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Technological disasters triggered by natural events - case studies in Czech Republic

P.Danihelka

Laboratory of Risk Research and Management

VSB - Technical University of Ostrava, Czech Republic

Mail: pavel.danihelka@vsb.cz, tel. +420597322822 mobile +420603252767

Risk analysis and risk mapping has become an important part of protection of citizens in modern world, nevertheless the most often only simple, one-event scenarios are taken into account. Detailed analysis of technological disasters show that in many cases, natural condition or events either trigger or aggravate technological accidents. Three case studies of recent NATECH type accidents in Czech Republic are described. First of them is a release of 86 tons of chlorine in Spolana Neratovice chemical plant to air and water during inundation in 2002, when floating container was disconnected from junction, second describes the explosion of waste container in nitrobenzene unit of MCHZ – Borsodchem Ostrava plant (December 2002) caused by variation of temperature and entrance of water to the tank with sulfuric and nitric acid and rest of nitrobenzene reaction mixture. The last one, very recent, is a case study of cyanide spill of more than 80 km of Elbe River in January 2006 due to malfunction of level control in decontamination tank blocked by ice.