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SAFEGUARDING THE NUCLEAR RENAISSANCE

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PIERRE GOLDSCHMIDT: Good afternoon, ladies and gentlemen. We have to start our session but before opening the session, I am sure you will agree to join me in expressing our deepest sympathy for the families who lost their loved one in the dramatic earthquake and tsunami that hit Japan as well as our admiration for the workers fighting to minimize the consequences of the Fukushima nuclear power plant’s accident that resulted from that.

The effects of these events on future nuclear programs worldwide are still unknown. But clearly instead of talking today about safeguarding the nuclear renaissance, we should address the question of safeguarding future nuclear developments. I think it’s a safer way to present it.

It is clear that even without a large expansion of nuclear program, the IAEA safeguard system will face new challenges and a workload that will increase faster than its resources.

Our first speaker is Jill Cooley. She is well-known. She’s the director of the division of concept and planning in the safeguard department of the IAEA. She has a huge experience – 30 years – over 30 years, I was told – over 30 years’ experience with international safeguards and she will highlight the IAEA’s department of safeguard’s vision and views on the actions that need to be taken over the next 10 years in order to increase its effectiveness and efficiency. So Jill, the floor is yours.

[00:05:10]

COOLEY: Good afternoon everyone. And thank you, Pierre, for that introduction. It’s definitely an honor to have been invited here to speak this afternoon and a pleasure to be on this panel with two of my former bosses, as well as Roger, my good colleague.

So what I would like to do today, as Pierre gave the introduction, is describe some of the important issues – strategic issues – that the department of safeguards is anticipating in the next decade-plus to come and to highlight some of our strategies for addressing them, focusing in particular on the expanded workload that we foresee.

The International Atomic Energy Agency has been working for more than five decades to help mankind enjoy the benefits of nuclear energy while at the same time minimizing the associated risks. During this time period, the IAEA’s role has grown in response to a changing world and of course the evolving needs of our member states.

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Today, the landscape is again shifting and there are many developments which highlight that evolving nature of our operating environment and will of course pose challenges to the safeguard system. And we additionally face some internal organizational challenges as well.
So all of this underscores the importance of preparing more proactively for the future by looking further into the horizon as well as continuing to improve both the effectiveness as well as the efficiency of the safeguard system in light of the growing expectations of the IAEA as well as the need to face the growing workload amidst limited resources.

The effects of the tragic events in Japan in particular on the decision of states to proceed with their nuclear power plants at this point are unknown. However, the nuclear renaissance, as Pierre indicated, is only one of the issues that’s driving the need to continue to evolve the safeguard system.

Even without a large expansion in nuclear power, the IAEA faces a growing workload and other complex challenges. So this is why two years ago in early 2009 the department — sorry, the department of safeguards — prepared its first ever long-term strategic plan to cover the 12-year period of 2012 to 2023. And this plan represents the department’s view of the necessary strategies and actions to be taken.

So let me highlight some of those as I indicated. For any organization it’s important to have a strategic vision toward which it works. At the highest level, we envision IAEA verification to contribute to a more secure world by helping to deter the proliferation of nuclear weapons and advance states’ aspirations for a nuclear weapons free world.

We would like to see the IAEA recognized as the preeminent international nuclear verification agency that has the confidence and support of the international community. And finally, as the department, we hope to have the necessary legal authority, the required technical capabilities as well as adequate resources and to work as a team to effectively and efficiently carry out the agency’s nuclear verification mission.

To work towards this vision, the department has set itself three strategic objectives which crystalize what we aim for. The first one goes to the core of our verification mission. It conveys the higher purpose of helping to deter nuclear weapons. In other words, we don’t do safeguards for the sake of safeguards. We do so in two ways: first, by providing credible assurances that states are meeting their safeguards commitments, in this way building confidence in compliance; and secondly, by detecting early the misuse of nuclear material or technology, thereby providing early warning to the international community.

The second strategic objective adds verification of nuclear arms control and disarmament as potential areas for where the agency can contribute as requested by states. Although the agency’s role in this area has been more limited, it could take on greater significance in the future given the new momentum on nuclear disarmament.
The third objective demonstrates our commitment to continual improvement and striving for excellence, thereby responding to member states’ expectations for effectiveness and efficiency. In the coming years, we will pursue these three strategic objectives in an environment that will include both challenges and opportunities.

So now let me highlight some of the strategic issues that derive mainly from developments external to the agency but which affects us greatly. As we are all aware, in recent years the nuclear nonproliferation regime has been under strain. The agency can help address this by first providing credible assurances of non-diversion in the absence of undeclared nuclear material and activities.

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Second, by addressing the current outstanding safeguards implementation issues resolving issues in Iran and Syria and be ready to resume activities in the DPRK. And third, by increasingly investing in the detection of the misuse of nuclear material or technology to alleviate proliferation concerns resulting from, for example, the possible future wider use of sensitive nuclear fuel cycle technologies and globalization.

A closely connected strategy – strategic challenge – is how we can ensure support for the IAEA’s verification mission. Given the depending divisions between IAEA member states, this affects many areas of our work, the extent to which the states grant us the legal authority and support its full implementation and efforts to strengthen it; second, how states cooperate with the agency and safeguards implementation; and third, how they back us through the implementation of safeguards through financial support. And besides carrying out its traditional safeguards, the IAEA as I noted may be expected to take on additional verification roles in the future.

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Compounding this challenge will be the projected nuclear expansion. According to IAEA data from last year, global nuclear electrical generating capacity is expected to grow somewhere between 40 percent and 120 percent by 2030. Of course, we recognize that this number is subject to constant fluctuation and may now change again given the situation in Japan. Hence, in terms of our strategic planning review, we review these projections every two years.

Should nuclear power continue to expand, this would bring many additional nuclear activities and facilities under safeguards with resulting implications. At headquarters, we will be collecting, analyzing and managing growing volumes of information and increasing our state evaluation activities. In the field, we will need to be conducting increasing numbers of inspections and install additional verification equipment.

Moreover, the IAEA’s global network of analytical laboratories – the NWALs— including the IAEA’s own safeguards analytical laboratories – will have growing numbers of samples to analyze, both nuclear material and environmental.
Because our resource constraints are unlikely to allow us to increase our activities proportionately, a basic rethink of safeguards – how we implement safeguards – is required. Indeed, we are now considering how to better prioritize our safeguards activities to focus our resource where they matter most in terms of mitigating the risk of proliferation.

I’m going to come back to this in a few moments. Besides the quantitative challenges of increasing numbers of facilities and material, the agency will also need to face the qualitative challenge of preparing to safeguard new and more advanced types of installations as the nuclear industry will continue to evolve technologically.

The third generation of water-cooled reactors are already being constructed. There is interest in new types of power reactors that are smaller in size and even mobile, including new transportable mini-reactors and floating nuclear power plants.

With respect to non-nuclear power – non-power uses of nuclear energy, the number of small- and medium-sized reactors may increase as the growing interest in their application for water desalination, heat and hydrogen production. New enrichment processes may emerge alongside or replace currently deployed commercial enrichment techniques including laser and plasma. And pyro processing may take a greater role.

As a result, the department must develop new safeguards approaches and techniques and acquire new kinds of equipment. So these are some of the strategic issues that we will face in the near and the long-term.

Now, let me turn to some of the strategies to address these, in particular our growing workload. As I already alluded to, the department is currently undertaking some important conceptual work for further evolving the safeguard system, specifically, to move away from our facility-level approaches that are driven by prescriptive criteria and are more or less one size fits all to a more flexible and customized safeguards implementation based on state-specific technical objectives.

To implement this state-level approach, we need to take full advantage of all the safeguards-relevant information available, use a broader range of state-specific factors and conduct a structured analysis if the risks and concerns for an individual state in order to determine that optimal set of activities that we need to conduct both in the field and at headquarters.

The current model that’s used for differentiating between states is based almost exclusively on the nuclear fuel cycle of a state; that is, the quantities and kinds of nuclear material and types of nuclear facilities located in the state. And this is reflected in rather mechanistic criteria.
So in other words, the larger the fuel cycle the state has, the more inspection activities we conduct. So we feel it’s really time to start considering other factors that are objective and measurable but go beyond these traditional factors. So we’re looking at, for example, a state’s legal framework for implementing safeguards, the quality and timelines of the information provided by the state, the state’s nuclear research and development and industrial capabilities, and a state’s overall transparency to provide a basis and means for assessing risk and focusing safeguards effort.

It is important that the application of safeguards remains nondiscriminatory by meeting the same overall objectives for all states. However, the effort expended and the measures to be applied can be differentiated between states with a broader look at these factors.

The ongoing analysis of all safeguards-relevant information about a state is at the heart of this state-level concept. Therefore, the agency will continue to diversify sources of information while also assessing its veracity and make maximum use of all this information, from state declarations to the results of inspection activities to open source information.

It will evaluate information, encouraging staff to become more analytic – sorry, analytical in their work and increasing collaborative analysis through state evaluation groups. It’s also very important that we enhance our information and knowledge sharing within the department.

Technology is also another major enabler for the agency’s verification work and an important means for improving both effectiveness and efficiency. The department will use the most appropriate cost-effective techniques for safeguards implementation. We will continually strive to improve our safeguards measures and techniques to this end.

It’s also important that the agency maintain its vital safeguards analytical infrastructure so that the department has timely, reliable results of nuclear material and environmental sample analysis. And to this end, we have a very large project underway at the agency to expand the agency’s environmental sampling analysis capabilities as well as to build a new nuclear material laboratory.

The department will also seek to stay abreast of scientific and technological developments and use promising innovations with significant safeguards application or other benefit to the department in a timely manner. We’ve already been developing effective new and novel technologies for the detection of undeclared nuclear material and activities.
More generally, we will strengthen our technology foresight to identify future innovations with potential for verification purposes, and in particular, employ a mission-driven R&D plan that will cover the same period as our long-term strategic plan.

It’s also important that the agency prepare for new technological verification challenges. We need to be ready to safeguard new types of nuclear facilities, including non-prescribed military activities – for example, naval propulsion fuel. We also need to – we need to be ready to provide technical input on the verification of aspects of new arms control and disarmament initiatives and carry out their implementation as requested.

We’ve already been requested to assist in the independent verification of the implementation of the U.S.-Russia Plutonium Disposition Management Agreement – the PMDA – and are currently working on the associated legal agreement between the IAEA, Russia and the United States.

The department will also rely on information and communication technologies to increase the efficiency of its daily operations, both in the field and at headquarters. At headquarters, we use technical tools for the search, collection, analysis and processing of safeguards-related information to be able to store and effectively utilize the knowledge ensuring from this information, we are deploying modern and secure safeguards information architecture.

These are important technological requirements as we move to the safeguard system that is fully information-driven. We will also continue to make use of the agency’s comparative advantage of having unique rights of access to information and to locations. We will certainly rely on our presence in the field – boots on the ground, as they say – and build on this strength.

However, in the field, technology will help us make optimum use of inspectors through, for example, increased use of remote technologies and secure communication technologies as well as user-friendly multifunctional field equipment.

Our legal authority is the basis for all we do. So it’s another major strategic enabler for our work. Ideally, as I indicated, we would like to have legal authority that is universal, unequivocal, fully utilized and unchallenged and which is responsive to evolving proliferation challenges. To help us get there, we will continue to promote the conclusion of comprehensive safeguards agreements and additional protocols and the rescission or modification of small quantities protocols through our outreach efforts to states.

Wider adherence to the additional protocol is of particular importance. In this context, we will continue to provide guidance and training to states, particularly the newcomers to nuclear power, on the implementation of their safeguards obligations. This is especially important in light of our growing overall workload.
This will help to ensure that we make full use of the IAEA legal authority. Looking further into the horizon, we need to keep this legal authority under continual review to ensure that it stays responsive to proliferation challenges as they emerge and to inform member states of any potential vulnerabilities.

We also rely on state support in the implementation of safeguards. Nuclear nonproliferation is a collective global effort which is more likely to succeed when all members of the international community work jointly together. Likewise, the IAEA is likely to be more successful when it works in partnership with states.

The growing safeguards workload requires greater efficiency in safeguards implementation. So having the cooperation between the IAEA and states is of growing importance. Hence, we will work to ensure that states have competent and independent state safeguards authorities and support states in making their state or regional systems of accounting for control of nuclear material – SSACs and RSACs – more effective.

And where possible, we will gain efficiencies by greater use of effective state or regional systems. Moreover, we will reach out to states to increase the sharing of safeguards-relevant information on a voluntary basis – in particular, to strengthen the IAEA’s capabilities to detect undeclared activities.

And in this regard, our lunchtime speaker certainly gave us a fantastic presentation on the relevance and importance of sharing trade-related information, both procurement inquiries as well as denials, and the role of the IAEA in evaluating this. And it was a great advertisement for the trade analysis activity we have going on in our outreach program where we reach out to industry and states who are sharing on a voluntary basis this information with us. So we will continue to pursue that angle.

The nuclear industry is also a major stakeholder in IAEA verification whose role is only likely to grow in the future. Given the projected nuclear expansion, it’s very important that nuclear reactors and other nuclear fuel cycle facilities are designed and constructed with safeguards in mind to minimize intrusions from and the cost of safeguards implementation as well as to facilitate safeguards effectiveness. Hence, the department of safeguards is actively promoting and guiding the states and industry in making their nuclear facilities safeguards friendly.

We are also contributing to other efforts – for example, the IAEA’s international project on innovative reactors and fuel cycles – INPRO – and the generation for international forum – to make nuclear facilities less attractive for developing fissile material for nuclear weapons.
And finally, safeguards play an important role in building confidence among states. So it really matters how we report the results of our safeguards activities. Hence, the department will attach greater importance to improving the openness and quality of the IAEA’s reporting and other communications on safeguards and verification matters. This includes expanding the state-level information in our annual safeguards implementation report, as member states have requested.

And this also includes including more information on a state-by-state basis. The department will also build states’ knowledge of the processes for drawing safeguards conclusions to enhance their understanding of and confidence in the IAEA’s assurances. We will also move to inform states and other stakeholders of the challenges to the IAEA safeguards system, explaining why the system needs to continually evolve and then seek support from states in strengthening it.

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The IAEA’s verification activities are likely to continue to draw public interest and be reported on by the media. So we will play our part in trying to ensure through effective public communication that the IAEA’s verification role and activities are understood and portrayed accurately. So these are all important strategies for building support for the IAEA safeguard system and more broadly for the IAEA’s verification mission. Thank you. (Applause.)

GOLDSCHMIDT: Thank you. Thank you, Jill, for this very extensive summary of the actions that the safeguard department intends to take in the future. And our next speaker is Roger Howsley. He is the executive director of WINS, the World Institute for Nuclear Security, also based in Vienna.

Roger is very young. So he has only 25 years of international experience relating to nuclear nonproliferation and security across the fuel cycle. Let me just add that he has been between 2001 and 2010 a member of the standing advisory group on safeguards implementation which advised the director-general of the IAEA on safeguards implementation issues. Roger?

HOWSLEY: Thank you, Pierre. I’d like to start by saying how much I agree with what Jill has just said and that’s not because we compared notes. But I suspect we have begun to understand how we each think over the years. But I just want to cover four points. Crises in the agency and in the nuclear industry will come and go over the next 20 years. We know what the problems are at the moment. They’ll probably be different in 10 years’ time. So I don’t want to talk about those types of things.

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But I want to really give you my view of four things the agency should do – I’m talking about the department of safeguards – which would change the way – I believe that the way the agency interacts with both its member states and facility management. The four things are to adopt a risk management approach – and Jill
touched on that – secondly, to ensure that its processes are transparent and there is state-by-state reporting – and Jill mentioned that.

Third, efficiency and to understand that time is money – and Jill kind of alluded to that but I think I’d like to go a bit further. And fourthly, the lunchtime speaker I thought said a lot of great things and I want to talk about governance and how to encourage that so that the agency works in partnership to get what it needs to be done.

So I’ve put this simple slide up here. Over the years, before I – well, whilst I was on the SAGSI and for a long time before that I was the director of safeguards for British Nuclear Fuel. So we had a lot of nuclear fuel cycle facilities, some of which were inspected by the agency and all of which pretty much were inspected by Euratom, which is the European-based equivalent.

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So we spent a long time thinking about safeguards approaches and the differences between Euratom and the agency and the similarities and so forth. But one thing I used to hear all the time was there’s no point inspecting nuclear weapons states because they’ve already proliferated. It’s just a waste of resources. So unless the agency has some purpose, like it needs to learn how to safeguard enrichment facilities, there’s really no point in doing it.

I was never – I never believed that because that straight away is discriminatory because nuclear weapon states have civil programs. So why are they not inspected but the ones in Belgium and somewhere else and somewhere else and Japan are inspected? That doesn’t seem to be equitable.

And I think you can look at it from another point of view which is there’s no point inspecting in some non-nuclear weapon states because it’s inconceivable that they would proliferate. And you can probably think through countries where it is inconceivable. So the question really is what makes it inconceivable. If we start talking about these state-level factors, I would argue that nuclear weapon states have a state-level factor which is that they have nuclear weapons.

But there are lots of other factors and I think what we need to be sure about is that this information – that the way in which state-level factors are established is published. I think as Jill mentioned, it is very much about risk management. It’s not about inspecting all facilities in every country the same way, which used to happen. The target is to be equitable and effective but not to generative so-called equal misery.

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And I think that there are ways – common ways of financial auditing which means that you have a relatively light touch unless you have reason to believe that the accounts of the company are possibly suspect when you would increase the amount of – it would become more intrusive and you would have a much more intensive verification regime.
And I think there are ideas around that where you back off from – you know, there’s some kind of feedback mechanism where those states that have effective safeguards programs that are transparent, are willing to publish more information, that there’s some feedback so they get less intense verification but that the agency reserves the right to do it whenever it needs to.

We talked about – or Jill talked about state-by-state reporting. I’ve always had a problem with the fact that the safeguards implementation report is so coded that it’s incredibly difficult to understand what’s going on. And my view certainly is that the IAEA, as far as I’m aware, is paid for by taxpayers’ money. Taxpayers being members of the public expect the agency to provide some confidence.

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The nuclear industry – the modern nuclear industry as we know only can operate with the consent of political and public organizations. That’s to say that the nuclear weapons programs in the ’40s where states determined exactly what was going to happen – that times are changing. Unless you have political and public support for nuclear power, it doesn’t happen.

So I do think the agency’s primary role is to provide confidence through what it does and the only way you can provide confidence is by telling people what you are doing and how you’re doing it and what your conclusions are. You can’t produce reports which say, you know, state A did this and state B did that and state C did something else. It’s ridiculous.

So people need to understand what the state-level factors are, to publish the thinking, the processes and the requirements and to produce a state-by-state register almost every year which will highlight the interactions that the agency has with that state.

And I’ve never really understood either this argument about the safeguards information being confidential. Euratom, when I was with BNFL, regularly used to publish it and if they didn’t like something at one of our facilities, they’d say so. And you know, it didn’t create the end of the world. I mean, it used to cause embarrassment to us as a company if they were critical but we did something about it. So I think publicity is a good idea.

And the other thing I’ve noted is that we get to hear pretty much everything that’s going on about those countries where there are safeguards problems, either because the board papers are put onto the Web the week afterwards or whatever but we don’t get to hear about some of these other things. And I think that without this transparency, things do fester for year after year after year.

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So one way to look at this would be to build up a state-by-state index. Some countries already publish all of their safeguards information. I think Finland does; Argentina does; Canada does. There are other countries that do. And if you look further afield than nuclear – because we always tend to focus on nuclear – if you look at civil aviation, there’s the International Civil Aviation Organization that has a constitution very similar to the IAEA, something like 190 member states, a board of governors of 35, a verification agency.

And they publish reports on aviation safety and if you stop and read them they are quite shocking. Some countries have very, very poor air traffic control. They have very poor training of their state system for aviation of pilots and for ground crew. You know, you read on and on and you think, my goodness, the public really ought to be alarmed by this.

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Well, I think some of those reports into aviation safety are a good deal more damning than anything the agency might put out about some of its interactions with member states. So I don’t understand why there’s this hang-up over confidentiality.

The ICAO uses eight audit criteria and they publish the results for each state and they benchmark them against the international standards and they publish their recommendations. Then a year later they tell you whether or not the state’s done them or not. It seems a good system to me and it’s certainly brought about improvements.

So one thing the agency could do is think about the criteria that it would use to assess a state’s performance. And here are just some ideas about what types of safeguards agreements there are, the nature of the facility attachments, the quality of the state stem of accounting control, timeliness and quality of data reported.

Now, in doing this, what’s going to happen is that states are going to argue about the results. And they’re also going to draw attention to agency deficiencies. And we shouldn’t think that everything the agency does is perfect. And I know when we negotiated facility attachments with the agency we used to get frustrated by how long that took. So there are certainly improvements on both sides. But that’s no bad thing because you’re looking for overall improvements.

And I think – and I’m realistic enough to understand the agency probably couldn’t publish this index. But I don’t see why somebody else couldn’t. You get indices for everything these days, whether it’s the level of child poverty or corruption or you name it. You can go onto the Web and find state-level indices. So I think this is something that would help.

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Thirdly, efficiency – that time is money. The IAEA is part of the U.N. family. It is constrained in many of the things it does in terms of state relations, et cetera, and employment. But I do think – and I think there are signs
of this – that the agency really just shouldn’t assume that because people are going to build more reactors it automatically needs an increase in its budget. It may well do.

But I think the first thing to do is actually to develop a culture of efficiency within the organization rather than a culture of really always looking to do more work. More work doesn’t necessarily mean better results.

So I think there are lots of ways that that could happen and the first thing to do is to introduce a recognition, or rather a system within the agency which allows time and resources to be properly recorded and allocated. In the organization I run, we do that every 30 minutes. And I don’t see why other organizations can’t do it.

So if you’re revising one of the safeguards documents, the first question should be how much does it cost to do this. People should think about the time they put into things as a cost and that way by having strategic objectives – which Jill has outlined – and by dividing up who’s accountable for what and what your targets are and then allocating money against those targets, you can really begin to get a control over what’s going on.

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And I think in any organization, there should be targets year-on-year to say 5 percent or to become more efficient by 5 percent. That doesn’t mean a cut of the budget. It just means efficiency, which probably would then mean that you’ve got time to do some of these other tasks.

Finally, governance – and we heard about this at lunchtime. I’ve received a number of questionnaires over the last few years from organizations who are trying to promote governance and some are quite good and a lot of them ask the industries the wrong questions because when I was a previous director in the industry, if we were asked: does your company support the wider nonproliferation regime – you don’t know what you’re being asked.

You don’t know whether if you tick the box and say, yes, it’s suddenly going to cost you a lot of money or something. So a lot of the questions are badly thought through. And I do think that there’s an advantage to working with some leaders of industry to try and identify the right questions to ask.

And again, I’m all for publishing the results. We should be getting someone to – the gentleman who talked at lunchtime – I thought he was doing a fine job. But his work and his thought process and his leadership will be for nothing unless someone incentivize him to keep doing it. He talked about why couldn’t he get fast track on export controls. Why not?

I mean, we need to help the people who do the right things because if he just gets left, apart from appearing in a few conferences, eventually he’ll stop doing it or other people won’t do it, which is what we’re all hoping will happen.
We should look outside the nuclear industry. The World Business Council for Sustainability Development is a CEO-led organization which is looking to see how it can promote political processes and political objectives, getting rid of child labor, all those kinds of things.

And I think we should look at what they’re doing and get our industries to think about doing the same. We should encourage corporate social responsibility reporting, come back to the main targets and indices that we’re looking for and publish the lists. So if AREVA is doing 10 of the right things on the list, publish it. If they’re doing two out of 10, publish it because those are the things that will generate interest among CEOs and the company leadership because no CEO wants to be at the bottom of a list.

And I think there are lots of other things we could do. One is to start a debate about many companies – engineering companies will work both for the civil sector and the defense sector. They really aren’t bothered. Work is work is work. But it might be interesting to start a debate and see which companies might refuse to work for nuclear weapons contracts because that then again is forming kind of an us-and-them type issue. And that might help.

And finally, I think that there really is a need to improve the competency and professionalism of a lot of people who work in the safeguards-related areas. I’m not talking about the agency now specifically. But there is no competency standard.

Anybody can go into safeguards having had no training at all. You can’t do that in safety – nuclear safety. You can in nuclear security, funnily enough, unless you’re a guard. But you can be a senior security management without any security competencies or training at all.

And again, I think that’s something that we can do because if industry becomes more competent and understands what the agency’s mission is, then I think it will make it better all around. So with that, I’d like to conclude my remarks. Thank you. (Applause.)

GOLDSCHMIDT: Thank you, Roger. I’m sure we will have a heated debate. Our last speaker is Olli Heinonen. He recently joined the Harvard Belfer Center but before that he has been working for 27 years with the IAEA in the safeguard department and he has been the head of that department for five years. I have always considered Olli as being the detective number one in illicit trade activities.

HEINONEN: Good, thank you. Dear friends and colleagues, nice to be here. And actually I have been asked to do a somewhat different talk and to pick up a couple of problem cases and to be provocative. That was an
email from, you know, George Perkovich. I don’t know whether I can be provocative but, you know, when we talk about the DPRK and what DPRK has done, maybe they do it on behalf of me. (Laughter.)

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Because – okay, this goes – let’s look what happened since 1992 when DPRK concluded a comprehensive safeguards agreement with the IAEA and what we have today. DPRK has uranium enrichment capability. We saw from the results of the visit of Sieg Hecker that they have 2,000 new centrifuges that are spinning, mostly likely enriching.

If you look at the capability of those centrifuges as they were told to Sieg, they are able to produce 1.7 tons, so 3.5, 4 percent enriched uranium per year, if they perform the way it was described. And if you put their additional 700 or 800 centrifuges of similar type, you are able to produce something like 330 or (3)40 kilos of highly enriched uranium per year and that is an achievement.

Since 1992, they have also mastered plutonium metal production. That was used in their two nuclear explosives. They have somewhere there a place to produce uranium hexafluoride. We don’t know where it is. They have done a lot of broad proliferation activities. They have exported uranium hexafluoride to Libya, most likely. They probably were involved in this bombed reactor in al-Kibar or Deir ez-Zor in Syria.

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They withdrew from the NPT, setting a very bad precedent. And they have done two nuclear explosion tests. So what’s the lesson learned? First thing is that we have to look at the IAEA mandate which has been very limited in this case. When it all started, it was very enforced. In 1992, comprehensive safeguards agreement enforced. The IAEA had a new fresh drive based on the experiences from Iran. We were embarking for verification of correctness and completeness. We didn’t even need those days for that purpose additional protocol. Everything was there.

Then things got more difficult. DPRK reduced their cooperation and I don’t go into all details. But then in 1994, a Korean framework was concluded between the U.S. and the DPRK and that put a lot of limitations to the IAEA safeguards because normally under comprehensive safeguards agreement, all nuclear material in all peaceful activities is subject to the IAEA safeguards.

But here the work was limited only to Yongbyon, to graphite moderated reactors and related facilities. Nothing else were, with the exception of those few locations which DPRK had said that particular nuclear material exists.

[00:47:11]
The IAEA was allowed to verify the declared material but not to look at the history to come to the conclusion whether all material indeed has been declared. Well, this went until end of 2002 when the IAEA was after certain disputes expelled from North Korea. Then was the first nuclear test and in 2007, a monitoring agreement between DPRK and the so-called – in a framework of so-called Six Party Talks was concluded and the IAEA verification scheme was further limited. 

Not anymore any verification of nuclear material – just to see that the nuclear installations in Yongbyon only were shut down and then that they were dismantled. There was no access rights outside of Yongbyon complex and even the original facilities, like IRT reactor, reactor critical assembly, et cetera, were actually excluded. So IAEA has not verified the highly-enriched uranium in IRT reactors since 2002.

So then let’s go to the implications. There is one more setback which we need to look. In 1991, North and South Korea concluded what is called the North-South Joint Statement which stipulates that there’s no reprocessing and no uranium enrichment in Korean peninsula and all the nuclear weapons will be removed.

[00:48:51]

And actually that’s what the U.S. did. So all the tactical weapons which were at that point of time employed in the Korean peninsula were removed and uranium or spent fuel reprocessing stopped in the DPRK. But DPRK has now changed its mind. Mindset is anew.

If you go to the statements in last few months, they consider that this denuclearization is equal to disarmament, which means that removal of nuclear weapons, removal of U.S. nuclear weapons from the Korean peninsula plus also proscribing the so-called nuclear umbrella.

But and this is very similar to the statement of for example Non-Aligned Movement, which DPRK is not member or Iran, that it has the right for civilian nuclear energy including reprocessing and enrichment as long as it goes for civilian purposes. So this is a huge change from 1991.

So what are the implications? Let’s go to the consequences. First of all, DPRK considers that it’s a nuclear weapon state. That’s clear from their statements. This has resulted counterarguments particularly in South Korea asking – some corners are asking to reintroduce U.S. nuclear weapons to Korean peninsula which is a very adverse effect if you look at the overall security in that area.

[00:50:30]

DPRK has also found that actually nuclear deterrent is valuable. And you just go to the statement which they did a couple of days ago about Libya, making a reference to nuclear disarmament in Libya, saying that peace can only be preserved when one builds on one’s own strength, meaning nuclear.
So here we are. What to do? On top of that, the whole international verification regime is eroded. DPRK doesn’t heed to any of the Security Council resolutions. IAEA mandate got limited. Now, it’s out anyway and the withdrawal from the NPT set a very bad example for future proliferators and it has been able to build – at least to certain corners of the world – the idea that actually nuclear deterrence even in this small scale works and brings benefits.

There has been also – let’s be honest – positive developments. During this period 1994 to 2002, no new plutonium was produced in North Korea. We can say today that the declared fuel fabrication plant in Yongbyon is practically dismantled. So they cannot produce fuel for – (inaudible) – reactor. Also the reactor itself to a great extent has been dismantled. And maybe the last positive sign is that they are ready for discussions now. The problem is the other side of the table, the other five parties which don’t feel that way.

[00:52:15]

So if we now look just from the verification point of view that what should we do next. Whatever it comes, the next verification regime needs to be much more robust. It has to cover all nuclear material, all installations in DPRK. It should have a clear steps and red lines covering all nuclear materials and activities when they are declared. The international community and the IEA needs a fully updated declaration from the very beginning and not this kind phased things that come piece-by-piece.

And then, every step of this verification needs to tie to red lines plus perhaps some of the confidence building message such as the disablement of some capabilities and capacities which are unnecessary for a non-nuclear weapon state but also perhaps bring new technology so that they can maintain their nuclear program and make it at least safer.

And I think that I end up here by citing something from Einstein which is that the definition of insanity is to do the same thing over and over again expecting other results. I think we need to change the system if we want to have a nexus in this corner of the world and I think we need it. Thank you. (Applause.)

GOLDSCHMIDT: Thank you, Olli. Now, we are opening the session to the debate with the audience. So please identify you and come and ask question at the micro here in the middle I think is the easiest way to do it and we’ll first – and say to whom you’re addressing your question.

[00:54:15]

Q: Hi, I’m Houston Wood, University of Virginia. I enjoyed all three talks.

GOLDSCHMIDT: Speak closer into the micro please.
Q: Okay. I enjoyed all three talks. But I wanted to direct this to Olli. You know, this is maybe a little bit harebrained but when Sig Hecker when to DPRK and they showed him their gas centrifuge plant, he didn’t see any cylinders and uranium hexafluoride. He did not touch the casings to see if there was something moving inside.

So this could be sort of a deception. We don’t have any proof yet that they are actually running centrifuges in this facility and enriching uranium. This is my optimistic side. So until we know they’ve actually produced uranium, I’m kind of holding it off and waiting to see that because the North Koreans, from my experience with them, have behaved in rather bizarre ways.

If you remember in October of 2002 they said they had gas centrifuges. By January of 2003 they said they didn’t and they denied it up until very, very recently. So this is just a comment on this DPRK mystery. So if you have anything to say to that more I would appreciate it.

[00:55:30]

GOLDSCHMIDT: Olli?

HEINONEN: Thank you, Houston. Let’s start from the history from the DPRK. Most of the time, they do what they say. And I think that this would be the first exception from that rule if they don’t have those centrifuges. So I think that we have all the reasons to believe and if you look the deliveries of material or statements of President Musharraf and Pakistan, I think we have all reasons to believe that there are centrifuges.

And when IAEA will be invited there, there will be centrifuges which are operating. Direct evidence about UF6 production is not there but if you look again at the infrastructure, most likely Libya got their UF6 from North Korea. There are supporting information to that. DPRK has acquired quite a lot of equipment and infrastructure which is relevant for centrifuge, either production – UF6 production, let’s say UF6 cylinders, high strength aluminum, maraging steel and – (inaudible) – et cetera and over extended period of time.

So I would be more inclined to be prepared for the first verse and for the challenge which is there rather than to find out a year from now or two years from now that actually they had them.

[00:57:05]

GOLDSCHMIDT: So a less optimistic view. Next question?

Q: Thanks. I’m Trevor Findlay from the Canadian Centre for Treaty Compliance at Carton University in Canada. Jill, thank you very much for the rundown on the strategic plan. I thought that was a very impressive document. Could I ask you three questions about it?
One in terms of the human resources – we hear that there’s to be a mass retirement of inspectors and other expert staff about now. I’m wondering how the agency will cope in terms of human resources to implement the strategic plan.

Secondly, what’s the relationship of the plan to the budgetary process because it’s all very well to have strategic goals but unless they’re translated to budgetary priorities we don’t get anywhere. And thirdly just in terms of transparency, the strategic plan is a publicly available document I’m wondering? Thanks.

COOLEY: Thank you, Trevor. Okay, with regard to the human resources, because of the limited time, I didn’t present everything. But we recognize that the human resource issue is definitely a strategic issue that we’re going to have to deal with internally. With regard to the retirements, we’ve seen quite a few retirements in the last couple of years of the senior management, section heads and directors, in the department. And we’re kind of leveling off.

But that still says that we have to be having definitely strategies to bring on the new inspectors and staff that we recruit to do training appropriately across the department and to change how we do our courses and curriculum and share knowledge. As I indicated, it’s very important.

So we have been introducing new training courses internally that focus on this more analysis of all this information that we get, combining – it used to be that we really focused our training for just inspectors.

And now we are – because we have to have such a process – a collaborative process across all the staff, combining different kinds of courses. And our next mode is to go to a really formalized curriculum so that staff can advance. And so we’ve got some clear strategies on how to do that as well as for recruitment and how we do that as well externally.

We continue to have an issue with being able to recruit people that are ready to do safeguards right from the street and so hence the training. And of course we are also competing with other industries for the basic nuclear staff. So that’s clearly a strategy.

With regard to the budget, the relationship of the strategic plan to the budget, that was one of the – actually one of the reasons that we proceeded with our strategic plan, is in order to be able to provide better information to our member states in terms of the program and budget and the medium-term strategy.

And in fact, the medium-term strategy, which is an agency document that the member states prepare for a six-year period – three biennium – we were able to introduce a lot of the things – the higher level strategies that we
reflected in our strategic plan that were reflected in the medium-term strategy that was approved by the board in December for 2012, 2017.

And as well we used our strategic plan to provide input for the 2012-2013 budget to set the priorities. And of course that’s – one of the intents is to serve as a framework for setting priorities within the department and being able to provide that information to member states. And so we’re trying to do everything in that framework.

With regard to transparency and is this plan available, at this point this is our internal document that we’re using it as a tool. But the intent – we’ve been making presentations on it. It was presented formally at our safeguard symposium last November. But the intent is to prepare an external version that we are working on as we speak to be able to be given to member states. So we intend to do that because that’s one of our strategies, transparency. Thanks.

[01:01:20]

GOLDSCHMIDT: Jill, you mean – you are speaking about the safeguards implementation report, right?

COOLEY: No, I’m talking about our strategic plan.

GOLDSCHMIDT: But reporting on states, as you mentioned, should be included in the annual safeguards implementation report, which is to a large extent restricted to member states. So it’s still not completely publicly available, right?

COOLEY: Correct.

GOLDSCHMIDT: Yeah.

COOLEY: The safeguards implementation report is a board report with restricted distribution. However, the public portion of it, which is the front piece, is getting longer and longer. And this year, Roger – I have to tell you, you will see a great difference in the SIR.

The public portion of it will also – is highlighting some of our problem areas in safeguards implementation, which has always been in the back of the report.

And many of the state-by-state details that were published in this confidential safeguards technical report that even few member states even requested, a lot of that information we determined is not confidential and has been brought up into the SIR. So that transparency is there. I think what Trevor was referring to is in terms of our strategic plan. So that’s another aspect.

[01:02:37]
GOLDSCHMIDT: Okay. Next question?

Q: Hi, Mark Goodman, Department of State. I had a question. I guess it’s for Jill and Olli. Both of you talked about – in different terms about the agency’s authority. Jill, you talked about needing to expand the agency’s authority, and Olli, you talked about the authority in North Korea. I want to get to the question of what do you mean by the authority. You know, one term – one way of thinking about it is in terms of the legal authority, the legal basis for requesting certain things.

Another authority would be sort of the political support that member states provide in recognizing the authority. And a third one would be the self-confidence within the secretariat to act with authority. So for example, just to take a random example, requesting a special inspection in Syria. (Laughter.)

So what – just a random one. Which – how do you see the interaction between these three aspects of authority and what’s more important? And how does the fact that you’re dealing with some of these tough cases in public under the spotlight affect your ability to use your authority?

[01:04:00]

HEINONEN: First of all, my personal view is that, you know, you should not scream additional authority if you don’t use already the authorities which you have to their full extent. So therefore, I think that like a special inspection, you can – you can ask it and I think we should set the bar much lower what it had in the past.

Then, these legal authorities, they are also sometimes – you know, the way you read the law. My father was a lawyer and he used to say that the law is not how it is written. It is how it is read. And I think that this is something, you know, what I think the Secretariat should do, be a bit more proactive and more courageous.

On the other hand, you understand when you are a bureaucrat in an organization that you want to have a backup if you run into trouble and this backing up comes only from the board of governors and the member states of the IAEA.

[01:05:00]

So when you push, you need to make sure that you will have an adequate support because if you end up, let’s say, in the board of governors and there is a voting and the board has 34 members I think. If you get 15 favor, 10 abstaining and five just don’t, you know, show their – or they are against it.

So then this can be interpreted in very many ways. Someone can say that, you know, they didn’t even get half of the board to support because there were, you know, 15 or 10 didn’t support and, you know, the five were against it. So one has to be careful.
These sorts of things – the way I see it, you know, how it happened, for example with North Korea in 1992. So you need to have a leadership among the member states or some country who takes it and sets the scheme in such a way that Secretariat can cope.

But on the other hand, Secretariat has a lot of authorities. So, one can ask a lot of questions because – for example, related to the weaponization and things like that because very often they are indications on possible undeclared activities which may also include nuclear materials.

[01:06:23]

Then we have a classical example of this, how the interpretations can be done, and here I refer to John Carlson who was talking in the other room over there – is that when you look at the NPT, it sets the objective in Article 3.

The objective is to prevent diversion of nuclear energy to nuclear weapons. So the objective is prevention and nuclear energy. It doesn’t talk about detection and it doesn’t talk about nuclear material, while you go to the INFCIRC/153 safeguard, there it’s actually nuclear material and detection

So if you take it literally, there are some other qualifications in the NPT Article 3. If you take literally that if you find that there was a diversion, actually you failed in your first objective because you were not able to prevent it. So I think that there might be room for reinterpretation. Who can do it? In principle it will be the NPT treaty parties. But that works with consensus, so all 180 or 190 states have to agree to that. So I don’t think that will fly.

Then IAEA board of governors probably have the same problem. There will be one or two who will be against it. So the only vehicle which can do such kind of interpretation in some form is I think U.N. Security Council, do something similar to 1540 or 1877 and put an interpretation or a request (ph) there. And then that would be I think helpful for the IAEA Secretariat and push them a little bit more.

GOLDSCHMIDT: Jill?

[01:08:15]

COOLEY: I don’t have much to add to that. I agree with what Olli’s been saying. I think that we’re not looking at this point for additional legal authority, that we feel that there is room in how we’ve been implementing the existing legal authority in terms of fully utilizing the provisions that we have in the comprehensive safeguards agreements in particular.
As well, this effort to get the rest of the states that have signed the NPT to bring into force their comprehensive safeguards agreements, and more importantly as I noted, extending the adherence to the additional protocol gives us additional legal authority.

And then of course it’s this issue of having the board support. We always say that we’re a technical organization but working in a political framework and I know, Mark, that you’ve been in board meetings and you know how that over the last five years in particular the divisions are great. And so we really need to have this backing from the member states, as Olli pointed out.

GOLDSCHMIDT: Yeah, thank you, Jill. I think this is a very important message that the secretariat can do a lot of things. But if they don’t feel that the board is going to support their proposals, they are not going to take the risk. And so, in the end, what should be technical becomes political. Yes?

Q: Thank you. Maria Sultan from South Asian Strategic Stability Institute. My question is to the panel. Nuclear industry is certainly global. However, right now we’re going through a transitional period in which we have seen the structural decay of the NPT per se, whether it’s a question of DPRK or whether it’s a question of the India-U.S. nuclear deal and now the U.S. proposal of actually including India in the NSG, or for that matter the case which we are seeing in the case of Japan.

The question which I want to ask the panel is how do you come about having an international regulatory framework which would be both responsive to the nuclear energy needs on the one side and on the other hand preserve a nonproliferation regime which would balance this out because at this moment you cannot see that regime developing on either side, either the nuclear energy side developing as fast as you want with being safe, secure and efficient, and on the other hand, having a nuclear nonproliferation policy which is based on the existing constellation of various nonproliferation tools and measures. So how do you deal with the challenge and in your opinion what should be the new criteria because certainly we require a new one.

HEINONEN: Okay, I’ll start, yeah? Well, it’s very simple, yeah. (Laughter.) I think we can – I think – so a pretty good question, you know? We can look at it from the various angles and there are many various medicines. One certainly – so certainly we want to universalize the NPT. There are actually only 20 countries which are not yet signed and ratified it and then three of them – out of them are which I call problem cases.

So I would phrase it like Mohamed ElBaradei a few years ago that should we wait next 20 or 30 years to have those also in the NPT or should we do something else and to take a pragmatic step-by-step process and bring them to this nonproliferation system which has many other elements than for example NPT itself.
We have nuclear security summit. We have – (inaudible) – NSG and we have hopefully cutoff coming soon. So maybe it’s better to work with those cases, each of them individually and bring them to be part of the family and have as an ultimate goal zero nuclear weapons in the world, as the U.S. president said in Prague speech.

And then you perhaps go less dogmatically and try to work for that direction. I think for me this is the best way. Then, when I look in the – well, it certainly brings up for the IAEA additional things. But since the plutonium is there in perpetuity under IAEA safeguards, at least that then is away from any nuclear weapons purposes.

And then one has to bring India and Pakistan to talk about cutoff. Israel is then an entirely different thing because that is to do with how we deal with the Middle East and the answer will be there in how we settle the weapons of mass destruction zone in the Middle East and it has nothing to do really with NPT per se or NSG.

[01:13:16]

It’s a different problem which needs to be solved. So therefore I would personally, you know, advocate to use those various strategies and get to the ultimate goal until one day, probably a long time, there will be this happy family without nuclear weapons in this world and everyone is in NPT. But it will take some time.

GOLDSCHMIDT: Olli, yes, and I think also people are not giving sufficient attention to the PMDA, the Plutonium Management and Disposition Agreement. We speak about the New START agreement and then people complain that this is not enough in disarmament. But the PMDA where the agency is supposed to work with Russia and the U.S.is about together 64 tons of plutonium that would become under control of the IAEA and irreversibly. So I think this is a major step. So I think people are not always fair about the progress that is made in the disarmament field.

HEINONEN: I agree with that. We have this thing – highly-enriched uranium which has been –

GOLDSCHMIDT: Downgraded.

HEINONEN: Downgraded and it has been used here in the U.S. to produce electricity. I think something like 10 percent of the U.S. electricity in the last few years has been used actually – produced using this old nuclear weapons material from Russia.

[01:14:45]

And then we have those tons of plutonium which are sitting Savannah River under IAEA and they will never go back to any military purpose. So there are achievements. But well, 60 tons is important and it also paves way to the other parties who argue that since they don’t see any progress made in certain nuclear weapon states – so those five who had – so therefore they don’t want to give their security away. So you need to do many things at the same time.
GOLDSCHMIDT: Next question?

Q: Hi, my name is Melissa Hanham. I’m from the James Martin Center on Nonproliferation Studies. My question’s on North Korea. I wondered the amount of time between when we first saw satellite imagery of construction at Yongbyon and Sig Hecker’s visit was relatively short and I wondered if you could share your thoughts on how items were procured and moved across the border into North Korea and staged and eventually set up in that short amount of time.

[01:15:50]

HEINONEN: Well, I think I could do battle with Houston now. But I can tell my own view. That is the end part of the enrichment, what we see in Yongbyon because before when they announced in April 2008 that they planned to proceed now with this enrichment program so to say, that certainly preceded with some R&D which has taken somewhere in a place which we don’t know.

And then you go back to the – for example – the memoirs of President Musharraf where he keeps a date and they gave certain centrifuges to North Korea which actually are somewhat different. I think at last memoirs, they at least are not accurate. The numbers were different types and different dates.

But most likely this program has been like any other program started 10 years ago, then in the beginning a small testing – actually 15 years ago – small machine testing, single machine testing, small cascades. Whether they took place in North Korea, whether they took place somewhere else we don’t know at this point of time.

And now we see then the part which they want to show. And they probably – to put it up so quickly it’s obvious that there must have been some preceding work. And then you look this one and you see that there has been parallel work related to uranium hexafluoride production, which practically only uses enrichment either in North Korea or elsewhere.

[01:17:32]

So I think that this makes it very clear to me that there has been a cohesive program since 10 or 15 years. And I remember from 1992 when the comprehensive safeguards agreement entered into force. So Hans Blix asked in one of the meetings from North Korea and said, have you ever thought about enrichment.

And they said, yes, we did but we felt that it was beyond our technical capabilities and therefore we opted for this other type of scheme which use graphite moderated reactors without enrichment. So there may be some history a way back which we just don’t know.
GOLDSCHMIDT: Okay, so there are many more questions. So let’s take the four next questions. We’ll take note and we’ll answer to the four questions. So please?

Q: Dan Horner from Arms Control Today. I address the question, at least initially, to Jill Cooley about the effort to craft the state-specific safeguard regime. How are you going to do that in a way that it’s perceived as nondiscriminatory, especially given, as Pierre put it, that the political becomes – technical becomes political? How can you do it in a way so that countries that receive increased scrutiny aren’t able to portray it as discrimination and rally others to their cause?

[01:18:55]

GOLDSCHMIDT: Thank you. Next question?

Q: Yuri Yudin, United Nations Institute for Disarmament Research. I don’t know to whom from our distinguished panel is to address this question. But it’s known that manufacturing facilities such as processing enrichment and MOX fuel manufacturing plants, they are difficult to safeguard because of the nature of processing.

So to what degree the agency can effectively safeguard them so to detect in an effective manner the diversion of significant quantity of fissile material and what can be done to improve the effectiveness of safeguarding them in anticipation of both a future renaissance and a future offensive need?

GOLDSCHMIDT: Thank you. Next question?

Q: My name is Ahmed Abdulla. I work on reactor safeguards and the governance regime at Carnegie Mellon and my question is directed to Mr. Howsley. You said that you’d like to see an index that uses these indicators and develops a composite number, the names and chains, if you will, certain actors they perform poorly.

[01:20:10]

And my question is it’s tempting to do that but what do you say to the academics who would maintain these indices are at best misleading and at worst dangerous and that you can’t quantify an issue as serious as this because it involves social, political and cultural indicators that your indicators wouldn’t necessarily encompass. Thank you.

GOLDSCHMIDT: Thank you. Last question?

Q: I’m Debra Decker, Harvard Belfer Center. And I’m one of those academics who sides with Mr. Howsley on the need for an index and I wanted to see what the other – and I have a paper coming out in the next two weeks on nuclear attribution and forensics that has a similar recommendation and I wanted to see what the other panelists thought about that and perhaps that could be used building off of the 1540 matrix on the nuclear side and just a simple checklist and that could be the basis for safeguard differentiation.
GOLDSCHMIDT: Thank you. Okay, so I think Jill, you have certainly some questions which are addressed to you?

COOLEY: Yeah, I’ll answer a few. On the question with regard to the state-specific safeguards approaches and how we will be able to differentiate without discriminating, when I made my remarks one of the important things that we recognize is exactly that, that we have to be seen as the – the safeguard system has to be nondiscriminatory.

So where we are looking at the state factors is to have them be objective. We feel that we can use factors that are objective and measurable. So in this last question in terms of the softer – the softer factors such as the cultural and social – at this point, this isn’t where we’re looking at. We’re looking at more objective factors that we can differentiate states with.

[01:22:02]

And then I think one of the important things as we go forward – and we’ve got a lot – I will not be shy in saying we’ve got a lot of work to do on this. One of the important things in developing this is being transparent on what the process we’re going to use. And I think back on when some 10 years ago we were developing our integrated safeguards, which was quite a big development effort.

And we had a lot of parallel support going on with SAGSI. This is the Standing Advisory Group on Safeguards Implementation that Roger was a longstanding member of. We have our member states support programs. We are doing briefings for the board.

So it’s very important as we are evolving the safeguard system in this next step on really applying the state-level approach that we are transparent in how we’re describing these processes and how we’re going to measure the states, if you will, and use these factors. So I think it really can be done. Maybe I’ll go to the second question?

GOLDSCHMIDT: Yeah.

[01:23:00]

COOLEY: With respect to the issue about the difficulty in the bulk handling facilities, doing safeguards, enrichment reprocessing, the MOX plants – we have quite a bit of experience in safeguarding these facilities. The mention was made of being able to detect a significant – the diversion of a significant quantity. These facilities, both enrichment and reprocessing in particular – the commercial facilities that we’re safeguarding are huge and the flows are huge.
And we don’t only rely on the measures of – measurement techniques to detect the significant quantity. We have a whole host of activities including installed equipment, our design information verification, our information analysis. So one of the key things is that we are always taking stock of is improving approaches at these bulk handling facilities with new kinds of equipment, keeping up as these processes change.

We recognize that there'll be new kinds of facilities of this type that we’re going to have to safeguard. So I’m sure Olli can say a few more words. He has more experience with these plants. But I think that based on the experience we have and the support that we get from our member states and being able to apply effective safeguards, I think we can continue.

[01:24:19]

GOLDSCHMIDT: Which I would consider as having an additional protocol in place. Roger?

HOWSLEY: Just a few comments – I think as far as the state-level factors are concerned, of course there will be a debate about them. I mean, first of all, I don’t know whether the agency will ever get around to publishing them and doing this kind of state-by-state analysis. I hope it does. But if it doesn’t, someone else can do it. And maybe it’s better if someone else does it because then the agency can kind of keep its hands clean on these things.

But I say let’s have the debate and try it. We’re in an information age at the moment I think where trying to polish something to perfection is a waste of time. You should start the discussion. You should get it out on the Internet. You should see what all the academics say. And through that means, you get a better product than continually trying to improve things internally without that discussion. So I think that’s entirely possible.

As far as safeguards go, the only other comment I’d make – we ran enrichment plants, reprocessing, MOX, da-da-da-da. Enrichment plants are pretty easy to safeguard. The materials accountancy is very good. And the way in which you can put a safeguards approach in is pretty easy. Reprocessing is much more difficult and MOX isn’t easy either because you get hold of plutonium oxide. but one of the reasons it’s not easy – part of it is to do with the bulk handling.

[01:25:49]

But the other reason is that if you were to put a priority order on safety security and safeguards, all of the operators that I know that operate these type of facilities would put safety number one, security about number five and safeguards about number 10. So that’s the problem. We need to find a way to encourage people or force them or do something to really take this seriously and put safeguards by design in.

Every aircraft that crashes, they do – they really try hard to get the flight data recorder because that will tell the accident investigators about the critical functions of the aircraft before it went down. Is it so difficult to do that
in any of these other plants and have black boxes which tell safeguards what it is the plants being used for and how it’s being used? I don’t think so. I think it’s entirely possible but it needs the insight and ingenuity to do it.

[01:26:49]

GOLDSCHMIDT: Olli?

HEINONEN: I don’t think I have anything to add other than, you know, I just support was Jill and Roger said and particularly in the area of the reporting.

I think there are a lot of other ways to do the reporting without running into trouble with the safeguards confidence which I believe is partially self-made problem because it’s again a little but how you interpret the basics of the IAEA statute or safeguards agreement because this was merely meant to protect originally the industry and proprietary information and not to block the information to be available to the member states.

So I think there’s something that we can do. And then not only leave this information distribution to the IAEA reports but when we get to the problem cases, my feeling is that the agency should engage, for example, the U.N Security Council, at an earlier stage so that the problems don’t go too far and become so difficult problems that at the end you cannot anymore solve them. And we had such kind of scheme in ’91, ’92, ’93 when Blix went to talk with the Security Council and brief on certain issues. And I think that should be perhaps revisited.

[01:28:10]

GOLDSCHMIDT: So in summary, there seems to be among the panel a consensus that the agency needs member state support to interpret its mandate and authority in a way that would allow the agency to do more than it does today and also that the agency has to be more transparent towards the member states first and the outside world.

So I think that’s an important message and now we will see what will happen in the coming months because the June report is a very important one. Thank you very much for the questions. I’m sure you have many more. But time is running and I would like to thank all the panelists who have made their fantastic presentations. (Applause.)

(END)