

**Testing and Prediction of Long-Term Waste Glass Performance-
Russian *In-Situ* Testing
Joint U.S.-Russian Workshop
Record of Meeting
Richland, Washington
February 11-15, 2002**

Russian Participants:

Alexander Barinov, Scientific and Industrial Association (SIA) Radon
Mikhail Ojovan, SIA Radon
Natalia Ojovan, SIA Radon

U.S. Participants:

Joe Westsik, Pacific Northwest National Laboratory (PNNL)
Pete McGrail, PNNL
Diane Bacon, PNNL
John Vienna, PNNL
Jonathan Icenhower, PNNL
Bill Holtzscheiter, Savannah River Site (SRS)
Troy Lorier, SRS
Liliya Petrachenkova, Science Applications International Corporation (SAIC)
Sergei Silitchev, Thomas E. Albert and Associates, Inc.
Kevin Kelly, Thomas E. Albert and Associates, Inc.

Purpose:

The purpose of the workshop was to discuss the status of work performed to date at SIA Radon and at PNNL on the Testing and Modeling of Long Term Performance of High Sodium Glass in Contact with Water and to develop a draft test plan for the work to be performed.

Workshop Activities:

During the first day of the workshop Diane Bacon, PNNL and Mikhail Ojovan, SIA Radon discussed the data input needs for the Subsurface Transport Over Reactive Multi-phases (STORM) reactive transport code. It was agreed that all currently available hydraulic and geochemical data for the glass, carbon steel container, sand, soil, and water samples will be provided by SIA Radon to the U.S. specialists by March 30, 2002.

During the second day of the workshop the U.S. and the Russian specialists gave an overview of the scientific and technological capabilities of PNNL and SIA Radon, and presented the data available at SIA Radon and PNNL on the testing and modeling of long performance of high sodium glass in contact with water. The Hanford Low-Activity Waste (LAW) performance assessment testing and modeling were the primary focus of the meeting.

During the third day of the workshop discussions continued on the STORM input needs, as well as the glass sample transportation and testing logistics. It was agreed that SIA Radon will research the possibility of the glass samples transportation from Russia into the U.S. Glass dissolution rate parameters will be measured by the U.S. scientists using a simulated glass of similar composition to that tested in the SIA Radon *in-situ* study. SIA Radon will confirm the results of U.S. simulant tests by reproducing one of the tests using a sample of the actual waste glass. In addition, SIA Radon will attempt to identify the alteration products formed on the surface of the waste glass during a Product Consistency Test (PCT) and on samples of the buried glass.

During the final days of the workshop discussions were held to finalize the test plan and a Joint Program (Scope/Schedule) was presented at the PNNL. A draft test plan developed to use the data and samples generated during the Russian *in-situ* testing program as validation for the Hanford site Performance Assessment source team testing and modeling approach is attached.

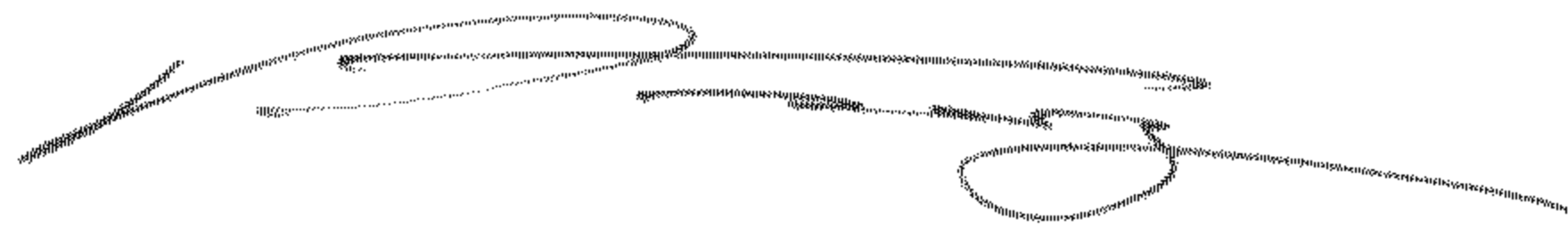
Signed:

For the U.S. side



Joseph Westsik
PNNL

For the Russian side



Alexander Barinov
SIA Radon