not only  
25 introducing flaws on the surface as well as subsurface of

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1 the vessels, but creating those conditions to see how these  
2 vessels would behave. We are providing a very small  
3 fraction of the overall cost of this program.

4 Another example goes to the issue of fuels I was  
5 talking about. We have not done research over the last 20  
6 or so years. The French have continued, and in the mid-90s  
7 the French identified the potential impact of higher burn-up  
8 levels on fuel and the fuel response under certain accident  
9 conditions, and the potential for pretty serious  
10 consequences. That sensitized us. That was our first  
11 information that led us to make sure that we are in fact  
12 fully engaged in that effort, and with the support of the  
13 Commission we are in fact involved.

14 The whole issue of the need for making sure that  
15 we have the right codes. There is a lot of work going on,  
16 and the international community helps us make sure we stay  
17 up to date.

18 Commissioner Dicus knows about this much more than  
19 in fact I do, the JCCRER Project 2.3. It is important in  
20 leveraging resources. We are providing a very small  
21 fraction of the overall cost. This would help us get a  
22 better understanding of long-term exposure based on data  
23 from the workers exposure, both internal and external.

24 NEA and our multilateral and bilateral agreement  
25 also allow us to make sure the right technical people are

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1 getting together and debating issues. I cannot, quite  
2 honestly, understate the importance of that. I believe  
3 firmly that not just taking information and reviewing  
4 something, but being involved in these things is how one  
5 gets deep understanding of issues. I think that is very  
6 important. That is another value that we have from our  
7 interaction with the international community.

8 We have access to a number of international  
9 facilities. NEA is very helpful in helping us get access to  
10 those facilities. Examples certainly are Cabri in France  
11 and some of the facilities in Japan, particularly seismic  
12 facilities.

13 I do want to acknowledge that we have two  
14 assignees in the Office of Research. From Switzerland, Dr.  
15 Chen. He has already been very successful in helping us  
16 separate two specific codes, a severe accident code from our  
17 thermal hydraulic code, because we are trying to consolidate  
18 the thermal hydraulic code, and this separation in the  
19 modular form helps us. I want to acknowledge the work he  
20 has done and contribution he has made to separate those

21 codes and help us in our move towards more efficient use of  
22 these codes.

23 Dr. Sanchez has just come on board from Spain.  
24 Dr. Sanchez is going to be working on thermal hydraulic  
25 codes in the neutronics connection. We are looking forward

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1 to working with him as well.

2 While there are many areas, I wanted to focus on a  
3 selected area for this discussion. It is very clear that  
4 the industry has gone to fairly high burn-up levels now and  
5 they are going to go to higher because of obvious challenges  
6 trying to optimize fuel designs. We are going to have to  
7 rely on some cooperative effort to get the necessary  
8 technical information to confirm those changes that we  
9 believe the industry is going to make are going to be  
10 appropriate.

11 France and Japan are two countries we are going to  
12 rely more and more on to get the information we need. To  
13 respond to what Commissioner McGaffigan said earlier, France  
14 and Japan do have resources which are three to four times  
15 our resources in terms of research capability. I think we  
16 are just going to have to make sure we are closely connected  
17 with those organizations so we can get the necessary  
18 information. That relates to both the high burn-up fuel and  
19 the MOX fuel area.

20 Burn-up credit is basically an example of  
21 unnecessary burden reduction where we are trying to get data  
22 to reduce uncertainty so we can make sure appropriate credit  
23 is given for reactivity in terms of the burned fuel. Today  
24 the assumptions are conservative, and it does cost a fair  
25 amount of money. We are hoping to get the information to be

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1 more realistic in terms of reactivity aspects of burned  
2 fuel.

3 These are some examples I wanted to share with  
4 you. I assure you there are many other areas that we could  
5 talk about if we had the time.

6 Thank you very much.

7 CHAIRMAN JACKSON: Thank you.

8 Dr. Paperiello.

9 MR. PAPERIELLO: While the NMSS international  
10 activities constitute about 2 percent or less of our total  
11 annual budget, they are a significant responsibility.

12 NMSS international activities are a consequence of  
13 treaties and other international agreements, NRC export  
14 licensing responsibilities, and mutually beneficial  
15 technical exchanges.

16 The United States has entered into treaties and  
17 international agreements to place legal requirements for  
18 some nuclear materials activities in the United States.

19 These requirements include making NRC licensed  
20 peaceful use facilities eligible for the application of  
21 International Atomic Energy Agency safeguards, ensuring the  
22 tracking and use obligations are implemented on nuclear  
23 materials in the United States that originated or were  
24 processed in foreign countries, and implementing export  
25 controls on nuclear and nuclear-related materials, equipment

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1 and technology.

2 These treaties and international agreements  
3 include the Nuclear Non-proliferation Treaty, the U.S.-IAEA

4 Safeguards Agreements, the Nuclear Suppliers Group, and  
5 agreements for cooperation with other countries.

6 We conduct numerous activities to satisfy U.S.  
7 treaty and international agreement obligations. More  
8 specifically, we implement certain treaty and agreement  
9 obligations associated with bilateral cooperation and  
10 international safeguards agreements. These obligations  
11 include verifying and returning the safeguard seals attached  
12 by other safeguards inspectorates, tracking and reporting  
13 quantities of materials on which international obligations  
14 have been attached, facilitating the application of IAEA  
15 safeguards at NRC licensed facilities selected by the IAEA  
16 for the application of safeguards, and reporting exports and  
17 imports, transfers and material balance information to the  
18 IAEA.

19 The United States is a major exporter of nuclear  
20 fuel, equipment, technical expertise and other services.  
21 The NRC is responsible for ensuring that certain exports of  
22 nuclear materials, equipment and services satisfy the  
23 requirements of the Atomic Energy Act, which includes  
24 requirements relating to the application of international  
25 safeguards and the adequacy of physical protection.

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1 In support of import and export licensing of  
2 nuclear materials and equipment, we review export and  
3 re-transfer cases to assure that the country to which the  
4 United States materials are to be shipped has international  
5 safeguards agreements in place, that the IAEA has been able  
6 to implement IAEA safeguards at the facilities in question,  
7 and that an adequate physical protection program is in place  
8 to protect nuclear materials.

9 NRC conclusions with regard to the adequacy of  
10 physical protection are based in large part on the results  
11 of physical protection bilateral meetings held with  
12 receiving countries to discuss their physical protection  
13 program.

14 In addition, we support U.S. non-proliferation  
15 goals through participation in U.S. coordinated efforts for  
16 strengthening international safeguards. We provide  
17 technical expertise to strengthen the IAEA's capability to  
18 verify the accuracy and completeness of states'  
19 declarations. This support is provided through  
20 contributions to the U.S. inter-agency activities to  
21 strengthen safeguards, and in some cases directly to the  
22 IAEA and states themselves.

23 We participate in U.S. Government efforts to  
24 negotiate and implement the U.S.-Russia-IAEA Trilateral  
25 Verification Initiative and other non-proliferation

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1 programs, such as HEU down-blending, transparency, and  
2 plutonium disposition.

3 Our activities support IAEA and U.S. Government  
4 verification actions and policy initiatives associated with  
5 the irreversible commitment to remove high enriched uranium  
6 and plutonium from the U.S. and Russian nuclear weapons  
7 program.

8 We also participate in selected mutually  
9 beneficial bilateral and other international efforts to  
10 strengthen regulatory regimes and create a global nuclear  
11 safety culture.

12 For example, we provide support to Russia, Ukraine

13 and Kazakhstan in material protection, control and  
14 accounting using support funds from the Department of  
15 Defense and the Agency for International Development. We  
16 also support the strengthening of the safety regulatory  
17 capability in Ukraine and Russia using AID's funds. Both  
18 programs are currently on hold pending funding.

19 In the area of waste and decommissioning, to the  
20 extent that we see a benefit to our current issues, we  
21 participate in selected international workshops and other  
22 activities.

23 One important but very small area in terms of  
24 budget and FTE is participation in the standard setting  
25 activities of international bodies like the IAEA which can

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1 have a direct impact on regulation in this country.

2 NRC participation in the standard setting  
3 activities of international bodies provides an opportunity  
4 to share our expertise with our international counterparts,  
5 learn from their perspectives on issues, and help ensure  
6 that the products they issue are compatible with NRC  
7 technical and policy views.

8 For example, we participated on the Waste Safety  
9 Standards Advisory Committee formed by IAEA to develop a  
10 series of guides and standards on radioactive waste  
11 management and support the radioactive waste safety program.  
12 We participated in the International Convention on Nuclear  
13 Waste and Spent Fuel, for example.

14 We participated in the IAEA Transport Safety  
15 Standards Advisory Committee in developing transportation  
16 standards. We also support the Department of  
17 Transportation's international efforts in developing  
18 transportation standards. Our own Part 71 in significant  
19 part and of course DOT's equivalent regulations are based on  
20 the international standards.

21 We are involved in radiation protection activities  
22 of the International Commission on Radiation Protection,  
23 which is an advisory body on radiation safety standards, and  
24 on IAEA's Radiation Safety Standards Advisory Committee.

25 We also represent the United States on NEA's

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1 Committee on Radiation Protection and Public Health. In  
2 these areas we have developed the international basic safety  
3 standards for protection against ionizing radiation. One  
4 aspect of that particular guidance document provided support  
5 for our own efforts on Part 35 with respect to the dose to  
6 friends and relatives to support a patient, a standard for  
7 exposure for those individuals.

8 Our efforts on clearance and decommissioning are  
9 also being coordinated with these bodies.

10 In all, in fiscal 1999 there are 8 FTE and about  
11 \$25,000 for activities under the Non-proliferation Treaty  
12 and safeguards. In addition, there is about one FTE used  
13 for technical exchanges.

14 I didn't have in my formally prepared remarks the  
15 issue of foreign assignees. We have had foreign assignees  
16 in NMSS in a number of areas. We have also had both  
17 headquarters and regional people participate in training  
18 activities, particularly in developing countries, on the  
19 regulation of materials used in industry and medicine.

20 Thank you.

21 CHAIRMAN JACKSON: Let me ask you a question.  
22 Maybe it is actually to all of you. You probably addressed

23 it when I had to leave the room and Commissioner McGaffigan  
24 was asking a number of questions in this regard.

25 Do you feel having to have DOE fund NRC

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1 participation in certain assistance efforts has affected the  
2 staff attitude towards participation in those activities?  
3 Anybody care to answer?

4 MS. LEE: I would answer that question. I would  
5 say it has definitely affected the staff's attitude. It is  
6 a real struggle to have to deal with getting money from  
7 other agencies. These reimbursables are not easy things to  
8 get. The classic example is this MPCNA. We have negotiated  
9 with DOE over the course of the last 18 months and we have  
10 really gotten not very far. If I was the staff person  
11 working on this, my attitude would be a little diminished  
12 and very deflated. I'm not so sure that the effort that you  
13 put in is worthy of the outcome. I think it tends to  
14 deflate the human spirit in their approach to work.

15 CHAIRMAN JACKSON: You were going to say  
16 something, Carl?

17 MR. PAPERIELLO: I think you expressed it  
18 extremely well.

19 CHAIRMAN JACKSON: Roy.

20 MR. ZIMMERMAN: I would share Janice's thought.

21 CHAIRMAN JACKSON: Ashok.

22 MR. THADANI: I think we have not had as extensive  
23 an involvement in some of the activities that we have had  
24 with some other agencies. It's a difficult issue in  
25 general, I think.

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1 CHAIRMAN JACKSON: Commissioner Dicus.

2 COMMISSIONER DICUS: I don't have any further  
3 questions.

4 CHAIRMAN JACKSON: Commissioner Diaz.

5 COMMISSIONER DIAZ: No.

6 COMMISSIONER MERRIFIELD: One quick question. We  
7 have been striving to a great degree over the last year and  
8 a half to reform the way we do business around here in our  
9 regulations fully consistent with our mandate to protect  
10 health and safety, to make them more risk-informed, and also  
11 to reduce unnecessary burden. I direct this at Roy, Ashok  
12 and Carl.

13 Our efforts through the Chairman's tasking memo  
14 and all of the other regulatory activities that we have had  
15 under way, would you agree with the statement that those  
16 have benefited and perhaps significantly benefited from the  
17 interactions we have had with our foreign partners?

18 CHAIRMAN JACKSON: Try not to all speak at once.  
19 Ashok.

20 MR. THADANI: There is absolutely no doubt in my  
21 mind that we have benefited, and there are many examples we  
22 could get into.

23 CHAIRMAN JACKSON: Carl.

24 MR. PAPERIELLO: I think the other way. We have  
25 been able to budge them, particularly in the area of

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1 transportation, to consider risk-informing transportation  
2 requirements.

3 CHAIRMAN JACKSON: Roy.

4 MR. ZIMMERMAN: We have clearly benefited and we

5 use the process as a filter so that as we go about doing  
6 work or planning a trip, we challenge ourselves to make sure  
7 it is driving us toward our outcome goals or another  
8 obligation that we might have, and that we expect that the  
9 request for the trip or the participation explain it in  
10 terms of our four goals, and that the trip report that we  
11 get back explains the benefit in terms of those four goals.  
12 So we are trying to talk and walk along the lines of our  
13 PBBM project.

14 COMMISSIONER MERRIFIELD: But there is a tangible  
15 benefit we have realized from that process?

16 MR. ZIMMERMAN: Yes.

17 COMMISSIONER MCGAFFIGAN: Madam Chairman, just one  
18 last thing. I want to congratulate you on your 309  
19 meetings.

20 CHAIRMAN JACKSON: 311.

21 COMMISSIONER MCGAFFIGAN: I wish you well. To my  
22 more eloquent junior colleague this is a cue. Are you going  
23 to do that? I thought you said you were.

24 COMMISSIONER MERRIFIELD: As I have said before, I  
25 think the Chairman has done a terrific job here. I said

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1 that to our employees earlier this week. If you measure  
2 this progress of an agency and the individual who has headed  
3 it, where it started and where it ended in that individual's  
4 tenure, certainly if the agency is in a position to move  
5 forward in a positive manner, I think in both of those we  
6 have benefited and certainly are a measure of Chairman  
7 Jackson's tenure here.

8 I did have another comment I wanted to make about  
9 international programs. Do you want me to weigh in on that  
10 now?

11 CHAIRMAN JACKSON: Sure.

12 COMMISSIONER MERRIFIELD: I do think that this  
13 meeting today has been very helpful. This Commission has  
14 had a number of our stakeholders who have raised concerns  
15 about the level of resources that we have invested in  
16 international programs here in the agency. As a  
17 conservative and indeed a fiscal conservative, I look very  
18 closely at spending in those areas.

19 I do have to say, however, given my own  
20 interaction in some of the activities I've had in regards to  
21 the bilateral arrangements and discussions we had over the  
22 last year, and the reports that we have heard today, I think  
23 it shows a clear demonstration that the relatively small  
24 monies that we put forward in this agency for international  
25 programs do have a tangible benefit to our licensees and to

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1 the programs that we have here as an agency.

2 I think we also need to recognize that countries  
3 around the world look to the U.S. Nuclear Regulatory  
4 Commission for our regulations and follow them. I've had  
5 many individuals that quote me almost verbatim on many of  
6 the NUREGS we have and many of the regulations we have.

7 So I think these are dollars well spent. I would  
8 challenge those who are raising that as an issue. I think  
9 these programs are worthwhile and we should continue  
10 pursuing them.

11 CHAIRMAN JACKSON: Thank you.

12 Dr. Knapp.

13 MR. KNAPP: I have one final comment, if I may.  
14 In recognition of the fact that this your 312th Commission

15 meeting and your last, I would like on behalf of probably  
16 several hundred people who have sat on this side of the  
17 table at one time or another to express our appreciation for  
18 your attention, your interest, your support of the staff in  
19 these public meetings, and overall your effective leadership  
20 of the meetings. We appreciate it very much.

21 CHAIRMAN JACKSON: Thank you very much. I'm going  
22 to cry if we keep this up.

23 COMMISSIONER MERRIFIELD: Don't worry. We'll get  
24 you there next week.

25 [Laughter.]

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1 CHAIRMAN JACKSON: I see.

2 This brings the presentations and our discussions  
3 to a close. I would like to thank each member of the panel  
4 today for your participation and insights. I'm encouraged  
5 in fact by your enthusiasm, by your insight and your  
6 commitment to the future health of these programs.

7 Again, as all of us have said, while our  
8 international activities comprise only a small part of the  
9 overall NRC budget and program, I believe that each of you  
10 have demonstrated the breadth of our involvement and the  
11 broad spectrum of benefits we derive, as Commissioner  
12 Merrifield has said, from that involvement.

13 I would encourage and challenge you to continue to  
14 carry the torch of international nuclear safety, and I thank  
15 each of you, and that is a broad "each of you," for the  
16 service that you have provided to the Commission and the  
17 support and service you have provided to me.

18 Unless my colleagues have any further comments, we  
19 are adjourned.

20 [Whereupon at 11:29 a.m., the briefing was  
21 concluded.]

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