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The Future of International Nuclear Material Control

Panel Chairman:
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BROOKS: Dr. Lehman currently heads the Center for Global Security Research at the Lawrence Livermore National Laboratory. He's also the Chair of the Governing Board of the International Science and Technology Center, which is an effort to take the brainpower of Russian scientists and turn it to peaceful uses, not exclusively in the nuclear area, but heavily in the nuclear area.

He has a long career in government. He was the Director of the Arms Control and Disarmament Agency, where I worked for him. He was a Senior Director and Special Assistant in the White House in the Reagan administration, where I worked for him. And he was the chief negotiator for the Start One Treaty where I replaced him and has served in the Pentagon as Assistant Secretary, has served in the Armed Services Committee in the Senate and has been on more boards than you would care to hear.

LEHMAN: When I was first asked to speak, I was asked to speak about international fissile material controls. And I said, "Well, actually, the topic is broader. It ought to be "International Nuclear Controls."" I notice on the program Bob Pfaltzgraff and his team got it right and I notice on my first viewgraph I got it wrong. So, I begin by apologizing.

Let me say that in preparing my remarks, I'm going to draw from a number of our annual Futures Roundtables that we held out at Livermore over the last few years, but most particularly from this year's project, which is not surprisingly, "Atoms for Peace after 50 Years." Many of the participants in the various workshops in Europe and Japan are in this audience. So, I don't

presume to speak for them. Indeed, I don't presume to speak for any entity with which I am now, or have been, or might likely in the future be associated. These are my own views.

And since my basic theme is that we are dealing with a great deal of uncertainty, it may well be that when the day is done, these may not even be my views. So, with that caveat, let me begin. Since I speak last, I work on the assumption that there will be no time available and everything I want to say has already been said. I think neither of those is actually true. But, nevertheless, to prepare for that contingency, I thought I would begin at the end with the conclusion, which is that we already have a huge legacy of stockpile overhang and, in fact, it's already being deal with in many ways, in a highly international way.

I won't repeat what Lint and Paul and Larry have already, and Philip, have already said about many types of international cooperation and activities that are involved in this process. But what I do want to suggest is that in our discussions, in our roundtables, around the world, it is quite clear that there are a lot of ideas, that people think that more can be done in this area and that the time for making those decisions is here, not simply because it's the 50th anniversary, but also because the objective conditions have changed.

My thesis today is really very simple, that the future of international fissile material control depends on the future of international fissile material, which depends on the future of what we mean by international, which seems to be determined by what is going to happen in terms of technology, politics and economics of nation states and non-state entities. In short, there are certain objective conditions out there that are going to shape the decision space.

And so in our efforts, what we've tried to do is identify what are the trends, the forces, the drivers, the motors of change. If something is fundamentally unchanged and important, we wanted to identify it. But if there are things new, such as the end of the Cold War, we wanted to understand what were the implications of those. I'm going to selectively pick some of these themes because, in part, many of them have already been mentioned.

One is that in our group I think there is a strong feeling that in advanced western industrialized societies, the big decisions on things like nuclear power will be made based on certain economic realities. But there was quite a bit of difference of opinion as to what value should be placed on externalities and what should be done about it. Should there have been compensation? Should there have been a leveling of the field? But there was a recognition that many of these externalities are terribly important.

I remember, not too long ago, going to visit the IAEA in Vienna. I met with the safeguards people and in that era their view was they were not interested in proliferation resistant technologies because they had a mandate to do a certain job and they were quite confident that they could do that job. The interesting thing was it was the nuclear energy side that was most interested in proliferation resistant systems. And when you asked why was that so, the answer was because this was an externality, this was a political problem for the advancement of nuclear power. It was a box to be checked and somebody had to do that.

In our discussions, what seems to have changed is, that the vision of safeguards and securing material has become much broader and deeper, in particular as a result of, not only the concern about proliferation from nation state but concern about non-state entities and terrorism. And, indeed, what one has seen and later I will talk about some of the IAEA views, a much broader vision of how you secure material. There was a lot of discussion in our groups about whether or not the objective conditions mean that nuclear energy is going to expand.

You've all heard the discussions of climate change, environment, hydrogen economies, a lot of discussion of those issues. At the same time there is a recognition, and I thought Dr. Wagner was quite eloquent in describing, that on the one hand the public still has an aversion to radiation when it is associated with nuclear power. One only needs to have watched the Discovery Channel's program on Three Mile Island last night to understand how public think about that.

On the other hand, the reality is in the United States that nuclear medicine is a bigger industry impacting in many ways on many people's lives more intrusively, more profoundly and more positively and you get an entirely different attitude. So many of the participants in the workshops are saying things like, "Why can't we explain to the public a new form of risk benefit analysis. And yet we run into this dilemma, which is that it is precisely in the nuclear community, where people have done best practices and risk benefit analysis, and it doesn't sell.

Now, maybe that is just a moment in time. So for example, in Sweden, the first effort to educate the public on the risk benefits on nuclear power resulted in a backlash against nuclear power and it was later, over time, in a broader political context that things advanced in that area. Those are some of the trends that we're looking at, all of which have implications for how we think about international fissile material control.

But, as I said, for the most part, the drivers that were impacting on international fissile control in our working group, partly because of the kind of participants we had, was the international security dimension. And that, too, is transformed. The Cold War is over and yet, a lot of concern about what is international governance with the end of the Cold War? Is there some kind of new world order with a common core of values or are we headed towards spheres of influence and regional balances that may turn out to have regional economies and regional approaches to dealing with regional threats and do you organize how you deal with nuclear material and nuclear risks in that way or some other way.

I think one of the most important things to emerge having to do with fissile material out of all of this, is the recognition that it's not just that nuclear is dual-use, double-edged sword. It's the feeling that the latency of weapons capability is becoming more pervasive and that you're now dealing with incremental movement towards weapons capability that takes place in such small steps that the international community and even nations can't respond in an effective way, like the frog in the pot. The temperature rises so slowly that we're going to get cooked before we ever react to something that should have been seen as inevitable.

This is made more dangerous by the fact that some of the trends in proliferation by the actual proliferators have been to become increasing networked, to go offshore, to exploit the

miniaturization and agile manufacturing and modern technology and to have just-in-time break out capability.

So, for example, we did a study on verifying the agreed framework in Korea and everybody wanted to know, "Well, how do you shore up the IAEA's ability to deal with diversion?" Well, what we found is there are some scenarios that are a problem. But there are actually relatively easy fixes to those scenarios. The problem is not diversion from the IAEA. The problem is covert facility, third country help and breakout. And the nonproliferation regime has not figured out how effectively to deal with those issues.

The bottom line, in terms of the implications of all of this security is the need to develop a system in which you recognize that you not only have to have a routine control of the material, but you have to deal with the question of the abuse and use of the material in a breakout scenario. So that has been driving a lot of consideration.

How bad is this problem of the spread of technology? I would like to just highlight a couple of points that have come out on perspectives on the spread of nuclear capability. President Eisenhower, as was pointed out, said that, "The knowledge that will eventually be shared by others, possibly all others." It has spread widely, obviously not to all of the 194 countries that signed treaties. But it is important to remember that 75 countries today either have reactors, had them recently or are about to have them. And there were only 60 members of the UN when Eisenhower gave his speech.

I mean you can quibble but the reality is the technology associated with nuclear power and the potential for nuclear weapons has spread widely. Many people have focused on Kennedy's speech in 1963 and he said that perhaps 15 or 20 nations might have nuclear weapons by the year 2000. Clearly if you take a look at it from the point of view that we also had some rollback countries, 13 nations probably acquired nuclear weapons before the turn of the century. And Mohamed ElBaradei and his Economist article that you may or may not have seen this week, in which he lays out a proposal I will mention, says there are 35 or 45 countries in the know and points out the problems of 50 countries who have spent fuel.

I'm going to skip this chart. It just simply lists the number of countries that are involved. But I wanted to put the context of fissile material control in the context of strategic thinking by the participants in our workshops. And, basically, we asked the question, "Will the significance of civilian applications be less, the same, or more in the future and will the significance of military applications be less, the same, or more in the future?" We discovered we had participants who believed that all of these possibilities-- I mean we had a participant who would support each of these as the most likely possibility. And some even advocated those positions.

And the key for that group was international control of fissile material, for many of them. Likewise, there was another group that said, "The risk from nuclear weapons and terrorism is so great that we must not only not see expansion of civilian applications, we ought to actually see a contraction. And, ironically, many of those who were often etiologically quite different believed that we needed greater international control of materials.

Of course the other schools were more of everything or less of everything but I think a sizeable group wanted to emphasize the most important point again, which is we are already in this world given the overhang of materials that already exists. We had a number of recommendations in general that are coming out of this report. All of them involve getting more confidence in how we deal with fissile material.
Eisenhower's speech in many ways has become the foundation for thinking about this problem in our group. His basic proposal was fairly straightforward. It was the superpowers would take the material out of their stock on an incremental pragmatic basis and make it available for peaceful uses. But he had a broader context, which involved political change in addressing the security circumstances.

Mohamed El Baradei has, in this week, in The Economist put forth a proposal. From the fissile material point of view there are three major steps that he proposes. One is to put reprocessing enrichment under multi-lateral control, without explicitly stating what he means by multi-lateral control. He also emphasizes the application of proliferation resistant technologies in the future but he really thinks the time has come to consider multi-lateral approaches to the management and disposal of spent fuel and radioactive waste.

He, like Eisenhower puts this in a broader framework, which some may like and others may not. But one of the most important points he makes, that I think is in contrast in some ways with Eisenhower, even though they both had a bold vision, that Eisenhower thought you started small with those particular parties of specific concern and you expanded to make progress. Mohamed ElBaradei is talking about starting anew, bringing everybody together in something of a grand bargain. So this is going to be a very interesting time to debate the question of international control of nuclear materials.

I want to conclude by simply raising some important questions about this. We do not yet know what we mean by international. Do we mean global or regional? Do we mean multi-lateral, transnational? Can it be private companies or does it have to be inter-governmental or does it have to be actually an international organization? Is it the IAEA or is it some other vehicle for internationalization?

What about these very important cooperative threat reduction efforts? How do they fit into the project? A second big question is what is to be internationalized? Are we really just talking here about storage, some improvement in competence in accounting? Are we actually talking about international protection and management or are we talking about ownership? We need to ask the question, what is the value sought by internationalization? In many cases what is sought is legitimacy. In other cases what is sought is confidence.

But what different players are seeking from internationalization is different and I think we need to sort that out. We have to deal with the question of, to what degree do uniform norms address very different economic and political security circumstances. And, of course, the questions of, are international organizations up to all of these tasks that some people want them to have? Is an international bureaucracy in a distant capital necessarily the best place to run a sensitive facility with safety and security concerns? A lot of issues there--

How urgent is the internationalization? Is this something that takes place over a long period of time or is it something that has to take place first in order for all of the positive events to happen. And, finally, quite candidly, does it supplement, amend, or replace the current NPT regime? What has been interesting to see is that the traditional view is that the NPT provides the core around which some differences-- Everyone is building the foundation for peaceful cooperation in the future.

On the other hand, there is an argument increasingly being made across the etiological spectrum that a new bargain is necessary, a bigger bargain is necessary and that some of the elements inherent in the NPT are not sufficient to deal with countries outside the NPT and countries that feel that they are inadequately served by being in the NPT. So let me stop there and say, it's a volatile time. We've got a lot of questions and I hope the audience has the answers. Thank you.

[applause]

Question and Answers:

BROOKS: We now turn to the part of the program where you get to ask the questions. I'm going to stand for this because I can't see that half of the room from where I'm sitting. I would ask that you identify yourself and, no matter how piercing you think your voice is, wait until the microphone gets to you. And I think we start with a question in the back.

NEFF: I'm Tom Neff from MIT. I have a question for Larry Scheinman. First I want to correct one of the things that Phil Sewell said. ...(Inaudible) receives about $425 million dollars from USEC for the enrichment services and I think the company profits by about $100 million dollars a year. Phil was right. This is money that should go into pockets of the sensitive nuclear workers that protect this material.

My question for Larry was Iran. We have gone from a period of a week ago, in which we were being very tough on Iran and we've gone now to where three countries are now promising cooperation in helping Iran with its civil nuclear program. Larry, could you comment a little bit about this switching of gears and where you think this comes out in the perspective of history?

SCHEINMAN: Well, I think it is enormously comforting to see that Iran has, in fact stepped away from what looked like a very conflictual and contentious approach. But I would worry about what kind of an outcome we get in the following sense.

If it were true that Iran would be prepared to completely dismantle its enrichment activities in exchange for some kind of a guarantee for long-term fuel supply from outside, presumably the European Union from what I understand to be the case, and that this could be done in the context of an additional protocol with all of the bells and whistles of transparency that that could bring-- We may need even more. Then I see this going in a very, very constructive direction because I think this would be a bell weather for how other countries would have to try to treat this approach to their fuel cycle desires in the future.

Iran is a real test case in this regard. If on the other hand, what looks to is to take a leaf from Ron's book, some kind of a multi-nationalization of an Iranian enrichment program sitting on Iranian territory, that becomes more problematic and I would be concerned about that, although I must say that, if I think about some of the questions that Ron just raised in his run down of the issues of what do we mean by this, that, and the other, there's no need for us to be uniform in how we approach this. I think we can take this region by region or country set by country set as long as we stay within the parameters of the arrangement that brings about the outcome that we desire, which is avoidance of further proliferation.

BROOKS: I had a question over here and then we'll go over there.

HORNER: Dan Horner from McGraw Hill Nuclear Publications. I think that you just made a-- I'll pose this question as a devil's advocate question and then ask the panelists to respond. In Paul Longsworth's presentation he mentioned, as part of the U.S. nonproliferation efforts, the effort with regard to the U.S. supplied research reactor overseas and converting those reactors and bringing back the HEU fuel. But wasn't the supplying of those reactors a direct outgrowth of the Atoms for Peace Program and, in that respect, isn't that a proliferation downside of the Atoms for Peace Proposal and wouldn't your job have been easier if that aspect hadn't taken place?

If Paul could respond to that initially and maybe some of the other panelists then could jump in. Thanks.

LONGSWORTH: You know, it's not, and I'm going to give you a strange answer here. It's not, because the original deal was that the spent fuel from those reactors would come back to the U.S. and I think, even in 1953 when they kicked that program off as the-- We realized that obviously we needed to repatriate the nuclear material. It is a strange answer because we are going to complete about half of the fuel that we've identified in an environmental impact statement by-- In the next few years we will have only addressed about half of the fuel that, again, we designated to come back to the United States.

So we are about halfway there in fulfilling our commitment from 1953. But I think we are going to continue to work on that and get that stuff back. But, no. I think it was part of the original bargain that that stuff would come back to the U.S.

INDUCI(?): Joseph Induci at the Brookhaven Laboratory. There used to be something called the Fissile Material Cutoff Treaty, which I thought had potential to bring in a few countries that aren't currently covered and now I hear nothing. Would one of the panel members be willing to enlighten the group on just what happened there?

BROOKS: Ron?

LEHMAN: The Fissile Material Cutoff Treaty was initially envisioned as sort of either of two things, one was a universal treaty open to all parties, the other was something that one would do, maybe on an interim basis or a regional basis, but primarily focused on South Asia and perhaps

the Middle East, i.e., the non-parties as well as the weapon states. Interestingly enough, there was a UN resolution in the General Assembly co-sponsored by both the United States and India, supporting a fissile material cutoff. And all the P-5 have said that they can live with it.

Having said that, it is in the conference on disarmament. It's caught up on linkages, by and large issues such as Pakistan's concern about making sure that it deals with residual stocks. It is not enough to cut off the production for weapons purposes; they want to deal with the existing stocks. There's linkages to India by the issue of a time bound framework for disarmament. In short, there's been maybe some flexibility on each of those, at least expressed by the parties. But the process seems bogged down in the CD.

ElBaradei in his Economist article raises the question that others have raised before of whether or not this could be the basis either for a new restraint regime or an additional restraint regime. But thus far people have not been able to break it away from these linkages.

BROOKS: I would like to just add that as the community thinks about the future, the Fissile Material Cutoff Treaty is a good example of the limitations of formal multi-lateral arms control. It's it's one of the reasons why we probably need to spend more time thinking about, as Ron said in his presentation, whether "international" means the same sort of thing that it has always meant or whether there are commercial international agreements a la the USEC Agreement that are, at least part of the solution.

We had a question down here.

__: Question for Mr. Sewell, I was intrigued by his suggestion with regard to the government sponsoring a reactor, the intent of which is to get rid of the, let me call it, surplus nuclear materials in Russia and, perhaps, even our own defense programs. We are not only having the problem with uranium 235, we also have a problem with regard to plutonium 239. And if the real objective is to get rid of those materials-- There have been people said, "Well, you just bury them."

But if you really want to get rid of them and get a new reactor into being, you would design the reactor core, which initially would burn straight 235 or straight 239. And if you do that, in the case of the 235 rather than using low enriched uranium, you don't make any more plutonium, which you would in your scenario, and the people would jump on that, the anti's, saying we're really not doing what we want to do.

So initially these reactors, which you are suggesting, could be designed to burn straight 235 or straight 239 and really get rid of all this surplus E-2(?). Economically, and for the long run, it doesn't make any sense, but at least politically, if that's the objective, it would succeed. Thank you.

BROOKS: Bill, do you want to respond?

BILL: I can't correct you at all, I don't think. That is a very good suggestion. The only thing I could say is that most reactors today are designed to use low enriched uranium and that's the

concept that we were trying to do so that we wouldn't have to be any major investments in a nuclear infrastructure for commercial basis. But conceptually, the concept, the idea that you propose is valid.

And the idea that we put forward, in terms of government support in burning basically, nuclear materials, is just that. It's an idea of the government and industry to grasp and design in a way that's optimum, optimum in terms of meeting policy objectives by the government and the world community and also in a way that will help provide incentives to build a new nuclear reactor that will get things started, with respect to the increased use of nuclear power that has so many benefits.

That incentive, again, would be one in which the government doesn't have to pay anything in the end. It's merely a backup incentive that would be paid back and looking in a way that several different objectives can be accomplished at once and that's the main idea in concept. And your concept and idea is just as valid and I just applaud them all. It's good for mankind, good for the world. That's what we're proposing today.

BROOKS: Let me just point out a third concept that's actually what we're doing. Some of the defense HEU is, in fact, being burned in U.S. reactors -- TVA reactors. In addition, at a galacticly slow pace, we are working with the Russian Federation to the elimination of 34 tons of weapons plutonium in each country through conversion into MOX fuel. It doesn't make any economic sense either but it does allow us to take advantage of existing reactors.

We had a question over there.

KEEN: My name is Linda Keen and I'm President of the Canadian Nuclear Safety Commission. My question is for either Ambassador Lehman or for Mr. Longsworth. Can you see in the future a safeguard regime for countries who are committed to peaceful use, who have put in extensive safeguards but is more risk based than the blanket program that we see now?

LEHMAN: I'll go first and buy you some time. The classic issue is the cookie cutter problem. One size does not fit all. And there are tremendous inefficiencies and actually drawbacks in trying to make one size fit all. The result is that we spend a tremendous amount of money verifying things that are low risk and many of our arms control efforts but then can't apply what is needed to deal with areas that are of higher risk.

In 1991, our approach to dealing with North Korea, for example, was not only to have them be parties to the NPT and have an IAEA safeguards agreement, but there was the North-South Denuclearization Agreement, which would have provided for no processing, no enrichment, North or South, and for separate bi-lateral inspection regime, the idea being that North Korea was a greater risk. This was a way to enhance things.

The problem is that in many of the international fora, the question of a common standard and universality of membership drives much of the debate, much of the question when you deal with India, for example, it has to do with their desire to have a common standard for everybody which

would be fine if you could create those conditions but, in fact, things aren't the same everywhere.

However, what I have experienced is, when you get more into the, I'll use the generic phrase, cooperative threat reduction and constructive engagement, you start to deal with practical problems that inevitably have to deal with the specific differences. And in many cases, I think the great debate about the future of arms control, international constraint and cooperative threat reduction is really the great debate between how much emphasis you put on standardization of norms and how much emphasis do you put on engagement, constructive engagement.

LONGSWORTH: You know there are so many nuances with how safeguards work actually gets done at facilities and I'd just like to parrot what Ambassador Lehman said. Inspections are the tool to the end not the objective. And I think everyone would agree that the IAEA probably spends a lot of money inspecting facilities that are not really a proliferation risk. For example, in the U.S., I don't think anybody has accused the U.S. of selling plutonium or weapons on the open market. But because inspections are a tool and because of the universality principle, I think we allow inspectors to come in and we fully support that but it is a problem because it does take limited IAEA resources and the UN is inspecting facilities that don't pose a great proliferation risk. But it is the way you get other countries to open up their facilities. So it is a tool to the end.

BROOKS: Back here.

LYMAN: Hi. I'm Ed Lyman with the Union of Concerned Scientists. I wanted to ask a follow-up question to Dan Horner's question on research reactors. With all due respect, I don't think you really gave a complete answer to the question of whether exporting HEU research reactors all over the world was the best idea or not and, in fact, the other part of the answer you left out, is that not only are we taking the spent fuel back but we are persuading reactors that we had shipped that only used highly enriched uranium to convert so they no longer need to use highly enriched uranium but can use low enriched.

And that was a flaw in the original regime that we're trying to play catch up on. In that respect, I'd just like to ask you, it would be a terrible legacy, 50 years after Atoms for Peace, if our own export control law was to be significantly weakened, yet that's exactly what's going on in Congress right now, where's there's an attempt to modify the U.S. HEU export control laws to make it easier for certain countries to receive highly enriched uranium without any obligation to work with the US to convert.

And I am just wondering why the administration is not, to my knowledge, going on record and said anything about this particular question, which I think is quite important and something that my organization is fighting very hard for. So, thank you.

LONGSWORTH: Let me start at the beginning of your question and work through it. It wasn't possible to build reactors at the time with low enriched fuel to achieve what you needed to do for science, medicine, agriculture and other purposes. I wouldn't describe it as a flaw in the original approach because I think the United States took the best course available to it at the time was,

we'll send the fuel out and we'll take it back. And it's taken 50 years to start doing that but we're making progress on that.

I do want to point out, on behalf of Ambassador Brooks, it is not his program or mine that is responsible for taking those back. It is another part of DOE, but (laughter) so, for the record-- But now low enriched fuels are becoming available and it is possible to have the same nucleonics in a reactor and get the same performance with difference kinds of fuels, low enriched fuels, and we're beginning to do that.

One of the programs that we carry out is to convert these reactors as I mentioned in my remarks. With regard to the Burr, Schummer, depending on which one is being debated in the energy bill, you know, interestingly enough, we were unaware that that provision was in there. I believe we are opposed to it. Frankly, I may get in a lot of trouble here, but I think we were opposed to the Schummer amendment because we have all of those authorities that Schummer, which was the underlying provision that was amended, that it required us to take a lot of steps that aren't necessarily appropriate to have in the statute.

And so I don't know if we agree with either provision, the underlying Schummer amendment or the Burr amendment, which you refer to would weaken the Schummer provision. So I think we are opposed to the Burr, but we are also opposed to the underlying Schummer amendment, which was being modified.

BROOKS: There was a question over here but I lost where it was. Yes, sir.

POMPER: Miles Pomper from Arms Control Today. A question for either Ambassador Brooks or his Deputy-- You mentioned the additional protocol and that it might come up before the Senate in the next few weeks, what's been holding it up? It's been held up for close to a year now and my understanding is that it is infighting in the administration between the State and Defense Departments.

LONGSWORTH: President Bush has sent it to the Senate so it is pending action by the Senate Foreign Relations Committee. While they are doing that, we are having discussion within the administration on exactly how we would implement it. But it think the next step is for the Senate to hold hearings and provide its advice and consent or not provide its advice and consent.

BROOKS: The President has made it very clear on wanting to see the additional Protocol brought into effect. As to what's holding up hearings, you're talking to the wrong branch of the government when you are talking to Paul and I.

More questions. Yes, sir. Down here--

__: I was glad to hear of Mr. Sewell's proposals for cost-benefit to the public of expanding nuclear power to burn up some of these materials. It doesn't stretch my imagination very much to think that the public would also accept a certain amount of public funds going to try to purchase this material and keep it out of the hands of terrorists, if it is only a few billion dollars a

year, when the public supports hundreds of billions for defense, if the public was just explained the affect of not doing this compared to the effect of the 9/11 incident on our country.

Could somebody answer why we don't have the government proposing to spend some taxpayers' money on this in advance to get this material and then put it in reactors as we build them?

BROOKS: Well, I'll answer it. Secretary Abraham proposed and his Russian counterpart agreed well over a year ago to a parallel program that would create a strategic uranium reserve. We would purchase basically whatever the Russians would chose to sell us and the quantity is still being debated. Right now it is only a few tons a year. Blend it down and make it sort of the uranium equivalent of the strategic petroleum reserve. It would just sit there minding it's own business, but it would be in a form that would be suitable for energy us and unsuitable for weapons use.

There is dispute on the hill as to whether that is good use of public funds and I'll let you know when I see the appropriations act. But the idea is one that the President thought of a year ago and it's basically a good idea. We're also purchasing, and this is small amounts, I mean small amounts in the Russian context but large amounts in anybody else's, HEU from Russia for the handful of U.S. research reactors that have not yet been converted to low enrichment fuel. They'll be burning Russian HEU here very shortly, once again, the will of the funders permitting, and I'm pretty sure it will.

Did you have a question down here? [pause] Can we get a microphone down front?

__: Firstly, I would like to make one historical remark. Indeed, historically, all technologies have become, as they were introduced ...(inaudible) technologies, and all have proliferated in the past. So, what we're trying to do here is historically, totally, unprecedented and, therefore, one should not be surprised that it is extremely difficult. I mean that is one remark. In that sense, Administrator Longsworth gave a list of the program achievement and his note was certainly quite optimistic. And there are, indeed, many achievements to be proud of.

But I think it is a matter of the glass either being half full or half empty, namely, there have been developing many impediments and the time scale in which some of these programs have been proceeding have slipped really extremely badly. I mean the plutonium disposition has slipped very badly that one is now talking about 17 years, or whatever the number is. There have been glitches in the HEU Purchase Agreement. There are major problems in the MPC&A [Material Protection, Control and Accounting] improvement in Russia due to, on the Russian side, them not giving access sufficiently, on the American side, due to the insistence on liability protection for the American participants.

These are problems that we don't let the Americans to attend various conferences and so on and so forth. And I was wondering, whether one of the panelists can give some comments, whether there are really some major efforts being made to try to re-accelerate some of the lost time on some of these programs.

BROOKS: Let me, because I think that is really a question that is addressed to those of us who are in government. I can tell you that Secretary of Energy has been more active, as far as I'm concerned, than any Secretary in history in trying to accelerate programs and remove roadblocks I can tell you that the President has been active in pushing these. I can tell you that it was discussed with President Putin at Camp David. And so we are trying to accelerate but I think the honest answer is, it is a very slow process and a very difficult process.

I think that is going to have to be the last question. As I listen to your comments and the comments of the panel, I came to sort of three broad conclusions that I will leave with you. One is that the international regime that grew out of President Eisenhower's vision, hasn't done everything, but it's done a lot. The second is that there are lots of good ideas for the future and we ought to explore those, but all those good ideas are going to take time. And, therefore, I guess, the third is that redoubling our efforts at material protection is probably pretty important in the near term.

With that, I think what is next on your schedule is a break until four, but before you do, I wonder if you would join me in thanking our panel.

[applause]

END OF SESSION 3