

of Cs-137 Background of Global Fallout at OSI Site as the Signature to Search for Radiation Anomaly or the Artefact

• In the late 80-ies of the last century, it was noted that Cs-137 contamination of the ground has been significantly diminished after the nuclear explosion in the shaft (vertical hole) at Semipalatinsk test Site (STS). Sites around 3 old tested nuclear shafts 1350, 1365 and 1412, have been surveyed on 1997-1998. Global fallout level of Cs-137 in the region of STS was on 1997-98 about 2.0-2.5 kBq/m². • During survey have been obtained gamma-spectra with Ge-detectors at 6-8 points and also mobile gamma-spectrometer “Niva” has NaI(Tl)-spectrometer along eight radial profiles. Cs-137 background in 50-100 m radius around tested shafts was significantly lower than fallouts level (approximately 2 – 10 times). The gamma spectrometric measurements conducted by two various techniques, has shown almost an identical picture on all surveyed sites. Variations of Cs-137 global fallouts occur as a consequence of large volume of constructive assembly operations during of shafts preparation activity for nuclear explosion. Change and shifting of surface top soil takes place at the site as a result of preparatory engineering works, and this can be complementary evidence of clandestine nuclear weapon test. These effects are suggested to be used as the search characteristic during the on-site inspection.

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