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The Jinami by 2011 Tohoku earthquake occurred Remobilization of Diphenylarsinic acid pollution at a site in Kamisu City, Japan

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Japan has a limited amount of readily developable land. Therefore sites tend to be used and reused fairly frequently, with alternating phases of excavation and deposition. Deposition creates man-made (anthropogenic) strata (MMS) which are often associated with geopollution and stability problems. The Great East Japan earthquake of 11th March 2011, with an epicenter off the coast of Tohoku, caused widespread damage due to ground waves (known in Japan as Jinami[1]) and associated liquefaction-fluidization of MMS. Kamisu City, Ibaraki Prefecture, East Kanto Region, was significantly affected. The City had a number of former gravel extraction sites that, after extraction, had been backfilled for new uses. It was revealed on March 20th, 2003, that drinking water from a well used by occupants of collective housing at Kizaki, Kamisu City, close to a former gravel pit, was contaminated by arsenic. The concentration in the water was 450 times greater than that of the upper limit of the drinking water standard (0.01mg/l). Some citizens had used this water suffered health damage including cranial nerve disorders or mobility disorders[2][3]. The site was severely disturbed by the 2011 earthquake during which the contaminant was mobilized by liquefaction-fluidization processes and extruded with sand onto the land surface. This paper reviews the history of the site and reports results of observations and analyses.

References :

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