Induced seismic events on the territory of the former Semipalatinsk Test Site (STS) according to the data of field observations

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Abstract Seismicity in the area of the Semipalatinsk Test Site near the sites of previously conducted nuclear tests, as well as on the territory of operating quarries in the STS area was investigated. To study man-made events at the test site, the data of field seismic observations for 2005-2010, and 2018-2020 was used. In addition, data from the Kurchatov-Cross permanent seismic array, the Kurchatov IRIS IDA three-component station, and the Kurchatov infrasound station were used. It is shown that during the period of UNE conduction on the territory of the Semipalatinsk Test Site, as well as in recent years in the area of nuclear explosions, induced earthquakes with low-energy were observed. In the area of mineral mines, where intensive blasts are carried out, technogeneous earthquakes induced by the prolonged impact of industrial explosions have been recorded.

Keywords Semipalatinsk test site, induced earthquakes.

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