

## **EXPERIENCE SEARCHING OF CONTAMINATED PAST SOVIET UNION MILITARY SITES AND REMEDICATION OF IT IN LITHUANIA**

*Wednesday, 25 May 2016 09:00 (9 hours)*

In Lithuania some territories and sites in past were used by soviet army. Sites where industrial, medical or other installations that used sources of ionizing radiation took place in Soviet times as well. Those sites are of interest for search of orphan sources or radioactive contamination. At some of the sites search was performed before the soviet army leaved the sites. Mostly of the soviet type industrial, medical or other purpose instal-lations were decommissioned, but problem exist due to incomplete information about the sources of ionizing radiation. For that reasons the companies of search of orphan sources and contaminates sites started in 2009. Periodical programs dedicated for the search of sites are approved by Director of Radiation Protection Centre. First step was analysis of information available about the sources of ionizing radiation at "old" industrial, med-ical or other installations those were operating in soviet time. That information was available at Radiation Protection Centre. Information about the soviet army sites and possible usage of the sources on those sites was obtain from data available at data reports of State Geology Service.

During 2009 –2015 year search was performed at 15 territories and sites in totally around 100 ha. In 2013 year in one of the military site during the search radioactive contamination of ground was found. Prelimi-nary results showed that the site is contaminated with 226Ra. In the most radioactive spots soil sampling was performed and  $12 \pm 1$  Bq/g concentration of 226Ra was measured by gamma spectrometry. Exemption level of 226Ra in Lithuania is 10 Bq/g.

By the requirements of legal acts of Lithuania the site should be investigate and assessed. The territory be-longs to one of the Lithuanian municipality, and according the legal acts the local municipality shall organize the investigation of contaminated area and if needed the municipality shall organize the remediation as well. Municipality contracted specialists for investigation of contamination at territory and performance of assess-ment of needs of remediation. The site investigation showed that maximum value of equivalent gamma dose rate at 1 m from the surface of ground was 0.5  $\mu$ Sv/h, at 5 cm from the surface 3  $\mu$ Sv/h. The maximum concen-tration of 226Ra was 5 Bq/g at 30 cm deep. Based on the investigation RPC recommended to perform on-site remediation of the area. In 2014 year municipality remediated the area. Specialists of Radiation Protection Centre gave advice and suggestions for radiation protection measures during remediation process and made final radiological measurements after remedial measures were performed.

### **Country or International Organization**

Radiation Protection Center, Lithuania

### **Type "YES" to confirm submission of required <br> Forms A and B via the official channels**

YES

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