

*Draft text: Preface to Main Report, Arctic 2014*

In 1996, after several years of cooperation and scientific strategy development, Canada, the Kingdom of Denmark, Finland, Iceland, Norway, Russia, Sweden, and the United States established the Arctic Council to provide a systematic approach to handling issues affecting the Arctic region. The Arctic Council was created with four working groups assigned to undertake specific areas of work. The Emergency Prevention, Preparedness and Response (EPPR) Working Group was formed to deal with the prevention, preparedness and response to environmental emergencies in the Arctic. EPPR focuses primarily on prevention and preparedness strategies for radionuclides and oil and gas transportation and extraction. The goal of the EPPR Working Group is to contribute to the protection of the Arctic environment from the threat or impact that may result for an accidental release of pollutants or radionuclides.

In 2001, EPPR partnered with the Nuclear Safety Institute of the Russian Academy of Sciences (IBRAE RAN) to prepare and conduct drills and exercises focusing on radiological emergency scenarios in the Arctic. Since that time many drills as well as the *Arctic* series of large scale exercises have been planned and carried out by EPPR. The exercises and drills have been designed to validate planning and preparedness activities developed by the EPPR Working Group and validate plans and procedures developed by individual countries and international organizations, such as the International Atomic Energy Agency and World Health Organization. The exercises incorporate advances and improvements in radiation detection technology (some sponsored by EPPR), modeling, public communications, and response and management capabilities at the facility, local, national regional and international levels. Lessons learned from each exercise are identified and implemented for continuous improvement. Additionally, EPPR reviews the results of the exercises and identifies projects which EPPR can undertake to improve overall response capabilities. The EPPR Working Group also observed each exercise of the *Arctic* series to ensure improvement of radiological emergency management systems among Arctic states. EPPR Working Group members and Arctic Council Observers have the opportunity to experience the exercise on site which greatly expands national, regional and international understanding of the systems in place to address radiological emergencies in the Arctic.

The latest large scale exercise in the series is the *Arctic 2014* exercise conducted in June 2014. The exercise scenario involved an event on a nuclear powered icebreaker in northwest Russia. The *Arctic 2014* exercise focused on assessing consequences and response to the radiation emergency. The main tasks for this exercise were related to communications, patient treatment of radiological exposure, and protection of workers and the public. Communication activities included obtaining and coordinating scientific and technical support information, alerting and informing authorities at the facility, local, national, regional and international levels and interfacing with the public and media. Many types of communication systems were used, including video conferencing, and interactions with mass media were also tested. Technical information was produced to inform decision making, including source term, dose burden to the public, protective measures, and meteorological data. Information was gathered to develop press releases and respond to journalists' questions as a part of the communication processes being tested. As with all drills and exercises, there were positive practices as well as items identified where improvements could be made. Recommendations for improvements were developed and are included as a part of the *Arctic 2014* final report.

In addition, the *Arctic 2014* exercise incorporated outcomes identified from the *Arctic 2012* exercise where communications were identified as an area needing additional effort. This exercise and the lessons learned will be reviewed by the EPPR Working Group as a part of activities related to future exercise development and the ongoing development of Arctic Council products and work.

The EPPR Working Group, IBRAE RAN, and other Arctic Council working group activities continues to support protection of the Arctic environment, in part through the ongoing series of EPPR exercises. Continued international cooperation and coordination provides the opportunity to experience a test of the emergency management system in place to respond to a radiological emergency. Exercising is a critical element in the process of developing, testing and maintaining effective emergency response capabilities in and among the Arctic countries.

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