

[Briefing Charts]

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION
OFFICE OF THE SECRETARY

NRC STAFF BRIEFING ON NRC INTERNATIONAL ACTIVITIES

PUBLIC MEETING

Nuclear Regulatory Commission
One White Flint North
Commissioners Hearing Room
11555 Rockville Pike
Rockville, Maryland

Tuesday, August 15, 2000

The Commission met in open session, pursuant to notice, at 9:30 a.m., the Honorable RICHARD A. MESERVE, Chairman of the Commission, presiding.

COMMISSIONERS PRESENT:

RICHARD A. MESERVE, CHAIRMAN
NILS J. DIAZ, Member of the Commission
EDWARD McGAFFIGAN, JR., Member of the Commission
JEFFREY S. MERRIFIELD, Member of the Commission

STAFF AND PRESENTERS:

WILLIAM TRAVERS, Executive Director for Operations
ANNETTE L. VIETTI-COOK, Secretary
SAMUEL COLLINS, Director, NRR
JANICE DUNN LEE, Director, OIP
ASHOK THADANI, Director, RES
MARTIN VIRGILIO, Deputy Director, NMSS
KAREN D. CYR, General Counsel

P R O C E E D I N G S
[9:27 a.m.]

CHAIRMAN MESERVE: Good morning. This briefing is an annual report to the Commission on the Agency's international programs.

I'd like to note at the outset that this is first of our Commission meetings that in a public way is being available for media streaming. And as those at the table know, this is our vehicle or a vehicle that we are using to try to enhance the capacity to the public to understand and participate in some way in our activities.

This is an appropriate occasion for media streaming, in that this is a very important activity of the Agency that we are discussing today. Our program of international activities is a very important corollary to our domestic regulatory program.

It's a program that serves many purposes. First, our international programs provide health and safety information and assistance to other countries, thereby enhancing global nuclear safety and security.

I think, as all of those in the room understand, a nuclear incident anywhere in the world has domestic repercussions, even if there is not a physical or chemical result.

Second, international programs enable us to leverage our research dollars and programs through joint cooperative activities.

Third, they enable us to keep abreast of regulatory activities in other countries, which may enable us to improve our own activities.

Fourth, they provide us with access to a broader base of data on U.S.-origin operating reactors, and the broader the database we have, the better our capacity to be able to analyze the possible vulnerabilities of systems that are operating in the United States.

Finally, and perhaps equally as important to all the others, is that international programs assist the U.S. Government in implementing our nuclear safety and nonproliferation policies around the globe.

So, the international programs serve many and important purposes, and the broad scope of these activities demonstrates why this briefing will be conducted not only by the heads of the Office of International Programs, but also Nuclear Reactor Regulation, Nuclear Materials Safety and Safeguards, and Research and our Executive Director of Operations, Dr. Travers, is also here.

Let me remind everyone before we get started that this is an unclassified briefing. Classified or sensitive issues are ones that can be raised at a later time under appropriate circumstances.

Before we get started, let me turn to my colleagues to see if they have any opening comments.

COMMISSIONER MERRIFIELD: Mr. Chairman, I would like to take this opportunity to second your comments. I believe this is a very positive briefing for us to have today.

The involvement that we have internationally serves both to enhance our own programs, as well as to provide benefits to those countries that we have relationships with, both on a bilateral basis, as well as others.

So I think it's a good program today, and I look forward to the main briefings that we will have, and I think it's very positive.

Thank you very much, Mr. Chairman.

CHAIRMAN MESERVE: Thank you. Why don't we proceed?

MS. DUNN-LEE: Chairman Meserve, Members of the Commission, I'm very pleased to be here today to represent the NRC's Office of International Programs and discuss the NRC's international activities.

Today marks the second annual public briefing on NRC's international programs. The last one took place on June 18th, 1999.

I'm pleased to have at the table with me, the EDO and representatives of the major NRC Program Offices which support and conduct the Agency's international activities.

With me are Dr. William Travers, the Executive Director for Operations, Mr. Samuel Collins, Director of the Office of Nuclear Reactor Regulation, Mr. Ashok Thadani, Director of Office of Nuclear Regulatory Research, and Mr. Martin Virgilio, Deputy Director, Office of Nuclear Materials Safety and Safeguards.

Let me take a moment to thank them for being here today, because it is they who truly represent the NRC in the conduct of the majority of our international programs. This is a fact that is generally overlooked.

Their central role in the international area was recognized in the NRC's strategic plan. Our single goal in the international arena is to support U.S.

interests in the safe and secure use of nuclear materials and nuclear nonproliferation, both at home and abroad.

Today we will discuss these activities that are mandated by statutory requirements, U.S. obligation and commitments, international treaties and agreements, and by Executive Orders and Presidential Decision Directors.

We will also discuss activities that are supported in the interest of international health, safety, and security, and are conducted under the Commission's discretionary authority.

I will focus on the major activities in the Office of International Programs, noting some successes and future challenges. My colleagues will then comment on activities of special importance to them.

This way, you can get a snapshot of the breadth and scope of our international activities, and the highlights of this past year.

These activities arise from U.S. and NRC interests and are carried out in a variety of ways. For some, we receive outside funding; for others, not.

Some are of short duration; others -- in some we are proactive and play a prominent role; in others, our role is often quite modest.

Usually we do not expend significant resources in these matters, but in any case, we look for ways to achieve our objectives at low cost.

Prioritization of our activities is an ongoing challenge that we are looking at anew. We will be discussing priorities with the Commission in the coming months.

If there are no immediate questions, I will proceed.

CHAIRMAN MESERVE: Please do.

MS. DUNN-LEE: NRC international activities represent a low-cost, high-impact program. For all the attention it gets, the international area represents one percent of the NRC's FY2000 budget.

This one percent is spread throughout our major Program Offices and are included in the International Reactor, Materials, and Waste arenas in the NRC's strategic plan. The \$4.7 million includes salaries and benefits for 39 FTE.

We cover a wide range of important activities under the one-percent budget. I have divided them into four major categories for you:

The technical information exchange and cooperative safety research activities directly support and enhance the domestic program.

The safety and nonproliferation support activities are more externally focused for the greater good.

I should point out that Research has its own budget. My intent here is to reflect the full scope of NRC's international activities.

Let me start with our statutorily-mandated activity, export licensing: I'd like to take a moment to highlight some major cases which the Commission reviewed this past year.

These include the export of HEU to Canada for medical isotopes. This was subject to an intervention by the Nuclear Control Institute and the topic of two Commission meetings.

We also had a case for a large amount of source material to Russia which was approved under an NRC license for general distribution. This case was unique because it did not come under an agreement for cooperation.

We also saw our first export of material to Kazakhstan under an

agreement for cooperation. We also reviewed several Part 810 technology transfers to China. Final action is withheld, pending receipt of additional assurances.

And we also reviewed a peaceful use agreement with Turkey, however, most of you know that the nuclear power plant project has been postponed indefinitely there.

With respect to our other nonproliferation activities, NRC provided assistance to the State Department in support of the NPT Review Conference held this Spring in New York.

The NPT Review Conference was successful in reaching agreement on a final document which emphasized the importance of continuing multilateral programs under the International Atomic Energy Agency.

With regard to core conversion, the technical, financial, and political aspects of the core conversion project have proven to be far more challenging than previously thought.

Efforts are now focused on developing new, non-nuclear sources of heat and electricity for the Thompson regions.

The projected cost of core conversion has now become comparable to that of non-nuclear alternatives.

With respect to strengthening IAEA's safeguards, NPT and assistance the FSU and Physical Protection Convention, I will just note here that NMSS has the lead for these at NRC, and they will be covered more specifically in the NMSS presentation.

Our former Soviet Union Nuclear Safety Assistance Program is a major activity where we work with regulatory entities in Russia, Ukraine, Kazakhstan, Armenia, and six countries in Central and Eastern Europe.

The goal of our assistance is to improve the safety of Soviet-designed reactors. Some of what we believe to be the more notable achievements of this efforts include the recent Ukrainian decision to permanently close the Chernobyl reactor by the end of this year.

There was also an April 1999 Kazakh government decision to permanently close the BN-350 fast breeder reactor near Aktal.

We've also seen the graduation of the Czech, Hungarian, and Slovak regulators from assistance activities.

I'm also very pleased to note that at the last Nuclear Safety Assistance Coordination meeting that was held in March of this year in Brussels, the U.S. delegation successfully advocated that the group be discontinued over the next year in favor of other existing international groups that also coordinate nuclear safety assistance activities.

In my role as Vice Chair of the West, I am involved in laying the groundwork for what I hope will be a successful exit strategy.

There are still significant challenges facing this effort, and this includes closure conditions which have been imposed by grant funds provided by the Nuclear Safety Account of the European Bank for Reconstruction and Development, to make safety improvements to these high-risk reactors.

While such grants have been provided, to date these closure commitments have not been successful. However, a significant change is occurring. Many of the Central and Eastern European countries now aspire to join the European Union, including countries in which high-risk Soviet-designed reactors are

being operated.

The EU has made gaining closure of these reactors a condition for EU accession; thus, these countries must now weigh perceived benefits from continued operation of these high-risk reactors, which is worth potentially tens of millions of dollars, against the benefits of EU membership, which is potentially tens of billions of dollars.

In the Ukraine, there are large numbers of significant activities underway or planned. These include Chernobyl closure, the Shelter Implementation Plan, possible completion of two reactors, and the development of safety analysis reports for existing reactors.

This is a huge burden and a challenge to place on a regulatory body of approximately 75 people.

NRC has made significant progress addressing concerns regarding the use of fee-recovered funds for FSU assistance activities. NRC's FTE costs associated with this program are now derived from NRC's general fund appropriation.

Meanwhile, funding support from USAID is decreasing and it's affecting our program. The bulk of the approximately \$45 million received since 1991 was received prior to 1996.

As you know, the GAO recently completed an audit of our efforts to improve the safety of Soviet-designed reactors. A concern was highlighted regarding the division of responsibilities here at NRC for the implementation of our program.

The GAO recommended that this division of responsibilities be eliminated and that activities be consolidated. The Staff agreed with this recommendation, and in response, we have consolidated responsibility in my office, the Office of International Programs.

The next two slides reflect possible exchange activities for the future. They are highlighted because they occurred during this past year.

South Africa is interested in developing a pebble-bed modular reactor. A U.S. team, which included NRC, visited South Africa to review the project's status in February.

The team concluded that the project could be successful, but formidable developmental and licensing issues lie ahead.

The Commission sent a letter to South Africa, indicating that both organizations might benefit in developing the licensing approach for an advanced reactor such as PBMR. We have not received a reply to that letter yet.

Separately, the South African National Nuclear Regulator has expressed interest in having NRC participate with them in the development of the licensing approach.

Two countries are moving towards nuclear power programs with likely requests for nuclear safety assistance. I would just briefly mention that the first is Vietnam. We have begun a nuclear safety dialogue with them. The IAEA hosted a senior scientific visit to the U.S. in May of this year. The group visited Washington, D.C., a number of federal agencies, and they also took a tour of facilities around the country, including fuel facilities, research reactors and power facilities.

On North Korea, there is a request pending before the Commission for nuclear safety assistance. This assistance is related to the two 1,000 megawatt electric lightwater reactors being supplied under the 1994 U.S. DPRK agreed framework.

The current schedule calls for operation of Unit 1 in 2008 and Unit in 2009. The Commission will soon receive a paper analyzing the request from the State Department and KETO for expanding nuclear safety assistance with a recommended course of action.

The NRC hosted nine foreign assignees this year. I am not going to dwell on the foreign assignee experience because it will be discussed by some of my colleagues. But let me add that the NRC foreign assignee program promotes direct and effective interaction with the international nuclear community. It has been an excellent mechanism for developing top quality, long-lasting relationships with key personnel in foreign regulatory agencies.

At last year's briefing, the Commission expressed an interest in the number of foreign visits to the NRC. A procedure for collecting visit information was initiated in October of 1999 and so far in FY 2000, we have received approximately 100 foreign visits. The total is grouped by number of visits and not by number of visitors.

The next two slides with address our important participation in multilateral organizations. NRC has a lead role on a wide range of activities in connection with the International Atomic Energy Agency. We have a nuclear safety attache who is stationed at the U.S. mission in Vienna and plays a key role in coordinating our nuclear safety activities.

The NRC supports U.S. adherence to several conventions through the IAEA. These include the Convention on Nuclear Safety, where NRC has the lead in writing the national report; the Waste Convention, which was recently submitted to the U.S. Senate for ratification; and the Supplemental Liability Convention, which is in the final stages of preparation for ratification.

A number of NRC staff, including the EDO, participate, often in lead roles, in a number of advisory and support committees to the IAEA. NRC also participates in several safety services provided by the IAEA Department of Nuclear Safety. These include the International Regulatory Review Team Missions, they are called IRRTs, the Operational Safety Review Team Mission, the OSRTs, and the Integrated Safety Assessments of Research Reactors. As most of you know, in February of this year, the North Anna Nuclear Power Plant hosted the fourth OSRT at a U.S. reactor.

In addition to the work with the IAEA, the NRC plays a key role in the conduct of many of our activities in the OECD NEA. The NEA is an organization of committees, which I will not mention by name, but only note that NRC representatives occupy leadership positions in those with most relevance to the NRC. The program office directors will be highlighting some of their committee work this year.

I would note that the activity within the NEA promotes our international cooperation. It encourages the development of international consensus, and it allows an opportunity to weigh the benefits of different regulatory approaches. The challenge we face as a consequence of our participation in both the IAEA and the NEA is to avoid duplication of effort.

The success of NRC's Y2K early warning system has generated worldwide

interest in a permanent Internet-based information-sharing system. I just want to take a moment to recognize a member of my staff, Clarence Breskovic, who is our resident webmeister, who actually was the founder of the YEW system, and I am very proud of the fact that it has gotten the attention of the international community and that they are very interested in advancing it.

A proposal was endorsed recently to place the INES events on the Internet instead of using a facsimile. NRC presented a proposal for an integrated information-sharing system at a recent June meeting with representatives of the IAEA and the NEA. The new system is going to be called the Nuclear Information Exchange System, which is NIXS, and with DOE funding, NRC would like to provide the YEWS code and technical support to the international community to facilitate the development of this prototype system.

The next slide represents foreign travel required by NRC staff in the conduct of our international activities. The number of foreign trips is divided into separate columns that represent trips paid for by the NRC and trips paid for by others such as USAID and the IAEA. International travel represents approximately 7 percent of the NRC's FY 2000 travel expenditures.

My last slide is titled "Improvement Plan" and highlights some of the challenges and changes that we currently face. This past year has been a time of tremendous change in the Office of International Programs, with major shifts in personnel and management.

In my small office of 25 staff members, I have selected and hired more than 10 individuals to fill vacant positions over the course of the last year. This office has placed considerable emphasis in improving our performance both in terms of responsiveness to the Commission and coordination of the agency's international activities among the program offices.

We have reorganized in the Office of International Programs and created two teams and augmented staff in key areas in order to accelerate the licensing, export licensing process, to improve the management of our nuclear safety assistance program, to tighten budget controls and to improve resource management, and we are actively reaching out to internal and external groups to create new and improved existing information exchange channels. We are also redefining -- or redesigning the internal OIP web site.

One of the strategies that was recognized in the NRC strategic plan in the international arena is to enhance the integration and coordination of NRC's international activities. For this purpose, we have established an International Council whose primary members are sitting at this table. I think we all agree that our expectations are high for ensuring that the NRC's international activities result in a consistent program focused on its strategic goals.

I will turn to my colleagues now for their presentations, after which I would like to offer some closing remarks. If possible, we ask that most of the questions be held until we have completed the other presentations. If that is okay, I would ask Dr. Travers to speak.

DR. TRAVERS: Thank you. As Janice's presentation indicated, technical staff, particularly program offices, play a fundamental role in furthering our international strategic goal related to nuclear nonproliferation and the safe and secure use of nuclear materials. And as you know, over the years the NRC

and its personnel have really maintained a significant stature for technical and regulatory excellence around the world. And I think this has been a principle reason for our success, really, in influencing other countries' incorporation of effective policies and practices to improve safety and to reduce the potential for proliferation.

Our broad programs related to safety, cooperation, information exchange and cooperative research have also, of course, benefitted our domestic programs. And as you will hear in a moment, each of the program offices plan to give you a little bit more information on that.

Before I turn to Marty Virgilio, I would like to endorse the comments that Janice made related to improving our integration overall of international activities. Certainly, in an era of ever-diminishing resources, we have to provide a constant focus for the effective use of limited resources in these areas, and we intend to do that.

I think overall PBPM and the International Council that Janice has instituted is playing a role in establishing and improving the effectiveness of the way we focus our resources on these important activities.

And with that introduction, let me turn it to Marty Virgilio.

MR. VIRGILIO: Thank you, Dr. Travers.

My presentation this morning is going to be broken into basically three parts. I am going to speak about the reasons why NMSS is involved in the international activities. I am then going to speak about how we are involved in this activities. And then I am going to touch on a few examples of accomplishments that we have achieved in the past year. Next slide, please.

There are a number of purposes associated with NMSS's international activities and most are outlined in NRC's strategic plan. In the interest of safety, our involvement allows NRC to gain access to non-U.S. safety information. This information could alert us to potential problems applicable to NRC programs and licensees, or expose us to new concepts that would lead us to improvements in our safety programs.

Our involvement allows NRC to assist other countries in developing their regulatory programs, and our involvement allows the NRC the opportunity to influence international regulatory standards, policies and practices through our technical expertise and bringing to bear the operational experience that we have had in the U.S. Next slide, please.

In the interest of international safeguards and nonproliferation, our involvement is instrumental in enabling the U.S. to implement treaties and agreements and international obligations. Our involvement supports strengthening domestic safeguards in other countries. And finally, we work to support and strengthen the nonproliferation regime. Next slide, please.

I will now speak to how NRC is involved in the international program activities. NMSS activities align under two of the strategic plans in international arena activities. The first strategy that we align under is we will continue to take a proactive role in strengthening safety, safeguards and nonproliferation worldwide.

I will hit these in reverse order. With respect to strengthening nonproliferation, the first line, NMSS participates in IAEA missions as requested by member states to evaluate their physical protection programs. NMSS has been an active participant in activities to enhance IAEA's convention

on physical protection and associated guidance documents. And at the request of the Commission, NMSS is now assessing the approach other countries are taking today to protect against acts of theft and sabotage to identify opportunities for improving our own programs here in the United States. Next slide, please.

With respect to safeguards, NMSS provides support to the IS -- IAEA and their efforts to strength international safeguards. NMSS provides the U.S. representative to the Director General's Standing Advisory Group on Safeguards Implementation. NMSS, through DOE, is currently participating in a program to support Russia, the Ukraine and Kazakhstan in implementing their material protection control and accounting programs. And NMSS is participating in a U.S. government agency-wide working group negotiating an agreement with IAE in Russia to provide and place U.S. and Russia fissile material under IAEA verification programs.

The next slide, with respect to safety, NMSS provides technical support to the Department of Transportation and IAEA in developing transportation standards and reviewing package designs, and responding to technical issues that arise. NMSS is an active participant in the IAEA Waste Safety Standards Advisory Committee. And NMSS is also an active participant in the IAEA's Radiation Standards Advisory Committee. Next slide, please.

NMSS participates in fuel cycle and waste information exchanges, for example, those promoted by the Nuclear Energy Agency on deep geological disposal of high level waste. NMSS participates in activities associated radiation source and radioactive material security that are derived from the IAEA's action plan on this topic. NMSS also participates in a limited extent on the Lisbon Program safety support initiatives, providing safety assistance to Russia and the Ukraine. The next slide, please.

Our second strategy under the strategic plan that our activities are aligned under is that we will focus appropriate regulatory activities and resources on significant international obligations and the U.S. and NRC international priorities.

NMSS conducts import-export licensing reviews, confirming that appropriate IAEA safeguards and programs are in place for those receiving material generated in the United States. The United States has also entered into agreements for peaceful nuclear cooperation with more than 20 countries. NMSS conducts various activities under these agreements, including ensuring that foreign materials are being handled in accordance with agreements and conditions that we have obligated ourselves to for receipt of that material.

The U.S. IAEA safeguards agreement obligates the U.S. to make certain U.S. facilities applicable for IAEA safeguards. Among other things, NMSS reviews the IAEA proposal for the application of safeguards at these selected facilities and helps coordinate the activities associated with their implementation.

On the next slide, the U.S. maintains a national system for accounting for nuclear materials, it is called the Nuclear Materials Management and Safeguards System. This system is jointly funded by the NRC and DOE, and NMSS is the NRC project manager for this system.

Finally, NMSS is an active participant in the U.S activities associated

with the international treaty on nuclear waste safety that Janice mentioned earlier.

The last of the three areas I wanted to talk about is our accomplishments. NMSS is involved in many long-term projects. However, there are milestones and deliverable products that do show we are making progress. I have highlighted three examples here on this slide. In May of 2000 we saw the completion of Project Sapphire, which was a downblending of HEU, high enriched uranium, from Kazakhstan at a U.S. facility. NMSS helped facilitate the IAEA safeguards that were applied to that project.

Last summer IAEA published a new revision, Revision 4, to its IAEA Info Circ 225. This is IAEA's physical protection guidance document on sabotage, and NMSS served a leadership role in the development of this document.

And finally, last month NMSS entered into an agreement, it is an interagency agreement with the Department of Energy for reviewing NRC's efforts associated with providing material, protection control and accountability support to Russia, the Ukraine and Kazakhstan.

This completes my prepared remarks. I will now turn this program over to Ashok Thadani, who will speak about the Office of Research's international activities.

MR. THADANI: Thank you, Marty.

I will briefly go over the efforts that were involved in terms of the scope of our activities, the value of our international programs, and then also briefly touch upon what I see as some of the future challenges as we go forward.

Now, about 80 percent of the reactors worldwide are, in fact, based on U.S. lightwater reactor technology, so there is a considerable amount of experience, not just in this country, but in other countries as well. International communities are also expending significant resources on safety research. Thus, having access to the foreign experience and research facilities is of considerable value to us. We receive important information and knowledge bearing on safety. Sometimes safety issues requiring following actions are also identified.

This access allows us the option of not having to generate all the necessary information ourselves. We have, in fact, increased cooperation to more effectively and efficiently utilize our resources. I will come back and give you some examples of that.

Finally, cooperative efforts lead to a better shared understanding of safety matters. Of course, these agreements also offer opportunities for networking for technical staff and experts, and I believe that is also a very important part of our cooperation. Next chart, please.

The Office of Nuclear Regulatory Research manages and coordinates 78 bilateral and multilateral agreements covering 25 countries. I might note that we have increased our cooperation. Last year we had 64 such agreements. We are currently working on about 13 additional agreements which we hope to complete in the near-term.

International participants contribute approximately \$1.7 million to our programs related to codes, computer code assessment, particularly two major programs, code assessment and maintenance program on thermal-hydraulic analyses, and the severe accident research program.

There is a downward trend, I might note. Last year the contribution was \$2 million and it has gone down to \$1.7 million this year. Of course, we have a large number of cooperative agreements. As I noted, we contribute approximately \$4 million to this cooperation with the international community. And for that \$4 million, I think we benefit greatly with the total cost of research amounting to about \$55 million.

As Janice noted, we are also very active in our interactions with both NEA and IAEA. We participate particularly at the NEA, research is more active. We participate both at the committee level, as well as at working level. And as Janice noted, that allows us an opportunity to influence what happens in terms of the focus of research.

May I have the next chart, please?

This chart shows really four examples of areas of cooperation. The scope of our cooperation is broad, and you can see, it really does cover essentially all areas of interest to us. This includes conducting experiments, generating data that we believe is appropriate, using that information in developing models and then that is having the right analytical tools that reflect good understanding, and then exercising these models, both ourselves as well as other countries, and we do learn a great deal from exercising of these models. And, in fact, there have been cases where some limitations have been identified, and the community works together to make enhancements to these computer codes. In fact, the next chart shows some examples of values program.

As I said, so the result of our cooperation is that not only do we learn from broader experience as to what important safety issues need attention, but we are also able to develop a sound technical basis for issues of concern to us at a lower cost to us. For example, fuel performance issues such as impact of high burnup fuels on safety, we are able to develop information so that we can make realistic decisions.

Similarly, in the case of fuel, we also have a cooperative agreement where we get data from other countries such that we can give appropriate credit for burnup in terms of cask designs.

As I mentioned, cooperative agreements in terms of code assessment and maintenance and severe accident program allow us to understand from use of these codes by various countries as to important issues that we need to be worrying about.

We do get considerable experimental data to have better understanding of ultimate capability of various structures, systems and components. I might note that is important as we move forward applying risk-informed thinking to our regulations, and that the cooperative program that we have had in structural, seismic, environmental and radiation effects on structures, systems and components has been very valuable to us also in our license renewal activities. Next chart, please.

Now, I did want to say a few words about the outlook and then the challenges. I think everyone here knows that worldwide there has been a decline in research, research budgets, except for a few selected countries where the budget has not declined. What is happening is -- and NEA has taken a leadership role in looking around, both in Europe, Japan and U.S., looking at various facilities, their availability or potential loss of those facilities

over the next few years. They will be issuing that report at the end of this calendar year, and that report is expected to identify some of the facilities that may well be shut down because of declining budgets.

They have also done a study recently, and I believe you have seen that, it is a big report, but a summary of that is in this Nuclear Education and Training: Is There Cause for Concern for Future? The key element in this is concern about the loss of infrastructure over the next several years unless focused attention is given to this matter. What that means is that our international cooperation becomes even more important than it has been. With limited resources, we have to pull those resources to attempt to deal with some of the issues that we anticipate. Next chart, please.

We do recognize that the industry is maturing, but there are significant continuing challenges and future challenges. I am not going to go through the list that is on the chart and the next chart except to note that we do have considerable issues in front of us which will require this infrastructure to be able to deal with them over time. Next chart, please.

I want to make a couple of points on this chart. I think the increases in risk assessment, it's been typically only on the quantification side that we need to develop methods to quantify probabilistic aspects.

But really, it's much more than that. One needs to have very sound understanding. And when one wants to make realistic analyses, it, in fact, requires additional information and not less information.

And that focuses on various analytical tools, thermal hydraulic codes, severe accident codes, fracture mechanics and so on. And our international cooperation is very essential in trying to develop some of the information.

Clearly, deregulation will lead to a continuing desire by the industry to optimize, and that we do need to be confident that the changes that we're making are well grounded in terms of a good understanding of safety, that we have adequate data in front of us as we move forward.

Now, many of these challenges are also being faced by other countries, so this sharing of information through cooperative programs is not just a good thing to do, but I think it's an essential thing to do. I don't believe we have much of an option.

Thank you. Those are my comments. Next, Sam will discuss the NRR international activities. Sam?

MR. COLLINS: Thank you, Ashok. Good morning, Commissioners.

My goal in the next slides is to provide a brief overview of the description of the NRR's programs in the international area, including the benefits, the investments, and the outcomes.

I intend to do that in the following three slides, with some elaboration with notes. As Ashok mentioned, the world nuclear power industry is based predominantly on western technology.

Ashok's team in Research and the NRR team benefit greatly from not only the experience, technically, but also the operational experience.

We also acknowledge that there is a number of developing regulatory programs, as well as developing nuclear programs in countries, and most of the technology that is cutting edge to date for new construction is being built overseas.

We're dealing predominantly in the U.S. market with retrofitting of

advanced technology into the existing power plants.

NRR could not accomplish its mission without the support of the Office of International Programs. We rely heavily on Research to provide input to our technical programs.

Some of that, as Ashok mentioned, is based on international experience. The Office of NRR has a senior level technical position, Dr. Cullingford, dedicated to international programs, and we also rely on the participation of the Regions, Regional Administrators, and the technical staffs, not only to host foreign individuals, but also to provide for technical expertise throughout our missions in the world.

In Slide 36, I would acknowledge that our activities cover three broad areas: The bilateral technical exchange; our participation in the multilateral technical working groups and committees; and also specifically our NRC and foreign assignee programs.

Slide 37 covers briefly the foreign assignees. This is a list of countries which have sponsored foreign assignees to the U.S., with the broad areas of expertise.

By way of background, I would acknowledge that over the past three years, 19987 to present, we have had ten foreign assignees representing seven countries. By our estimate, the investment of NRC FTE in this area is approximately .5 or one half of an FTE.

Our actual budget model with our operating plan assumes and investment of .2 FTE per year for the coordination of foreign assignees.

As a result of those ten individuals, we have received approximately nine to ten years, depending on travel time, of expertise.

The reason I mention that is because the individuals we receive are very carefully screened. They are typically highly professional, in most cases, highly placed individuals within the international communities.

They have very good speaking skills in our language. If not, that training is provided prior to or during the assignment.

Each individual is given a work plan with an expected output and a contribution to the Agency, as well as a very carefully screened security program in concert with our Office of Administration and Tim Martin.

Mike Cullingford supervises each one of these individuals, and they are provided a mentor and coach during their stay.

We currently have two countries represented within our foreign assignee program, China and Spain. Japan had an additional assignee that ended in June. France had an assignee that ended in May.

France will start a slot in October, and we expect representatives from Turkey and Egypt to also start this year.

The NRC contributes with our resources, specifically in 1999, Bill Jones, who is a previous Resident Inspector, and is now one of our reactor analysts. He was recently promoted in Supervisor in Region Iv.

Bill Jones partook as an observer with the French Nuclear Safety Authority, DSIN in 1999 during power reactor inspections.

More recently, Mike Tschiltz in 2000 participated as an observer, again with DSIN, with inspections of the power reactor program, fuel production, reprocessing MOX fuel and facility dismantlement.

Early in 2001, we are now working on the third NRC foreign assignee. That will be in the area of MOX and decommissioning, and we're coordinating those with our team members in Research and also in NMSS.

Slide 38 indicates bilateral support. We really have areas here where we supplement those efforts from our Office of Research, in that we look at the application of the regulatory programs and the application of the technology benefit that Research provides to us.

Examples of that would be the digital INC, the actual application of our Chapter 7 development of the Standard Review Plan as a result of that Standard Review Plan being modeled by other countries. It's being applied. We can provide for lessons learned in the application and retrofit that into the U.S. regulatory guidance.

Again, high-burnup fuel, as Ashok mentioned; also looking at material issues such as steam generator, reactor vessel internals, the French have the lead in those technical areas, specifically.

In the bilateral support, as Ashok mentioned, we gain predominantly as a result of worldwide industry experience. Developing countries such as Japan and Taiwan, are modeling the advanced reactors such as the advanced boiling water reactor, and as was mentioned by Janice, there are a number of countries who are entertaining new construction of reactors as well, with, in some of those cases, technology not yet utilized.

In the multilateral area, we are the members of numerous working groups. I am a Bureau Member of CNRA of NEA. That deals predominantly with regulation.

As an Agency, we also contribute specific staff to IAEA. David Lange, for example, is going back to IAEA for a rotation. We have Harold Eichenholz from Region I, past Senior Resident Inspector who is a member of the IAEA International Regulatory Review Team.

Those individuals are an investment by the NRC. We gain when they come back and bring those insights to the Agency. There are also points of contacts on an ongoing basis for us to glean information as they perform their roles overseas.

I know that travel is an area that's been discussed by Janice, and I'd like to acknowledge that in the NRR operating plan, we track our resources in the international arena in multiple ways.

We have four FTE that are dedicated on an annual basis to our international programs. We track the expenditures of those on a quarterly basis. Our most recent third quarter indicates that we'll expend, on a projection, approximately 3.3 FTE this year in the international arena.

That's broken down in a budget sense; the four FTE budget assumption with two FTE for the Russia/Ukraine, that's an OIP initiative; regulatory exchange overseas, are 1.6; regulatory exchanges at NRC is .2; and foreign assignees is .2.

Our travel budget for international programs is approximately \$138,000; that's against a backdrop of approximately \$1.8 million in the general travel budget for Travel Office of NRR.

And as of 8/7, we have expended a little less than half of that, \$64,000, so we're below projection in our travel for foreign support.

I'd just like to close by acknowledging the number of trips that we have as budgeted in two ways: We have core and non-core. For the purposes of

today, we're including the Canadian trips into the core. Typically the Canadian trips would be called non-core, but we're budgeting it in a different way.

We are at 74 trips, as indicated in the graph, and it looks like our actual numbers will be less than that. We budget those on an annual basis with a projection. We brief the EDO on those trips and their mission, and they are carefully screened. Each one results in a trip report, as provided to the Office of International Programs and the other stakeholders.

We look for value, we judge that value against our four outcome measures. And to my way of thinking and to the Office, our support for international programs not only in the community for OIP mission, but in deriving the benefits for the Office, specifically, is a net gain for the Office of NRR.

At this point, I'd like to turn the agenda back over to Janice. Thank you.

MS. DUNN-LEE: Thank you. I'd like to take care of some closing remarks here to discuss some of the challenges ahead.

We are, without a doubt, in a period of change and transition, both externally and internally. We are witnessing the evolution and the role of nuclear power in advanced countries as well as in the developing world.

We are impacted by restructuring of electricity markets, nuclear accidents, and incidents occurring worldwide; license renewal activities, and nuclear power phaseout in some countries.

The question of U.S. leadership in the market and in standard-setting continues to remain at the forefront.

We are also concerned about safety and security of nuclear materials at home and abroad, the declining dollars, as Ashok talked about, and the desire to effectively and efficiently incorporate our best practices, both domestically and internationally.

NRC has been a leader and retains a position of influence in the international nuclear community. We regulate the safe operation of 25 percent of the world's operating reactors.

In addition, the U.S. continues to be the world's largest exporter of nuclear fuel, technology, and equipment.

Today, many reactors operating outside the U.S. are of U.S. design, and new technologies developed in other countries are being used in our domestic program.

This is all the more reason for our continued participation in exchange activities and cooperation in a wide but carefully selected range of safety and safeguards assistance.

Let me close by saying that it is in our direct interest to maintain a solid program for NRC's international activities. Let us not lose sight that our efforts to strengthen regulatory practices worldwide is a shared benefit to global nuclear safety and to the U.S. domestic industry.

I thank you for this opportunity, and we would be pleased to answer any questions at this time.

CHAIRMAN MESERVE: I would like to thank the entirety of the panel. This is a very impressive array of activities that you have described for us

today.

I know we all have many questions. Let me turn first to Commissioner Diaz.

COMMISSIONER DIAZ: Mr. Chairman, first I want to thank Ms. Dunn-Lee for not only presenting the OIP look but to bring at the same an integrated look at all of the activities. I thought that was very good and it gives us a very good overall quick look at what is going in all of the offices.

I would like to second what the Chairman said in his remarks and Mr. Travers, that, of course, we are a domestic agency and we have a small part of our statutory activities dedicated to exports and how that influences nonproliferation, and, therefore, we continue to have a focus on how our international activities benefit our domestic activities. And I think that has been clearly made and I totally agree with that.

I would like to turn to your Slide Number 2, Ms. Dunn-Lee, on international arena share of NRC Fiscal Year 2000 budget, because Mr. Travers made a comment, and you have made a comment to me that you are trying to see how you integrate your activities within the agency to become more efficient, try to avoid duplications and so forth. And this slide says that the -- I may have been not understanding that the total international arena share of the NRC's budget is 4.7, or about 1 percent. Do you mean that all of the activities that were described by all these offices are approximately \$4.7 million?

MS. DUNN-LEE: Yes. With the exception of the research.

COMMISSIONER DIAZ: With the exception of the research contracts.

MS. DUNN-LEE: Yes.

COMMISSIONER DIAZ: So all of the FTEs from NMSS are all included in this budget?

MS. DUNN-LEE: 39 FTEs, that's correct.

COMMISSIONER DIAZ: Very good. Then I have a problem with all of the other offices, because if you conduct all these activities as 1 percent of the budget, I would like to know what we do with the other 99 percent of the budget. So you have created a problem if you conduct all these activities with this little amount of money, maybe it is not the international arena that needs increased efficiency, but it is the rest of the other offices that need efficiency.

So I would like to suggest that we hold a one week meeting, look at the 99 percent of the rest of the budget and determine where can we make efficiencies.

Having that said, Ms. Dunn-Lee, now that you have --

COMMISSIONER MERRIFIELD: It may take more than a week. Considering it took an hour to do 1 percent of our budget, 99 hours for the remaining part may not be the best use of the Commission's time.

COMMISSIONER DIAZ: The mathematician in the Commission corrected me, we will need a month-and-a-half to conduct this.

DR. TRAVERS: Commissioner, if I might make one comment, the FTE that we have presented today, because of the way we account for our budget, that would include some of the management time that is spent, Sam, myself and others, in attending some important meetings that we go to in IAEA and some of the exchanges. So, I just want to make sure that even though I can't give you sort

of a crisp rollup of what that is, that I account for the fact that there is some significant amount of management time that is spent in connection with the direction of international, and in fact, in some cases, participation directly in some of these international activities.

COMMISSIONER DIAZ: And that includes the regions and so forth.

DR. TRAVERS: That's right.

COMMISSIONER DIAZ: Okay. So we are -- this is accounting for direct FTEs in the budget and travel, and contracts, except the reserves. Okay. That is a good clarification, I appreciate that. That is a good point.

Having looked at all these things, Ms. Dunn-Lee, as a whole blanket, do you have any recommendations for the Commission in how we can better situate, you know, our efforts? Is there anything that you recommend that we should do that will actually make not better utilization of resources, because it seems to me you are doing quite well, but to better, you know, have resource from our efforts, maybe it is in the form of a union, maybe -- you know, what is, you know, from your perspective, what is it that we can do better?

MS. DUNN-LEE: Well, I would comment that we could do a lot of things better. We certainly are working in an effort to --

COMMISSIONER DIAZ: You want to speak in the microphone, I think it is -- maybe we can move this forward to you.

MS. DUNN-LEE: We have a vast program, as you have heard, and we are always looking for ways to improve the method in which we conduct our business. I think the first step that we have taken is the establishment of the International Council where we have actually learned a lot from one another just in the short time that we have established ourselves with respect to our programmatic activities.

I think there are some efficiencies that can be gained in our international programs. One area that comes to my mind specifically is perhaps in the conduct of our export licensing activities. They are currently split among two program offices, OIP and NMSS. And I think that if we took a hard look at the examination of some of those functions, we might be able to streamline and better serve the Commission in terms of our resource application. That is one particular area.

I think that there is lots of room for improvement in the communication aspect and I hope in the coming months that as we work and bridge our programs closer together that we are going to find more and more ways to operate more efficiently.

COMMISSIONER DIAZ: Going back to my first statement, are we making a direct effort on determining and assessing and using the value of our international activities for our domestic, you know, industry?

MS. DUNN-LEE: Oh, I clearly think so. I think that that is clearly at the forefront of many of the decisions that we make in the use of our resources in the international area. Does it have a direct bearing on our domestic program? I think that is a first consideration.

COMMISSIONER DIAZ: Okay. I know it is a first consideration. Are we documenting any specifics, you know, values being derived? I know that you can't do in every place, but any benefits that are derived from international activities into domestic, are we trying to separate and document them? I think

Ashok did some, you know, of that specifically.

MS. DUNN-LEE: Yes.

COMMISSIONER DIAZ: But are we doing it across the board?

MS. DUNN-LEE: I would invite my colleagues to comment on that for the Commission, because they do conduct primarily those programs which have direct effect on the domestic programs. So if anybody would like to answer that.

MR. COLLINS: Thank you, Janice. I think there is a number of ways that can be acknowledged. You asked us if it is documented. We have a table here that we would be glad to share with the Commission of the benefits of each of the foreign assignees, for example, where they have contributed to ongoing reviews up to and including inspection programs, for example, and digital I&C; reviews, technical review of license renewal AP600.

The individuals that come have talents. Dr. Calingford screens these individuals very carefully and negotiates the level.

Then there is the intrinsic value of the individuals learning our processes, the establishment of personal relationships, if you will, that carry on through the professional years. There are a number of individuals now who are the heads of regulatory agencies who have been assigned to the NRC, who understand our processes and have a very close relationship with us, both technically and personally, and that helps to, I believe, contribute to an understanding of the programs and the transfer of that information.

In a technical sense, I will let Ashok speak to the hard technical areas and the application of the regulatory program. We have derived a great benefit in the revised reactor oversight process from Mike Johnston being on the international working group for inspection programs. He has been able to use the resources from other countries, this is a committee from the CNRA, to screen the revised reactor oversight process and to challenge that process, to bring in different insights. And in some cases, it is looked at quite closely, with a lot of scrutiny and a lot of doubt.

So those types of insights are invaluable to us, as well as the willingness of countries to in some cases adopt our programs. Spain, for example, has a mirror program. Our partners in Mexico follow our programs very closely. So we tend to get to second check on our regulatory programs and their application and the feedback of is it working outside of our closely held domestic market, in a similar market, and that is of value to us. That is just a few examples.

MR. THADANI: I might just note that last year, I think you know fairly well we do have fairly well-defined cooperative programs, but last year we had two foreign assignees, one from Spain and one from Switzerland. And as Sam noted, they usually are highly qualified people and these two individuals were very helpful to us. They were both working in one branch, working on thermal-hydraulic codes. And they had specific tasks, they completed those tasks on time, prepared their reports prior to going back.

So I think it was a very positive experience, I believe not only for them, but I certainly know it was for us, because they made a real contribution to what we are trying to do. We are expecting an assignee now from IPSN, he has got significant background in digital technology and that is an area of great interest to us. So, once again, I expect that that will add a fair amount of value to us.

I think it is very important to note that we are quite active at the committee and working group levels, as I said. We are able to really influence areas that should be pursued under international agreements.

COMMISSIONER DIAZ: And be influenced.

MR. THADANI: I'm sorry?

COMMISSIONER DIAZ: And be influenced.

MR. THADANI: And be influenced, yes. We are getting more influenced as time goes on, I want to say.

But I think it is important that the management, I know at Research and other offices, is quite active in trying to have an early say in what areas are to be pursued. And then at CSNI, certainly, where I am quite active myself, we have developed a process that we will go through to make sure that the areas we are focusing attention on are important areas to us.

MS. DUNN-LEE: Can I just add one comment to that? When we were working on the international arena in the PBPM process of the strategic plan, we consciously had a discussion and made a decision to incorporate the international activities in the domestic arenas, because there is such a close linkage. And I think that we wanted to tie the benefits together, and that is really sort of one place you could find the linkages. Maybe they are not as clearly articulated as they should be, but there definitely was the decision made to make that linkage to the domestic program, and, therefore, each of the program offices have a discussion of the international.

COMMISSIONER DIAZ: Thank you.

CHAIRMAN MESERVE: Let me turn not to Commissioner McGaffigan.

COMMISSIONER MCGAFFIGAN: Let me follow up by just commenting on Commissioner Diaz's line of questioning. I think it is very important that we be open to being influenced. At times, because we were the 800 pound gorilla once, you know, there could be a certain hubris associated with that, and I think there is a lot we can learn from the others.

And my first question, and Sam answered it in part in his presentation, when I was looking at the slide about foreign assignees that Janice presented, it was assignees to here, and there was very little of us going there. Now, Sam mentioned, in the case of France at least, there have been at least three -- or two, and I guess one planned, trips in response to Mr. Lecoss presumably urging that we send some people his way. I don't know how long our assignees have been there. Have they been relatively short?

MS. DUNN-LEE: About a month, I believe.

COMMISSIONER MCGAFFIGAN: About a month. Whereas theirs come here for a year or nine months.

MS. DUNN-LEE: The last one was here for three years.

COMMISSIONER MCGAFFIGAN: Three years, okay. I am not going to necessarily endorse three year assignments, but I think that we could -- I honestly think we could do more of that, not just with France, but with the U.K., there is clearly no language problem in the U.K., and perhaps other Western countries. I think it gets to be harder in Japan or Korea, or other nations where there may be significant linguistic issues, but we also have staffers from those countries who may speak that language.

So I would be interested, and I notice NMSS has been quiet through this

entire discussion. It isn't clear -- I know people like Margaret Federline participate, she is in Research now, but participate in evaluating the Swedish waste program. But it isn't clear whether NMSS has thought about placing people in other countries to learn from their experiences in decommissioning, for example, or repository design or whatever, repository licensing.

So how can we do more? And I know there are budget restraints. But if we are getting benefits, how can we do more to place some of our people in these foreign regulatory bodies?

DR. TRAVERS: Well, maybe I can answer generally. As you point out, budgetary constraints are a reality that we deal with and, in the main, what we are looking to do is provide a balance between what some would like to see in terms of longer-term assignments or experience overseas with carefully placed and focused assignments of the type that Sam was talking about, managers traveling to participate in meetings, tour nuclear power facilities to understand things like security systems and other safety issues that arise in connection.

But in the main, we have not had a tradition of budgeting for longer-term assignments overseas. We have actually had some discussions, with the French, notably, for, on their part, a hoped for change in that policy. We haven't done it yet. It is certainly something we could think about and perhaps in connection with the International Council we could do that.

But they do have some fairly significant budgetary implications for us. So right now our posturer is more aligned to shorter stays, optimizing these shorter stays, including inspections, to achieve the sorts of outcomes that we have identified in the PBPM process.

We are always open, though, to the possibility.

COMMISSIONER McGAFFIGAN: I am open, I think we should reconsider that, to be honest with you. I mean if other countries -- it is a place where we are differing from at least some of our foreign colleagues who see a clear benefit in placing people here. And I think we should think about how to place some of our people there, at least once, and see whether there is, you know, a commensurate benefit.

We do spend money to send people to IAEA, and I think that is fine and that is expensive, although sometimes IAEA pays for it, I guess. But we may well benefit more, or at least as much, by dealing with an individual peer regulator and having somebody there for an extended period of time, if there is interest.

Another question, you know, I, again, was interested in Sam's remarks about how Mike Johnston benefitted from working on the new reactor oversight process, the inspection part of it, with his peer group. It strikes me, you know, in looking at the strategic plan, one of the goals that I think comes from Research, or it is in the reactor arena, I think, is to look systematically at our rules and see whether we should change any of them, or whether we are getting the benefits that we projected.

Is there any systematic look at our practice vis-a-vis international practice to see whether we need to make changes? You know, if there is a consensus abroad and a certain approach, that we are the outlier, do we have a program of saying, okay, well, why do we continue to be the outlier or vice versa? Do we help them figure out whether they are an outlier?

I mean part of this is motivated by, you know, the Tokimura event where, you know, clearly, the international system failed the Japanese in the sense of not pointing out to them that their regulatory program for inspecting and licensing fuel cycle facilities was very different from everyone else's and make them think about whether it should be. Now it isn't. Now Meady is going to be in charge and it is going to look like our program and the European programs.

But we also are outliers in a bunch of areas, and it would be interesting to, you know, sort of go through the intellectual rigor of justifying why we continue to be outliers and in some sort of systematic way. So, evaluating areas where we are different and making recommendations as to whether we should continue to be different is something that might be worthwhile.

DR. TRAVERS: As you pointed out, in the case of events like Tokimora, we specifically look at the program in place in the foreign country to make an assessment against our -- and we did that, and we came to the Commission, and we presented --

COMMISSIONER MCGAFFIGAN: But the question is, could we have done that in advance? Could somebody have been sitting at all those meetings that you all go to at IAEA or whatever and say, gosh, why are you so different in Japan? Have you thought about why you don't inspect fuel cycle facilities?

DR. TRAVERS: In terms of a systematic approach to that, I would say that we don't have that, but we do carry out that sort of thinking in connection with all of the work that we do at IAEA and other places.

An example of that would be the need to establish transportation regulations. Right now the Commission is in the midst of rulemaking that will be necessary to align the transportation regulations in this country with the international community to establish free flow of trade.

COMMISSIONER MCGAFFIGAN: But there is a statutory mandate to do that.

DR. TRAVERS: That's right.

COMMISSIONER MCGAFFIGAN: Congress could pass a law telling us that we need to periodically look at foreign regulations, but I'm not sure that we want that.

DR. TRAVERS: Systematically, I would say that we don't dedicate a lot of resources to that sort of review. On the other hand, in connection with the interactions that do take place, we do that sort of thinking all the time.

And could we do more of it? Perhaps. But there's a cost to it.

COMMISSIONER MCGAFFIGAN: There's also a benefit if it brings us more into alignment and we save ourselves from making a mistake.

DR. TRAVERS: Well, another example of where I think we are trying to get a better understanding is the question of free release of materials, an understanding of where the international community is, generally, versus the sorts of reviews and considerations going on within the Commission right now.

COMMISSIONER MCGAFFIGAN: Let me just try to wrap up by asking three specific questions:

One has to do with the OSART report that Janice mentioned when she was dealing with Slide 12, which is not final yet, but which we have in the draft form. There are two recommendations -- or I think they're called suggestions

to the NRC in the draft report that I'm sure will be in the final report.

One has to do with the adopting IPR-60 as part of Part 20. We got similar advice in the review conference on the Nuclear Safety Convention a couple of years ago.

And then the second had to do with various emergency planning practices in this country where they suggested that international practice was ahead of us. Now, that partly may be the federal/state system in this country that may prevent us to some degree from adopting international best practice.

But when the OSART report is final, do you intend to report to the Commission on whether we should adopt those two suggestions and analyze whether we should go ahead?

MS. DUNN-LEE: Yes, we plan to do that.

COMMISSIONER MCGAFFIGAN: How promptly?

MS. DUNN-LEE: That would be probably in the November timeframe.

COMMISSIONER MCGAFFIGAN: The second -- and this may be Janice or maybe no one will know the answer -- but I saw a report recently that the Russians had decided that GAN Military was going to be responsible for the Northern Fleet cask safety, rather than the GAN that we deal with.

Do we deal with GAN Military at all? Has anybody peer-reviewed the GAN Military?

MS. DUNN-LEE: No.

COMMISSIONER MCGAFFIGAN: And know whether their cask standards are up to snuff or whatever?

MS. DUNN-LEE: We do not interact with GAN Military. That's a completely separate entity. We know of them, but it's really more a DOD linkage. We work with the commercial GAN.

COMMISSIONER MCGAFFIGAN: Okay, does anybody -- but they are a regulator?

MS. DUNN-LEE: Yes, they are.

COMMISSIONER MCGAFFIGAN: Does the NASB work with them, or --

MS. DUNN-LEE: I think it's primarily the Defense Department, and maybe some of DOE and some of EPA.

COMMISSIONER MCGAFFIGAN: Not a lot of a regulators at DOD that I'm aware of. The final issue is, on page 8, you mention the pebble bed modular reactor.

MS. DUNN-LEE: Yes.

COMMISSIONER MCGAFFIGAN: And, you know, a fairly central issue -- I mean, they're talking about using a risk-informed and perhaps even a risk-based licensing process there. And a central issue where they are going to differ from everybody else on the face of the earth, potentially, is the lack of containment on that pebble bed modular reactor.

The Germans had containment, we had containment at Ft. St. Vrain. I understand General Atomic approached us in the early 90s about the possibility of no containment on a high-temperature gas reactor in this country, and they got an answer from the Commission at some level that was unlikely to be approved.

And the Europeans are even stronger on containment. I remember the head of Framatone bemoaning the fact that as he was having to deal with the European pressurized reactor, the French and German regulators had imposed containment

liners and corium spreaders. That's something that we had not done with the advanced designs.

So, there's -- if you take a risk-based approach, you could say that you don't need containment on a light water reactor, let alone a high-temperature gas reactor, but that's not consistent with the way the Europeans or we approach defense-in-depth.

So, how is this issue of the licensing approach in South Africa going to be brought together? It strikes me, you know, that one could claim, you know -- and the industry is off selling, and in fact, it's the South African industry itself selling this notion that we can build this reactor in a city without containment, you know, there, which they couldn't sell in Europe or the United States or Japan or whatever.

MS. DUNN-LEE: I think it's a little early to answer that question. We have views about these types of things.

We have really not engaged in a technical dialogue yet. I think that there is recognition that there is benefit to that, and so I would say that it's a little premature right now to anticipate the outcome of that.

I think that they will definitely be the subject of technical discussions, and perhaps that would be the Office of Research that primarily plays in that arena.

MR. THADANI: I might just note, Commissioner, that I think there are very good reasons why we're not going forward with risk-based approaches.

And you're quite correct that in 1989 with the high-temperature gas-cooled reactor design, we did disagree. Our view was that you have to recognize that there are limitations in probabilistic techniques that one has to take into account, the real concept of defense-in-depth, the inherent gaps in our understanding in some areas.

So it was essential for us to make sure that people didn't think we were calculating ten to the minus six core damage frequency and saying, well, we really have -- we think that may be appropriate, that that may be the real underlying frequency, but there are lots of questions about what we know and what we don't know.

And it seems to me that if we do get involved here, it's going to be -- there will be a number of challenging issues. As Janice says, I think it will take us a little while.

CHAIRMAN MESERVE: Commissioner Merrifield?

COMMISSIONER MERRIFIELD: Thank you, Mr. Chairman. I'd like to first make a couple of comments to underscore a couple of names that have already surfaced today, the first one being Dr. Michael Cullingford. I'd like to second the plaudits that were given to him. He's provided some invaluable service in my Office, in my travels, and certainly I want to recognize that.

The other one is Clarence Breskovic, who is our webmaster for the International Programs Office. Not only was his involvement outstanding and hopefully he'll follow up with the NISX program, but he is also developing an ability to have many of our documents from international programs, making those palm-pilot capable and has been personally helpful to me in that regard.

So he is clearly a very good resource for our Agency in that way, too, so I certainly want to recognize that, and the outstanding support that all the

international program staff have given to me, which I do appreciate.

I want to focus a little bit -- I was struck, in some of the visits that I have had recently -- we -- our Agency, as I have termed it and others have termed it sometimes, is sort of the Maytag Repairman of regulatory agencies, and has somewhat of a low profile.

I was somewhat surprised by the degree to which some of our State Department colleagues, in countries in which we have bilateral agreements, still are not fully cognizant of the fact that we are separate and apart from DOE.

And I think that's an area where we perhaps may want to have some enhanced educational outreach efforts, particularly in those countries in which we have bilaterals, and countries which have nuclear reactors.

But it strikes me and I was struck today by the presentation we had, obviously we're a very technical agency, and the presentation we had was, I think, very positive in that it was very much directed toward the PBPM process and how we try to correlate what we're doing in our international program offices with the domestic benefits that we receive to our own nuclear power industry, correlating our research efforts with things that we need to be doing here.

I think we've done an excellent job of that. It was a terrific presentation. But it strikes me that part of what we do in international programs is also part of the softer science of international diplomacy where we relate with many of our international counterparts.

We have over 30 bilateral agreements, or bilateral arrangements with over 30 international countries.

And I guess the question I have out of all of this is directed towards Janice. And that is, do you think, from a geographical perspective, and from a country-by-country perspective, we are appropriately balancing our international relationships, or do we have a tendency of focusing perhaps on those countries with which we have the strongest relationships?

I won't name them, but there are some that we visit more often than others, and do we need to take a look at the notion of perhaps making sure that our interactions with our bilateral partners aren't merely on a five-year basis, every time we sign a bilateral arrangement?

I just ask for some general comments in that regard.

MS. DUNN-LEE: Well, that's a very good question. I think we're hitting the world at about the right level. Let's not lose sight of the fact that as the discussion has occurred today, and as Commissioner Diaz has recognized, you know, that one of the huge drivers in our program is the domestic benefit and where do we get that. And that's fairly obvious -- from our major partners, Japan, France, Western Europe.

And so there is a lot to be gained with engagement there. That's not to say that the other rest of the world is not important.

But we have limited resources. We have to weigh the different factors. We try to do the things that we can within the resources that we have.

But it's not always possible to engage like we would want to. There are problems all over the world in many countries that would love to have our help, our assistance. If not for anything else, for humanitarian reasons, it would be a good thing.

But our resource applications are very seriously considered here. I mean, we get down to very minute quantities of FTE expenditures, and because we're a fee-based agency, I think we have to take that into consideration.

So, while I agree that there are many parts of the world that I personally would like to see stronger, better, closer ties, it's not always possible because we have to have some prioritization of where we get the most for our money in our efforts. And so that's kind of the rationalization that is utilized.

COMMISSIONER MERRIFIELD: Do you feel comfortable -- obviously some of this is carried over into the international arena.

We, through IAEA and NEA, rely on our foreign counterparts to ensure that those nations with the stronger nuclear programs are able to provide assistance to those countries which have reactors or have facilities but don't have the same level of resources.

Are you comfortable that through the IAEA and the NEA, that we are -- that those countries are being appropriately covered in the international arena, or is it useful for us to at least step back for a moment and look at that and seek our own judgment and determine whether through IAEA and NEA, we may want to see some assistance directed toward some that certainly don't have that level now?

MS. DUNN-LEE: The IAEA, especially, is a good starting point for culling out where help needs to be considered. I think that we use that as sort of the first point of reference.

I think that from there we go on to give further consideration of whether we can, in fact, provide assistance to other countries. This is really case-by-case decisionmaking. This requires Commission involvement, generally, even for any sorts of assistance.

We really are very conscientious about how we spend our resources. I hate to say that everything is driven by that, but to a large degree, it is, as a fact of life.

But I do believe that we ourselves in the Office of International Programs, don't have the resources there to just go out. I think that there's always our -- our antlers are out. We're receptive to the needs of other countries. I think they're surfaced, they're evaluated, and they're proposed.

And it really lies with the Commission to decide whether we want to apply ourselves in those areas.

COMMISSIONER MERRIFIELD: Well, I know you have your new International Council, which I think is a good idea. I think one of the things that I would note is that obviously the Commission itself, the Commissioners, do engage in international travel.

And incorporating what we do, in a holistic sense, I think is important as well.

MS. DUNN-LEE: Absolutely.

COMMISSIONER MERRIFIELD: So as you all get together and consider those things, I think recommendations of how the Commission can use its own resources and its own travel time to most benefit the Agency would be helpful to know as well.

The second thing I want to get into is relative to the recent GAO report

which you did reference in your overhead in the initial presentation.

In the Executive Summary, in the recommendations, they pointed to, as an example, difficulties that the Commission had had back in Fiscal Year 1997 and 1998 to obligate a half million dollars in accordance with a two-year statute imposed by Congress.

And ultimately those dollars were returned to the Treasury. In their recommendations, they recommended that we integrate the assistance activities of the Offices to implement nuclear safety assistance to avoid duplication, inefficiencies, and presumably to avoid a future occurrence of having to turn back money to the Treasury which had been obligated for specific purposes.

It would appear clear to me that one of your intentions of the International Council is to accomplish one of those very tasks, but I just wanted to get a sense of any further comments you'd have relative to that, and plans you have to follow through on the recommendations made by the GAO?

MS. DUNN-LEE: Right. Well, we took the report very seriously. The fact that we had a significant amount of money that was un-obligated, did not make me feel good, but, you know, spending government money on these types of programs is a very complicated process.

Our program has been one that has evolved over time. Primary responsibility for some of our major activities used to lie in the office with the Executive Director for Operations.

And then parts of it also lay with the Office of International Programs. You'll get varying stories as to why that happened, and I don't intend to get into that here.

But I will tell you that I have taken the report findings very seriously. We have taken steps to improve.

Dr. Travers and I have agreed to consolidate the program for management purposes in my Office. I personally am involved and feel very accountable for this.

We've informed the State Department, the DOE, and the USAID of this change in consolidation. I hold weekly, what I call FSU meetings to track activities, to find out where we're at on the expenditure of money.

I have a team leader that oversees the program of the former Soviet Union and Central and Eastern Europe. We have developed monitoring and tracking mechanisms within our Office to be sure that we don't get into this sort of situation again.

COMMISSIONER MERRIFIELD: Let's underscore the value of the foreign assignee program. I'm glad we were able to get some greater understanding of the level we have today. That was underscored for me by some recent discussions I had with Jukka Laksonna, who is the Director General of STUK, which is the Finnish Regulatory Authority, our partner internationally in Finland.

And he is a very product of that program some years ago. And so it is clear that our foreign counterparts do use that program to bring along their best and brightest, and I think it is a benefit to us and one that we will continue to reap benefits from for a long time in the future.

Thank you, Mr. Chairman.

CHAIRMAN MESERVE: Thank you, Commissioner Merrifield. Let me just say on the foreign assignee point that I was intrigued by the questions that

Commissioner McGaffigan had asked you about the reverse flow possibilities.

Although we seem to have had more reverse flow to France, I would just report that I have had some meetings with Mr. LaCoste in France, and he has very vigorously urged me to provide -- for the NRC to provide a staff person who would be available for a longer term than a couple of weeks. We customary have -- and this is a very high priority for him.

I'm curious whether you have received inquiries from other countries requesting that NRC staff be assigned? Or is there a sense that this is not something that we have done, and that it's not therefore something that people ask for?

MS. DUNN-LEE: Well, I'm aware that the Japanese regulatory agency, in particular, requested or we placed an NRC person there several years ago. This was Dr. Gail Marcus who spent about six months in Japan.

But that's not a regularly-occurring event. I think when Mr. LaCoste had approached us about a long-term assignee, he had indicated that he was also making his people available to the regulatory bodies in the UK and state.

And so they are engaged in long-term assignees with those countries. Now, I'm not aware that the UK has approached us directly, but I would imagine that that would be sort of a place where we might consider such an assignment.

DR. TRAVERS: I don't know of any other inquiries except what we heard of today, actually, about the potential for Paraguay being interested in some NRC support on a longer-term basis that we would through IAEA, potentially.

But, of course, we do provide individuals to IAEA. In fact, we have encouraged NRC staff and we've leveraged some of our NRC resources, which are limited, in the direction of providing some long-term stays of several years, in fact, to both IAEA and NEA over in Paris, and we've used those agencies. Of course, we have influence by being on the Board of Governors and those things with the direction of the support that those agencies provide to other countries.

But we also have directly provided NRC staff who have re-employment rights and so forth to come back to NRC when their stays are completed.

But I'm not aware, personally, of -- maybe others are -- of requests that we've had from other countries for longer stays.

MR. THADANI: I may add that I did receive a request from Switzerland after the assignee left. I was asked if we could support someone from our Office going there for a period of six months or longer.

We've not acted on it as yet, as you know.

MR. COLLINS: It's the same for the Office of NRR. Switzerland would be the other alternative at this point, right.

CHAIRMAN MESERVE: I'd like to turn to Slide 14 and just ask you a question about the Nuclear Information Exchange System.

I had understood, and I think you have reinforced today that the Y2K early notification system was a remarkable success in that people around the world really responded very well to an NRC initiative to provide information on nuclear events that might have been associated with the transition to the new millennium.

And I'm -- it seems puzzling to me, as someone who is a recent government employee, to have this be eight months later and to not have such a

great success be one that's easy to implement on a more permanent basis.

Have there been some problems associated with going forward with a broader --

MS. DUNN-LEE: Anytime you deal with an international, bilateral organization --

CHAIRMAN MESERVE: I suspected that was going to be the answer.

MS. DUNN-LEE: -- it's very difficult. I think actually we have made quite a bit of progress since we just transitioned into the year 2000. And the fact that we are moving towards a new system is quite monumental.

CHAIRMAN MESERVE: You don't have to wait till the next millennium?

MS. DUNN-LEE: Right.

DR. TRAVERS: Some of that coordination is occurring between the NEA and the IAEA, and that is part of the international issue that needs to be resolved.

CHAIRMAN MESERVE: This is a question for Mr. Virgilio who has not been under much fire this morning.

You talked about your activities in coordination with foreign countries. I think that you mentioned the nonproliferation area, but also the security areas.

I have been struck in visiting other countries to see a very different approach towards security on nuclear power plants that is followed in most other countries with a far less aggressive effort that is required in terms of protecting the facilities and assuring -- preventing acts of sabotage.

Could you say a little bit more about the nature of the interactions you've had on this issue, what kind of responses you have had? I mean, this is probably an area of the type that Mr. McGaffigan mentioned, where we are presumably an outlier on the world scene in terms of the demands we make of our licensees in this area.

And that's not to say that's inappropriate, but to just observe that this is an area where we are out of sync, and I'd be curious in getting your perspectives on the issue.

MR. VIRGILIO: I'll do this while trying not to cross any lines that you established early.

CHAIRMAN MESERVE: Please do.

COMMISSIONER MERRIFIELD: Mr. Chairman, I just -- not to -- it's not clear. I'm not necessarily -- I haven't had a chance to talk to you, but the last visit I had to Lithuania where they had an armored personnel carrier parked in their secured area.

And as you know, with our counterparts in South Korea, they have army units stationed very near their plant. So I don't know if you would want to necessarily leave the record that we're an outlier. There are some countries that have different security requirements than we do.

We have very vigorous security requirements, clearly.

MR. VIRGILIO: On a continuous basis, and then periodically, we sit down and document and brief the Commission. We look at what we call the design basis threat. We look at how the environment, the threat of the environment is internationally and nationally, and whether our facilities are protected appropriately against that threat.

At the last semiannual briefing of the Commission, there was much

discussion along these lines as to what's happening internationally and how do we compare? You have to look at that, both at comparing the threat and then comparing the level of protection, both, in order to do this benchmarking type assessment.

We're in the process of doing that work now. We will be reporting back to the Commission in the very near future as to the results of that assessment.

CHAIRMAN MESERVE: You could defer it until then till we understand the nature of the information.

MR. VIRGILIO: Yes.

COMMISSIONER MERRIFIELD: Mr. Chairman, just to add on, I'd be particularly interested in the report about Canada, which is just a lake away in many cases, and has wildly different security rules from us.

MR. VIRGILIO: We will include Canada.

CHAIRMAN MESERVE: I have a particular interest in MPC&A activities, some activities I did before I came here. And as you know, we do now have an MOU in place with DOE for activities in Russia.

And I would be curious if you could give us a quick update on the status of the activities that are underway or anticipated under that MOU.

MR. VIRGILIO: We have just recently signed the interagency agreement. We had DOE sign several months ago. We signed, I think it was July 7th, to continue the cooperation.

Basically it's with Russia, the Ukraine, and Kazakhstan. Our interest is trying to build their regulatory infrastructure to ensure that they provide appropriate levels of protection, and also to ensure that we transfer training and knowledge and skill abilities as well.

So it's just starting up again. Again, we signed on the agreement on the 7th of July, so we don't have much progress to report after basically a two-year hiatus as a result of not having been able to negotiate that agreement.

CHAIRMAN MESERVE: So at this point, is there anything specific that's been scheduled?

MR. VIRGILIO: Continuing meetings. I think we have a number of meetings, and we'll be starting the program up again in the very near future.

To go to Commissioner Merrifield's question, if there is a bias from the NMSS perspective in where we do apply our resource, it tends to go to the former Soviet Union in this particular area. And that's as a result of the economic conditions that we see over there and the events that are occurring involving loss of control of some of the materials.

So it's almost risk-informed when you think about how we apply approach. It's what can happen, how likely is it, and then what are the consequences? And so in this area, we're driven to apply more resources toward the former Soviet Union countries than in other areas.

CHAIRMAN MESERVE: Good. That's all of my questions. I would like to thank you all for a very informative briefing. This is an enormously important area, although it does not benefit from significant amounts of funds. It is one that I think is central to the effectiveness of our Agency and to the importance of our fulfilling our obligations.

With that, we're adjourned.

[Whereupon, at 11:15 a.m., the briefing was adjourned.]