

Sem 6th chemistry hons.

## Recovery and recycling reuse of chemical

A hazardous secondary material is recycled if it is used or reused (e.g., as an ingredient in a process), reclaimed, or used in certain ways including used in a manner constituting disposal and burned for energy recovery.

A material is reclaimed if it is processed to recover a usable product or if it is regenerated (e.g., regeneration of spent solvents).

A material is used or reused if it is either employed as an ingredient in an industrial process to make a product (e.g., distillation bottoms from one process used as feedstock in another process) or if it is employed as an effective substitute for a commercial product (e.g., spent pickle liquor used as a sludge conditioner in wastewater treatment).

"Use constituting disposal" is recycling that involves the direct placement of wastes or products containing wastes (e.g., asphalt with petroleum-refining wastes as an ingredient) on the land. "Burning for energy recovery" is recycling that involves burning a hazardous waste for its fuel value (either directly or when it is used to produce a fuel).

What are the Benefits of Recycling Hazardous Waste?

this is a picture of a man checking a yellow drum in a room full of drums

Hazardous waste reuse, recycling, and reclamation can avoid environmental hazards, protect scarce natural resources, reduce the nation's reliance on raw materials and energy and provide economic benefits.

Environmental Benefits

There are several, interrelated environmental benefits of recycling hazardous waste including:

reducing the consumption of raw materials,

reducing pollution,

reducing energy use and

reducing the volume of waste that must be treated and disposed of.

The extraction, refining, transportation and processing of new raw materials can have a significant impact on the environment. Recycling hazardous waste can mean less air, water, and soil pollution associated with these practices.

Also, recycling can reduce emissions of greenhouse gases (GHGs). When hazardous wastes are recycled, less energy is needed to obtain raw materials and to manufacture products. When energy demand decreases, fewer fossil fuels are burned and less GHGs are emitted into the atmosphere, which can help lessen the impacts of climate change and decrease air pollution.

Finally, by recycling hazardous wastes, less hazardous waste is sent for treatment and disposal. This means less need for hazardous waste landfills and incinerators, as well as a decrease in energy used for those systems, which leads to less pollution.

#### Economic Benefits

Hazardous waste recycling is not only good for the environment, but can benefit an organization's bottom line. Recycling hazardous waste can increase production efficiency and reduce costs associated with purchasing raw materials and waste management. By recycling hazardous materials, a business may be able to eliminate the generation of hazardous waste and avoid RCRA regulatory requirements altogether. A business may also benefit from the positive or "green" image associated with hazardous waste recycling efforts. For example, a company who values strong corporate stewardship can increase goodwill with shareholders and consumers and further distinguish itself from its competitors.