

Misuses of hazardous chemicals. How to analyze vulnerability and where to get knowledge?

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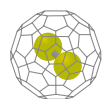
Chemical substances are one of the categories of CBRNE (Chemical, Biological, Radiological, Nuclear and Explosive) materials used by criminals to cause public security threat. The most vulnerable to be misused are: a) acutely hazardous chemicals for respiratory system and for skin; b) substances which can cause an explosion or set a large fire; c) explosives precursors [1]; d) „dual use materials” [2]. Description of hazardous chemicals according to classification of: CLP Regulation [3], NFPA (National Fire Protection Association) and ADR [4] is presented in “Manual of Chemical Security Trainer” [5]. More detailed information about physicochemical properties, impact on the environment and industrial uses of hazardous chemicals can be found in the database of potentially hazardous chemicals described in part VI of [5].

Due to poor predictability of criminal intentions aiming at mass damage, and time-varying circumstances it is impossible to assess risk assessment for chemical company. Vulnerability is assessed instead taking into account following issues: a) properties and quantity of chemicals (hazardous ones in particular); b) company distance from human settlements (hospitals, schools, trade centers etc.); c) staff stability; d) recognition of the company as having hazardous materials; e) transport security. Vulnerability analysis is described in detail in part II of [5]. Methods useful in vulnerability analysis with particular emphasis on chemicals misuses in terrorist acts may be SOCMA method [6] and [7]. SOCMA method is described in detail and the second method [7] is mentioned in [5]. “Manual of Chemical Security Trainer” [5] is a collective work of many specialists published by Industrial Chemistry Research Institute. As mentioned above the Manual contains valuable information about vulnerability analysis and also about chemical threat management, goods’ flow control, responsibility of the law and order authorities, preventive role of entrepreneurs in public chemical security systems. In part VI of the Manual web page of the project „Towards the Chemical Security Culture” has been presented. The web page is on web portal run by International Centre for Chemical Safety and Security under the address: <http://network.iccss.eu>. The registered users have access to training materials, database of potentially hazardous chemicals, a forum for exchanging knowledge on chemical security. Another source of information is a web page www.chemia-kultura.iccss.eu. It promotes chemical security culture principles, contains useful materials and encourages to involve in eg. building a network of participants for the prevention of chemical threats.

Voluntary preventive measures in the field of chemical security undertaken particularly by entrepreneurs and based on cooperation, commitment and exchange of experience can be more cost-effective than actions by authorities imposing further restrictions, limiting trade and impeding economic growth. Also cost of first response and law enforcement shall be reduced as the result.

Literature

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Chemical Safety
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