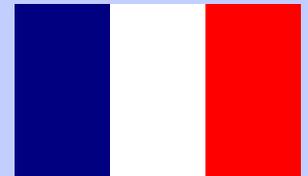
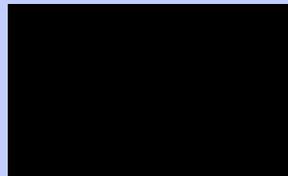
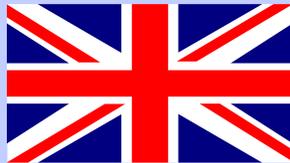
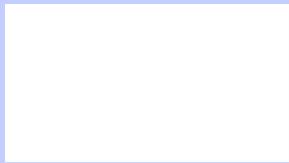


***OFFICE OF SCIENCE AND TECHNOLOGY  
INTERNATIONAL PROGRAMS***

***Briefing to  
The Environmental Management  
Advisory Board  
April 14, 2000***





# **Office of Science and Technology**

## **International Programs**



### **Problem**

*EM is not yet realizing the full value of international expertise and system solutions, opportunities for foreign technology demonstrations, and cooperative R&D available through partnerships with the international scientific community.*

### **Mission**

*Ensure continued awareness and identification of opportunities for EM participation with the international S&T community in order to accelerate EM operations and reduce the cost/risks of the DOE weapons complex cleanup.*



# Strategy



*Facilitate the identification and evaluation of foreign technologies to broaden access to potential solutions that meet EM clean-up requirements.*

*Establish partnerships that enable efficient and predictable international technology transfer.*

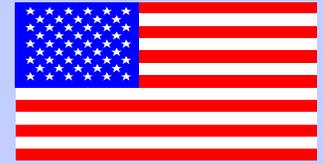
*Formulate and support implementation of EM international activities in accordance with US. foreign policy.*

*Facilitate private sector deployment of innovative international technologies at DOE sites.*

*Coordinate international S&T activities within DOE/US federal agencies and international organizations to leverage resources and avoid duplication of efforts.*



# Russia



*Peaceful Uses of Atomic Energy  
Agreement between U.S. and Russian Governments  
Signed 1972*

--- Bilateral Agreement

*Memorandum of Cooperation  
in the Area of ERWM  
DOE/MINATOM  
Signed 1989, renewed through September 2001*

--- Implementing Agreement

*Joint Coordinating Committee for  
Environmental Restoration and Waste Management  
Co-chairs G. Boyd/N. Egorov*

--- Management Structure

*HLW  
Tanks*

*Chemical  
Separations*

*Subsurface  
Contaminants*

*D & D*

*Mixed  
Waste*

*Plutonium  
Stabilization*

--- Areas of Cooperation ---

# Russia

Focus Areas: Tanks, D&D, CMST,  
Pu, Seps

Program Duration: FY 90 - Present

Total Program Cost: \$7.4M

## **Why Russia?**

*Administration directive to help stabilize the post cold war nuclear scientific community*

*Countries have similar contamination problems, nuclear history and clean-up needs*

*Highly skilled workforce available at a fraction of the cost: **20:1 Labor Ratio***

## **JCCEM Program Accomplishments (FY92 - 00)**

<i>Projects implemented</i>	60
<i>Technologies demonstrated in the U.S.</i>	6
<i>Current Deployment opportunities</i>	6
<i>Technology exchange workshops/conferences</i>	56
<i>U.S. Patents filed (3 Granted, 3 Pending)</i>	6

# ***Domestic Deployments of Russian Developed EM Technologies***

<b>Technology</b>	<b>U.S. Deployment Site</b>	<b>Date</b>
<i>Russian Pulsating Pump HLW Tank Retrieval System</i>	<i>OR GAAT Tanks</i>	<i>FY00</i>

## ***Future Technology Deployments***

<i>Russian Gamma Locator Device</i>	<i>INEEL Radiological Characterization</i>	<i>FY00</i>
<i>Russian Foam and Electro-Chemical Generator D&amp;D Technology</i>	<i>LANL Waste Management</i>	<i>FY01</i>
<i>Russian UNEX Separations Technology</i>	<i>HLW Processing Technology</i>	<i>Future</i>
<i>Russian Contaminant Transport Modeling Technologies</i>	<i>Hanford Site wide Modeling</i>	<i>Future</i>

# ***DOE-RAS Memorandum of Understanding on Cooperation in S & T***

*Signed in 1999 under 1993 US/RF Agreement on Science and  
Technology umbrella*

*First Meeting of the Joint Coordinating Committee on S & T to  
be held May, 2000*

*Currently three RAS proposals are under consideration in the  
areas of fractured rock and vadose zone studies*