U.S. Participants: Gerald Boyd (Co-Chair), Elizabeth O’Malley, Barry Gale, Kurt Gerdes, Skip Chamberlain from DOE Headquarters, Paul Hart from DOE Federal Energy Technology Center, Adam Hutter from DOE Environmental Measurements Laboratory, Kenny Osborne and Jenya Macheret from DOE Idaho Operations.

U.S. Observers: Mac Lankford, Mary McCune, Jaffer Mohiuddin, Charles Nalezny, Jef Walker from DOE Headquarters; Roy Herndon, Mikhail Khankhasayev, John Moerlins, Don Oakley from Florida State University; Pete Wells from Argonne National Laboratory, Jack Watson from DOE Oak Ridge National Laboratory, Dieter Knecht from INEEL; Rebecca Longsworth, Mary Hoel, Anne Starz, and Liliya Petrachenkova from Science Applications International Corporation.

Russian Participants: Viktor Akhunov (Co-Chair), Evgeniy Kudriavtsev, Galina Rybkina from MINATOM, Evgeniy Drozhko from Mayak Production Association, Evgeniy Filippov from Institute of Chemical Technology, Valery Romanovsky from Khlopin Radium Institute, Mark Glinsky from Hydrospetzgeologiya, Alexander Pavlov from VNIPiET, Vitaly Kurochkin from VNIPromtechnologii, and Gregory Polyanchikko, Consultant.

Interpreters: Paul Grenier and Irene Firsow from ASET International

Mr. Boyd welcomed the delegation and opened the meeting by recognizing the success of the projects conducted over the past year. He noted Dr. Carolyn Huntoon was recently appointed as Assistant Secretary of the Office of Environmental Management. Dr. Huntoon has instituted a long-term stewardship program, which may provide opportunity for collaboration in the future. Mr. Boyd also expressed sympathy for DOE on the death of Dr. Anna Nordova. Mr. Boyd recognized the support of Florida State University and thanked Dr. Herndon and his staff, particularly Dr. Khankhasayev.

Dr. Akhunov gave opening remarks by conveying greetings from former JCCEM co-chair Dr. Mikherin and current co-chair Dr. Egorov. He recognized that the JCCEM is one of the longest running programs and is an example of a successful cooperation. Dr. Akhunov thanked the U.S. side for preparing the meeting. The Russian side introduced themselves.

Dr. Gale gave an overview of DOE cooperation with Russia. He noted that DOE is in the process of implementing new security processes for on- and off-site foreign visits with
DOE, which include additional time for issuance of invitation letters, and additional reporting requirement.

**Intellectual Property Rights (IPR)**

Ms. O’Malley gave an update on IPR. Three U.S. patents have been granted, one U.S. patent application is pending and two U.S. patent applications are expected to be filed in the fall of 1999. Both sides agreed to the principles for intellectual property rights in attachment. It was also agreed to begin discussions on IPR procedures to cover private sector commercialization of jointly developed technologies.

**Efficient Separations**

Mr. Gerdes presented the progress made on current efficient separations projects. Cobalt Dicarbollide UNEX technology is included as a waste processing option in the Idaho site Environmental Impact Statement (EIS). Dr. Romanovsky noted that recent tests of the technology in 1999 were very successful. It was noted that the U.S. side’s visit to St. Petersburg’s Ozersk, Russia in June 1999 was very productive and useful. The U.S. end user’s participation in this trip was critical to including this technology as an option in the Idaho EIS. It was agreed to inform the Russian side of the Idaho Record of Decision on waste processing when it becomes available in spring 2000.

It was agreed to fund UNEX development studies in for approximately $340K in FY00. Both sides approved the current $80K SOW with the Institute of Physical Chemistry (IPC) on technetium studies and agreed to a conduct a workshop on technetium studies in Augusta, Georgia in the spring of 2000 with participation from both IPC and MINATOM.

Dr. Drozhko described waste separation activities at Mayak Production Association connected with the construction of the testing facility which will be used to demonstrate different technologies, including crown ethers technology. These demonstrations are necessary because of the complex composition of Mayak wastes.

The points of contact for this area are Mr. Kurt Gerdes and Dr. Valery Romanovsky.

**Contaminant Migration and Site Characterization**

Dr. Hutter and Dr. Glinsky presented the current accomplishments on the modeling at the Mayak and Tomsk sites, and described the proposed plan for FY00. It was agreed that the work will be funded at a level of $180K, and specific project funding levels will be determined at a workshop to be conducted in November 1999, in conjunction with the American Institute of Hydrogeology Meeting in San Francisco, California. It was agreed that the Mayak inverse transient model for a neutral component will be completed on FY00 and further discussions of direction of the program will be discussed at the workshop.
It was agreed to continue Tomsk model development and to develop an inverse transient model of the Mayak site in FY00. Both sides stated that concerning the Tomsk modeling program, it will be necessary to release historical data from the Tomsk site.

The points of contact for this area are Adam Hutter, Mark Glinsky and Evgeniy Drozhko and Vitaly Kurochkin.

**HLW Tank Remediation**

Mr. Gerdes presented FY99 accomplishments on HLW Tank Remediation projects. Dr. Kudriavtsev gave an update on tank remediation activities at the Mining and Chemical Combine. Dr. Kudriavtsev reported on the progress being made in developing a tank remediation demonstration facility in Krasnoyarsk, Russia.

The Russian pulsating pump will be deployed into a U.S. tank in the fall of 1999, marking the first deployment of JCCEM-developed technology in the United States. It was agreed to develop a document on the lessons learned through the commercialization process. The Russian counterparts agreed that the quarter-scale pump be dismantled in Richland, Washington.

The TFA Multi-Year Program Plan will be transmitted to the Russian side. It was agreed to fund the Sludge Dissolution project at a level of $100K in FY00-01.

The TFA will complete a technical evaluation of the Silica Gel proposal I January 2000. Based on this evaluation, a Silica Gel project may be funded at a level of $50K.

The 2nd Users/Developers Retrieval Workshop will be conducted in conjunction with the National Tank Closure technical workshop in Idaho Falls, ID in February 2000.

The U.S. side will provide multi-year program plans on all Focus Areas as they become available.

The points of contact for this area are Kurt Gerdes and Vitaly Kurochkin.

**Transuranic Stabilization**

Dr. Macheret gave an overview of the accomplishments in the area of transuranic stabilization in FY99. The FY00 SOW on GUBKA development and demonstration for $125K was approved. It was agreed to conduct spiked simulant tests in Idaho Falls, ID and Zheleznogorsk, Russia in the spring of 2000. U.S. scientists will participate in the demonstration in Zheleznogorsk, Russia. The U.S. side will visit Russia in the spring of 2000 to identify additional transuranic stabilization technologies.

The plasma denitration technology has been transferred to Argonne National Laboratory for review. The iron phosphate bonded ceramics reports will be forwarded to the Efficient
Separations Cross-Cutting Program for evaluation for LLW solidification. The U.S. side expressed their interest in continuing to evaluate iron phosphate ceramics as alternatives to baseline technologies within the DOE complex in the future.

Dr. Macheret, Dr. Osborne and Dr. Albert Aloy are the Points of Contact for transuranic stabilization.

Deactivation and Decommissioning (D&D)

Dr. Hart reviewed the accomplishments made in FY99 in the area of D&D. Dr. Pavlov presented additional information on previous D&D accomplishments.

It was agreed to implement $10K statements of work for each of the four Russian technologies that are being considered for demonstration in the U.S.:

- Distance Method for Determination of Activity Density Distribution on a Surface
- Deactivation of Radioactive contamination through Removable Coatings
- Deep Decontamination of Plutonium Gloveboxes (Electrochemical Method)
- Decontamination of Plutonium Gloveboxes (Foam Generator Method)

The scope of work for these projects will provide additional data to facilitate evaluation for U.S. demonstration. The U.S. side will decide by early 2000 on the demonstration of one or more technologies at INEEL and/or the Mound facility. It was agreed that a decision on the demonstration of two additional Russian technologies at Los Alamos National Laboratory in FY01 will be decided at the 10th JCCEM in September 2000.

The U.S. side agreed to follow up with the Office of Nuclear energy on the Russian Uranium Hexafloride proposals and provide an update.

In regard to the Institute of Chemical Technology’s proposal entitled “Radioactive Scrap Metal Decontamination for Re-Use of Metal by Remelting Method in Low Frequency Induction Furnace with Cold Crucible,” Dr. Hart will work with DIAL/Mississippi State University to determine funding level and scope of work for the proposal on cold crucible melter within the next couple of months.

The Tanks Focus Area Program Manager agreed to review the proposal entitled “Radionuclide Immobilization from Spent Radioactive Ion-Exchange Resins in Glassike Matrix” for applicability for high priority needs. Upon successful review, scope and funding level will be determined.

Based on discussions between Dr. Akhunov and Dr. Hart, it was determined that both Minatom and DOE are developing new D&D plans for their respective activities. It was agreed that close cooperation and sharing of information would be beneficial to both sides. A joint D&D workshop will be held in the summer of 2000, either in Moscow, or
in Knoxville, Tennessee at the International D&D Conference, which will be held in June, 2000.

Dr. Hart and Dr. Pavlov will serve as Points of Contact in the area of D&D.

**Vadose Zone Issues**

It was agreed to establish Vadose Zone Issues as a new area of cooperation. Mr. Chamberlain gave an overview of previous activities conducted in this area, and noted that Russian scientists contributed to a DOE-sponsored book being prepared on Vadose Zones. Copies of this book will be provided to the Russian side. Mr. Glinsky noted that Hydrospetzgeologiya has relevant civilian research data on vadose zones.

It was agreed to hold in-depth discussions and to develop proposals for possible projects at a vadose zone workshop to be conducted in the early spring of 2000. It was also agreed to initiate a $10K project to facilitate the development of this area of cooperation.

Mr. Skip Chamberlain and Dr. Vitaly Kurochkin will serve as points of contact.

**Other Business**

The U.S. agreed to continue to inform the Russian side when competitive calls for proposals are issued, and encouraged them to continue to submit joint proposals in the future.

Mr. Boyd informed the Russian side of changes in DOE security procedures. He noted that Dr. Vadim Romanovsky’s post doctoral studies at Lawrence Livermore National Laboratory will not be affected by recent changes in foreign access. Both sides agreed to provide security information on visiting delegations at least two months in advance. Minatom agreed to provide information necessary for DOE to meet its reporting requirements.

Minatom agreed to encourage JCCEM participants to submit information on their projects to Khlopin Radium Institute for inclusion in the JCCEM webpages.

It was agreed that deliverables and invoices will be submitted to DOE, and a copy will be sent to Florida State University.
It was agreed to conduct the 10th JCCEM meeting in Prague, Czech Republic in September 2000 in conjunction with the Prague 2000 Symposium. DOE will provide additional information on the Symposium as it becomes available.

Signed on the first of October, 1999,

Gerald Boyd  
Head of Delegation  
U.S. Department of Energy

Victor Akhunov  
Head of Delegation  
Ministry of Atomic Energy for the Russian Federation