

## **10432- Public Health Risks of Hazardous Substances Events Associated with the Manufacturing of Chemicals and Allied Products**

Deana M. Manassaram, MPH, Maureen F. Orr, MS, Wendy E. Kaye, PhD, Lori Hutwagner, MS.  
Division of Health Studies/Epidemiology and Surveillance Branch, Agency for Toxic Substances and Disease Registry, 1600 Clifton Rd. NE, Mailstop E-31, Atlanta, GA 30333

Since 1990, the Agency for Toxic Substances and Disease Registry has maintained the Hazardous Substances Emergency Events Surveillance (HSEES) system, which collects data about the acute releases of hazardous substances and subsequent public health outcomes. HSEES data include the industries/services associated with these events, which are coded according to the 1990 Industrial Classification System of the U.S. Bureau of the Census. This presentation will describe the frequency and potential public health impacts of hazardous substances releases associated with the Manufacturing of Chemicals and Allied Products (codes 180-plastics, synthetics, and resins; 181-drugs; 182-soaps and cosmetics; 190-paints, varnishes, and related products; 191-agricultural chemicals; and 192-industrial and miscellaneous chemicals). Descriptive analyses of industries and services involved with releases during 1993-2000 from 16 participating states are provided. The analysis indicates the Manufacturing of Chemicals and Allied Products as the most frequently reported industry category in the surveillance system. Over 12,000 hazardous substances events (28% of all events and 35% of fixed-facility events) were reported to have occurred in this industry during this time. Further analyses by industry codes found that 71% of these events involved code 192-industrial and miscellaneous chemicals; 21% code 180-plastics, synthetics, and resins; 5% code 191-agricultural chemicals; 2% code 181-drugs; 1% code 182-soaps and cosmetics; and approximately 1% in code 190-paints, varnishes, and related products. Events involving the Manufacturing of Chemicals and Allied Products category also accounted for the most injured persons (18%, n=2751) of any industry in the surveillance system. The majority of injured persons were employees (42%), followed by the general public (38%), students (15%), and responders (5%). These figures illustrate the potential public health impacts and allied financial costs associated with releases of hazardous substances in this industry. The information provided by HSEES data can be used for employee education, training, and prevention activities.

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## 10528- Chemical identification of soil pollution with hazardous waste of oil industry

On different stages of a many staged technological process of production and processing of oil, formation of oil sludge as a hazardous and solid waste takes place. During the century of oil production in Azerbaijan more than discharged to environment. Assessment of environmental pollution with hazardous waste is of great ecology-hygienic importance. In connection with this, chemical identification of oil sludge composition of different technological processes of oil production was performed.

Methods. Oil sludge sampling was implemented at the point of their formation. Chemical analysis of samples to identify hydrocarbons was carried out by means of infra-red spectrometry gas chromatography, non-organic components – by atom-absorption spectrophotometry method.

Result. It has been established, that concentration of more than 10 heavy metals in oil sludge exceed clarke in soil 2-10 times. In this aspect Cd, Pb, Co, Sn, Cu are predominant.

Research has revealed large amount of organic composition of oil sludge. Organic part of sludge represented 70% of their total mass. This part of waste is represented by saturated, non-saturated, and aromatic hydrocarbons.

Predominance of some components has been determined by technological oil sludge class (grade)

A research analysis result of oil sludge chemical composition allows to emphasize exclusive danger of these wastes for environment and population health.