Disposal of Hazardous Aviation Waste

Definition of Hazardous Waste

Hazardous waste is a discarded substance that because of its quantity, concentration, physical, chemical or infectious characteristics may cause or contribute to a serious illness or pose a substantial or potential hazard to human health or the environment when improperly treated, stored, transported or disposed of. Hazardous waste can take the form of a solid, liquid or compressed gas. In the aircraft industry, waste can originate from the service or repair of aircraft components to temporary storage of outdated products that have not been used or new products purchased in excess.

Characteristic of Hazardous Waste

Characteristic hazardous wastes are materials that are known or tested to exhibit one or more of the following four hazardous traits: -Ignitability / Reactivity / Corrosively / Toxicity
These wastes may be found in different physical states such as gaseous, liquids, or solids. A hazardous waste is a special type of waste because it cannot be disposed of by common means like other by-products of our everyday lives. Depending on the physical state of the waste, treatment and solidification processes might be required.

Listed hazardous wastes are materials specifically listed by regulatory authorities as a hazardous waste which are from non-specific sources, specific sources, or discarded chemical products

Hazardous waste is waste that poses substantial or potential threats to public health or the environment and thus require a stricter control regime.

This is laid down in particular in Articles 17 to 20 of Directive 2008/98/EC. (European Union)
It provides additional labelling, record keeping, monitoring and control obligations from the "cradle to the grave", i.e., from the waste producer to the final disposal or recovery. In addition, mixing of hazardous substances is banned in order to prevent risks for the environment and human health.

Moreover, the permit exemptions that may be granted to installations dealing with hazardous wastes are more restrictive than for installations dealing with other wastes.

The classification into hazardous and non hazardous waste is based on the system for the classification and labelling of dangerous substances and preparations, which ensures the application of similar principles over their whole life cycle.

The properties which render waste hazardous are laid down in Annex III of Directive 2008/98/EC and are further specified by the Decision 2000/532/EC establishing a List of Wastes as last amended by Decision 2001/573/EC.

Health Concerns

Improper handling of hazardous waste can threaten human health. For example, acids or bases (such as battery acids and metal cleaning solutions) can destroy or cause irreversible damage to normal living tissues, such as mucus membranes, eyes, gastrointestinal tract, respiratory passages and skin.

Toxins are another health hazard that poison your system. Toxic solvents, heavy metals, paint thinners and adhesives can accumulate in your body over time.

This could affect your nervous system particularly the brain and circulatory system.

Hazardous Waste Disposal Considerations

Hazardous waste should not be disposed of in Waste Container's.

There should be no mixing of dissimilar waste streams (such as organic solvents and aqueous solutions) into one container.

If non-compatible waste are mixed, it could cause dangerous chemical reactions.

Furthermore, mixed waste cannot be economically recycled.

Non hazardous waste should not be mixed with hazardous waste. If mixed, the whole batch becomes hazardous and the cost of disposal increases.

Once a container is used for hazardous waste, it should not be used for another waste.

Even empty hazardous waste containers are often considered hazardous waste.

Due to the extra expense of legal hazardous waste disposal, the cost of solid waste disposal rises substantially if mixed with hazardous waste.

Hazardous waste disposal should be carried out in accordance with local municipal and country requirements – Do you have this document and is everyone aware of the relevant procedures

Depending on the amount of waste generated, a facility may retain waste for a certain time period before disposal.

All hazardous waste must be shipped in acceptable containers for transportation and properly labeled.

Requirements pertaining to preparing hazardous waste for shipment can be found in 49 CFR Part 172. (For USA requirements – consider this as advisory and should be overridden by your national requirements)

A hazardous waste manifest is a multi-copy shipping paper that accompanies the package and must be signed by the generator, carrier and receiver.

The shipper should receive the manifest after the materials have reached their proper destination to a permitted facility and keep the papers on file for three years.

Remember the generator of the hazardous waste is responsible for the waste from the point of generation (cradle) to the final destination (grave).

The liability never leaves the generator of the hazardous waste.

Waste Minimization

Waste minimization is any process that reduces or eliminates the amount of waste generated.

As a result, it lowers treatment and disposal costs, reduces health hazards, reduces liability and protects the environment. Basically, there are two main techniques to accomplish hazardous waste minimization.

These techniques are pollution prevention and recycling .

Pollution prevention consists of product changes and source reduction.

By substituting hazardous products with non-hazardous products and by using only the amount necessary to perform the task would be examples of product changes. Source control would consist of material changes such as material purification and substitution, technology changes and good operating practices. For example, good operating practices would consist of properly managing the hazardous materials inventory, and keeping lids tightly sealed (especially volatile hazardous materials).

Recycling consists of reusing and reclaiming used materials.

This not only reduces waste but it also lowers disposal and raw material costs. Recycling programs can work with a variety of waste products.

Example Procedure Content

This procedure details the way in which disposal of shelf life expired items or other material that require special disposal in accordance with Environmental Protection.

All shelf life expired consumables are routed via the Senior Stores Inspector, he will then access those items requiring special disposal.

A list of the above mentioned items will then be faxed to a Waste Management company.

They will then fax a quotation for the disposal of the above mentioned items and forward the regulatory documentation required by the Law on Controlled Waste — Duty of Care.

On completion of the required documentation the top copy (white) pre-notification will be posted to the environmental department of the County Council where the actual disposal will take place.
On collection of the waste the driver will check the details on consignment note against the description of the waste and sign and date part "C".

The Senior Stores Inspector will then sign and date part ‘D” and post the blue copy to “The Environmental Standards Department”.

The Senior Stores Inspector must retain the green copy on file for two years.

The remaining three copies i.e. orange, yellow and pink are taken by the waste management company’s driver together with the consignment of waste.