

Hazardous and Municipal Waste Management

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At the top of the hierarchy of waste management is „Pollution Prevention“ (P2), followed by recycling, reuse and recovery of materials and energy. At the bottom of this hierarchy are the appropriate treatment and disposal methods. The costs and problems associated with hazardous and municipal wastes are so large that it makes more economic and ecologic sense to intervene before these wastes are generated.

During this lecture, we will discuss the 5 major laws that govern solid waste management in the US, and the definition of ‚hazardous waste‘. We will review problems associated with Superfund sites, such as multimedia contamination, pollutant mobility and potential exposure pathways for humans.

The composition of a typical municipal waste stream will be investigated and we will review trends over time in the volume and treatment method. The ‚Dual System‘ in Germany will be presented as an example of how the large amount of packaging in the municipal waste stream can be addressed. Problems associated with recycled materials will also be discussed. We will ‚walk through‘ a landfill and a thermal treatment plant („waste-to-energy“), which represent the most common treatment and disposal options.

In summary, the foremost goal of waste management remains to reduce the amount of waste that is generated.

Which leads to my question:

Can you think of new ways to promote this emphasis on pollution prevention during the generation of industrial or municipal waste?