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I am the manager of the Department of the protection of information regarding nuclear materials at the Russian Ministry of Atomic Energy. I'm also the co-chairman of the joint co-ordination committee between the US and Russia, in implementation of the agreements between the US and Russia in the areas of control, accounting and physical protection of nuclear materials.

Since 1993 we've had an integrated programme between the US and Russia to co-operate in the areas of physical protection control and accounting. Since 1993 we've had an integrated programme between the US and Russia on MPC&A, the legal basis for which was the agreement between the Russian Federation and the United States of America regarding the safe transportation and storage and elimination of weapons grade material, the CTR agreement which was signed in 1992.

In October 1999, the managers of both MinAtom and the Ministry of Energy of the United States signed an agreement, and inter-governmental agreement between the Russian Federation and the government of the United States of America on co-operation in the area of physical protection control and accounting of nuclear materials. The inter-governmental co-operation in the areas of MPC&A received a new impetus when the interests of very many different Russian agencies came into place, such as those listed. Such as MinAtom, the Ministry of Defence. The ministries as shown on this list are united in their efforts in one inter-governmental agreement.

Under the authority of this agreement (next slide please) the executive authorities, the implementation organisations, implementation authority was given to the Ministry of Atomic Energy under this agreement, and included all the materials that are used in the various agencies in the Russian Federation.

A single co-ordination commission was established in order to bring together the interest of all organised and engaged agencies and institutes of the Russian Federation that are participants in the MPC&A process over nuclear materials in Russia. The significance of efforts to provide for the MPC&A over nuclear materials has led to the reduction of radiological and nuclear threat from nuclear materials. Based on protocols from the joint co-ordination committee which has met a number of times over the three-year period since 1999 has led to the expansion of co-operation in a number of directions.

This slide shows the directions that were identified at the first meeting of the joint co-ordination committee. This included up grading and modernising the systems of MPC&A at nuclear hazardous sites, establishment of regulatory and normative documents that underpin the MPC&A efforts, providing for an informational system, a nationwide system for control and accounting of material, various metrological and examination type instrumentation support to the MPC&A effort, improvement of the transportation security over nuclear materials,, the establishment of training centres, the establishment of

protective forces for MinAtom facilities, and other directions. Co-operation in the efforts of control accounting and physical protection has had a substantive impact on the improvement, the acceleration, of the development of highly-qualified specialists in all areas who provide for the physical protection control and accounting. People who are developing and incorporating sophisticated equipment, improving their instrumentation, systems for weighing, systems for detecting materials, all of these areas are a result of the improvements in the professional qualifications of personnel working in these organisations.

Six slide please. As a form of priority directions for co-operation we have identified a first line of defence, a system of priority upgrades at those facilities that you see listed on this slide. These facilities were most in need in automated control and accounting systems and improvements in the physical protection systems. Systems such as CCTV, and such as access control. Every facility was up graded in this way based on a vulnerability assessment, based on a threat model for each different facilities and this slide shows the various components, the various types of violators both internal and external, the various forces and influences that may interdict such threats, the threats presented by both internal and external violators, the physical protection systems within a facility, and the organisation of the reaction forces. And these analyses are all conducted by the basic principles of MP&A and by IAEA standards.

The first integrated complex of integrated MPC&A measures that might be used at scientific research institutes, at production facilities, are shown on this slide. In the assessment of the specialists at MinAtom, the scope of measures taken to upgrade physical protection of these facilities may require as much as US$275 million. Right now we are working in this direction based on more than 1000 contracts and a whole series of orders. The Russian side is working very hard to implement its side, to take an organised and programmatic approach, a managed approach in our co-operative efforts with specific programmes supporting specific facilities, and our planning goes out as much as five years.

These plans are all performed based on specific vulnerability assessments, various types of threat models that are specific to each type of facility. We look of course at the attractiveness of the materials at the facilities, how much material is available at a facility, issues associated with the mindset of the workers. In our long-term planning of co-operation it allows the managers of our nuclear facilities to establish the structures in order to provide for concrete long-term planning for the long-term storage of nuclear materials in safe and secure circumstances. During the course of our co-operation we have found a number of ways to positively implement our long-term plans. During the course of 2002, as was noted by my colleague Patrick Cahalaine, through the joint efforts of joint working groups we looked at long term plans at a number of MinAtom facilities including places like Snejinsk, Tsarov, Jelineskorski 26 and the mining and chemical combine. Some of the joint efforts undertaken at these facilities have in fact been undersigned by protocols issued by the joint co-ordination committee and therefore are incorporated in our long term planning.

Some of the other basic directions are shown on the next slide. They are incorporated as part of this programme. Development of a regulatory and normative document base, operator training, automated systems for control and accounting, provision of equipment for MinAtom's guard forces, and of course sustainability and maintaining the complex. Again, more than 170 contracts and orders are working in this direction and by the assessment of experts of MinAtom we believe that US$160 million may be required in order to resolve these issues successfully for the long term.

Some of the results, and some of the major directions we may be taking in the areas of MPC&A over nuclear materials. We've established more than 20 regulatory documents that are at federal implementation of all, more than 30 of them are in the development stage. We are competing work on an automated system to provide for security of transportation, an automated system for a federal information system, the FIS, for connectivity with MinAtom facilities in order to provide for unified accounting of nuclear materials. In order to train Russian specialists to use the technical and physical systems for control accounting and physical protection of nuclear materials we have established a training centre. We have as separate course at MIFI as well.

The basic scope of the programme, including programmes that can be carried out in co-operation in all the different directions we've noted, consists pretty much of the kind of resource level that we are looking at here over a ten-year period. Looking at our global planning, we are looking at up grading - we're talking about up grading, were not starting from zero - and bringing to a specific level the systems of MPC&A. The first stages of this effort are wrapping up pretty much this year. And this sum of course includes some of our budget allocations, the allocations of some of our facilities that contribute to the process as well as the resources that come from International Co-operation. As already noted, based on the agreement of 1999, it includes the interests of not only of MinAtom but of an entire series of ministries, and as co-chairman of the JCC, I'd like to note also some of the accomplishments of some of the other agencies or branches of our government that have achieved notable achievements in their co-operative work with the Department of Energy.

There's important work that goes on with Russian Gosatomnadzor, the Nuclear regulatory Commission. Some of these joint projects include new regulatory documents, provision of specific equipment for inspectors to provide inspections at facilities, provision of informational systems to GAN, training of GAN inspectors, and operators of equipment, and we are providing for upgrades at MPC&A Systems at seven Nuclear facilities that are not under the direct authority of Russian MinAtom.

This slide shows many other directions we are taking with other agencies such as for example the Ministry of Defence. We are talking about more than 40 facilities that are getting MPC&A assistance. The State Customs commission of the Russian Federation, where there's work to upgrade the customs points at the borders of the Russian Federation and there is an effort to provide for detection of nuclear materials that may be smuggled or may be taken across an international border. There'll be more specific reports on that by other representatives of these agencies here at this conference.

A great deal co-operation goes on with the Ministry of Internal Affairs in conjunction with the Ministry of Atomic Energy which provides for the provision of equipment for protective forces, guard forces, at MinAtom facilities. And mostly this is representatives from the internal forces of the Ministry of Internal Affairs. This provides with providing them with up graded contemporary equipment. This year, I have to say, we've put together a very large, very all-encompassing, contract to provide for rapid upgrades very quickly to the protective forces working at MinAtom Facilities.

In conclusion, with his next slide, I'd like to make some conclusions. For our co-operation over the previous period I'd have to say that the programme that began in 1994, which began with co-operation with one facility, the City of Electrostol, is now a joint effort that includes more than 80 Russian facilities. Under the impetus of the joint co-ordination committee, and under our inter-governmental agreement, we've managed to resolve a number of legal issues, issues that were taken on by Dr Caravelli, issues that were associated with access to facilities, the ability for the sites to exchange confidential information, the ability to expand the programme in very sensitive areas where previously we were not able to go, but where there was quite a necessity to do a lot of important work. For example radiological terrorism, which we did not look at before, but areas where rapid acceleration of efforts were necessary. I'd also like to note that within the establishment of the FIS system we have now completed development, we've developed a methodology for selective inventory checks, for vertical profiling that allows for validation of the Federal Information System for material accounting. Of course it's impossible for me to highlight all of the work that goes on in our joint co-operation, in the co-operation between the Russian Federation and the United States for up grading the physical protection control and accounting systems in Russia.