



FMBC - NRPA COOPERATION IN MEDICAL RADIOLOGICAL EMERGENCY RESPONSE IN 2005-2011

M.I. Grachev¹, L.S. Bogdanova¹, G.P. Frolov¹, Yu.A. Salenko¹, M. Sneve², A. Jaworska²

¹ Burnasyan Federal Medical Biophysical Centre
Zhivopisnaya str.46, Moscow, Russia, 123182

² Norwegian Radiation Protection Authority



ls_bogdanova@mail.ru

1. Introduction

Since 2005, several collaborative research- and practical activities are being carried out within Russian-Norwegian cooperation in regulation of safe nuclear energy use. The partners in this collaboration are Burnasyan Federal Medical Biophysical Centre (FMBC) and Norwegian Radiation Protection Authority (NRPA). The above mentioned activities are aimed at improvement of medical and sanitary preparedness of the FMBA's medical units in the Northwest Russia.

2. Objectives

The main goals of works performed – improvement of emergency preparedness of medical units under FMBA of Russia in the Northwest Russia and provision of the regulatory bodies with scientific and methodical support in compliance with the regulatory standards of the Russian Federation and taking international recommendations into account.

3. Methods

Effective response is achieved by increasing the knowledge and skills of workers, improvement of operational management and interaction, worked out through the training and exercises. Scientific and methodical support of the regulatory bodies is provided by development of normative and methodical basis of medical emergency response for "SevRAO" sites, development of documents in compliance with up-to-date national and international approaches.



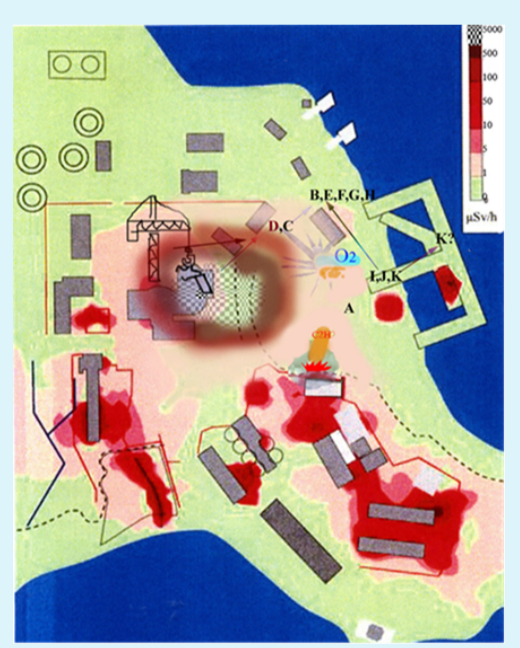
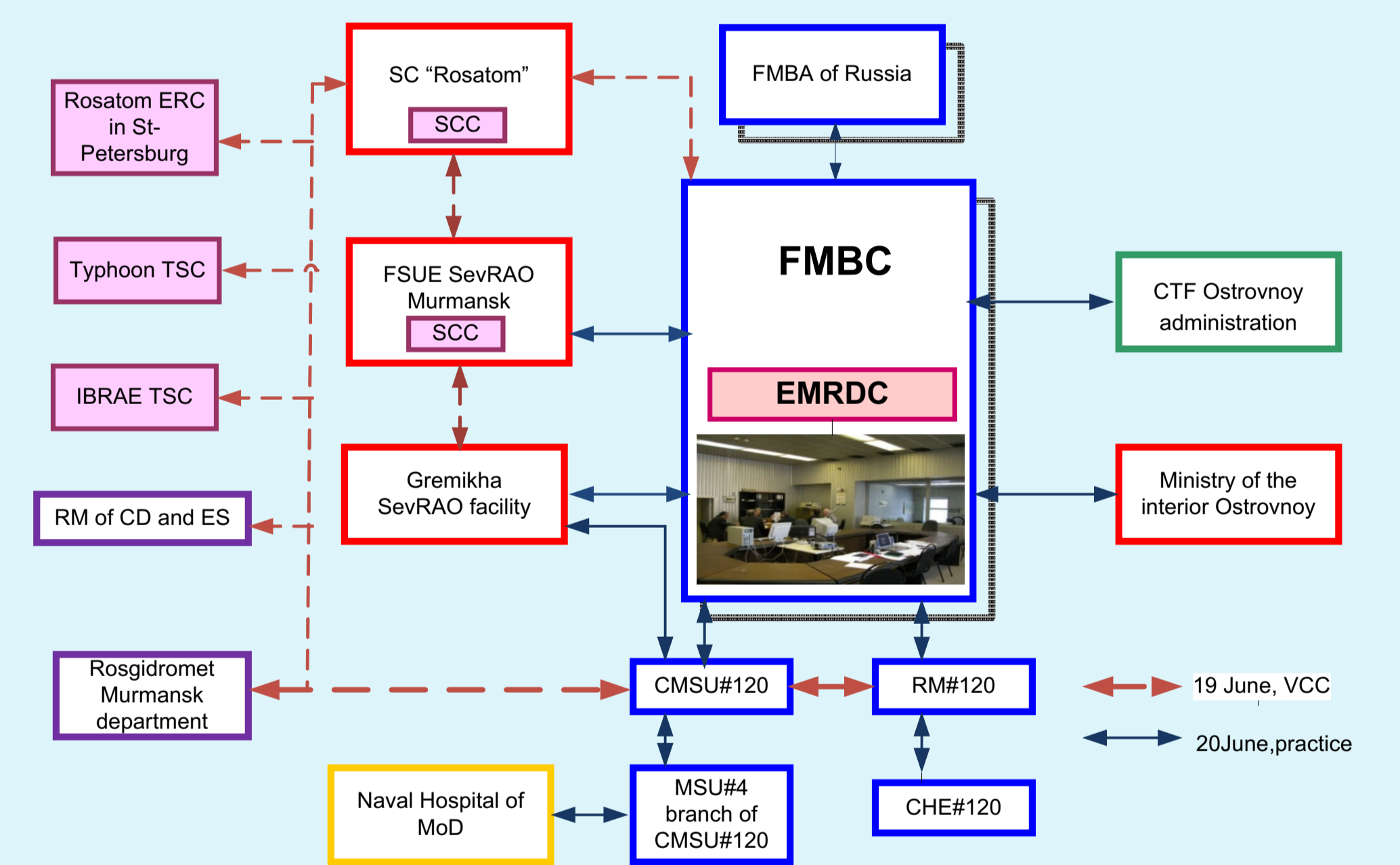
4. Results

In the course of works, the regulative and methodical basis of the medical emergency response for the SevRAO sites has been improved; operational and medical criteria have been developed to establish the rapid response plan and early application of protective measures at SevRAO facilities. These criteria were later being tested during the medical and sanitary and public health response exercises conducted at Andreeva Bay (2006), CTF "Ostrovnoj" and Gremikha village (2009).

Recommendations on trainings to be conducted at SevRAO facilities have been prepared on the basis of analysis of problems in medical and sanitary provision of workers and the public in case of radiological accident. The list of scenario tasks for the purposes of training in emergency situations connected with loss of control when transporting radiation sources and compendium of scenario exercises (tests) for expert groups, based on results and experience accumulated in the practical measures performed.

Since 2005, within the Project specialized topical trainings are conducted periodically. Large-scale exercises have been organized and conducted in the Northwest Russia: specialized emergency training of medical teams under FMBA of Russia in case of conventional radiological accident at sites for SNF and RW temporary storage at FSUE "SevRAO" at Andreeva Bay, 2006, and emergency training on radiological protection of workers at SevRAO branch "Ostrovnoj" and population of Gremikha village on 19-20 June, 2009.

During the practical activities in 2010 and 2011 on the response in case of radioactive material transportation accident, including those with participation of the Rosatom concern, Rostekhnadzor and IBRAE RAS the following topics are under testing; organization of information exchange with use of the available state of the art communication means; procedures of the regulatory response; telecommunication of expert groups, and the test-based development of consolidated assessment of emergency consequences.



5. Discussion

Severe climatic conditions of the Arctic, remoteness, difficulty of delivery and deployment require the special solutions of the operative response:

- Practical skills of the staff of the regional medical units to provide the qualified medical care to victims of the radiological accident in hospitals and clinics;
- Effective expert support and medical consultative assistance by using the up-to-date (mainly, satellite) communication systems;
- Integration of the technical support centers and emergency centre under FMBA of Russia (EMRDC) into the emergency response system of the State Atomic Energy Corporation «Rosatom»;
- Interaction of the personnel and emergency engineering services with medical and hygienic services under FMBA of Russia;
- Cooperation with Murmansk regional medical units.

Presently, our collaboration is focusing on solutions for, relevant for the Northwest region, problems connected to radiation safety regulations for radiological emergency response in case of potential accidents during transportation of radioactive materials. We are also looking into regulations regarding mitigation of potential radiological consequences.

6. Conclusions

The organized by the project, accident-scenario based, seminars for the personnel of the regional management, centers of hygiene and epidemiology and regional and local medical units of FMBA of Russia, are helping to increase the potential of the regulatory response, and contribute to consolidation of the available response powers in the region.



emrdc@fmbcfmba.ru
emrdc@mail.ru