



## Hazardous Waste Determination

This fact sheet summarizes the hazardous waste determination process, which includes generator knowledge of waste generation processes and hazardous waste analysis. Waste analysis shall be conducted using approved Environmental Protection Agency methods (SW-846, Test Methods for Evaluating Solid Waste, Physical/Chemical Methods).

### Generator Knowledge

It is the hazardous waste generator's responsibility to determine if a waste is hazardous or nonhazardous. The generator can do this by (1) determining whether the waste is included on one of the lists of substances classified as hazardous wastes or (2) determining whether the waste exhibits one or more hazardous characteristics (i.e., ignitable, reactive, corrosive, or toxic). The generator can conduct a waste determination by either:

1. Applying generator knowledge of the hazardous properties of the waste in light of the materials and processes used (e.g. material safety data sheets and process flow diagrams); or
2. Providing analytical testing data (i.e. hazardous waste analysis).

Waste determinations require documentation and must be kept at the facility, available for inspection.

The reason a generator would test waste is to verify the material tested is a hazardous waste and its composition. Again, waste is hazardous if it exhibits any of the four characteristics of hazardous waste which include ignitability, corrosivity, reactivity, and toxicity (there are other criteria that defines a waste as hazardous, however, this information exceeds the scope of this fact sheet). Using prior knowledge of the processes or reaction that generate the waste stream or the composition of the materials used in the process generating the waste is helpful. Prior to collecting the samples, basic knowledge of the waste is needed to safely obtain the waste ensuring proper analysis

### Hazardous Waste Analysis

If a generator is unfamiliar with their chemical processes and/or they cannot adequately explain whether an associated waste stream is hazardous or not, then a hazardous waste analysis can be conducted. This entails collecting representative samples of the waste and having it chemically analyzed at a state-certified environmental laboratory. There are numerous certified laboratories in Los Angeles County. Each laboratory will have developed their own protocols on how to obtain an authoritative sample. A list of these labs is located at the following website: [http://www.waterboards.ca.gov/drinking\\_water/certlic/labs/index.shtml](http://www.waterboards.ca.gov/drinking_water/certlic/labs/index.shtml)

Before sampling a waste, the generator should "plan" for sampling and know exactly what sample to take, why they are taking it and how to take it.

*Sampling Containers and Equipment:* The laboratory you intend to use should provide guidance as what containers and equipment are needed for an accurate result. Alternatively, your hazardous waste transporter may offer this service as a component of their agreement.

*Representative Samples:* Samples that are considered representative exhibit the characteristics of entire waste streams. It is normally the case that samples should be representative. The number of samples to be collected is

dependent on the type and quantity of the waste and the type and purpose of the sampling. If it is known that the waste is not variable (that is, the waste chemical types and concentrations are consistent throughout the media to be sampled), then one sample point may be considered. If a waste is variable, and waste chemical type and/or concentration differs within the media to be sampled, then one more planning is required and more sampling points should be incorporated. For instance, a drum or tank may contain distinct “phases,” with solids resting on the bottom and organics floating on the surface (sampling technique and equipment would be critical in this case).

*Ignitable Waste:* Waste that may readily catch fire a flash point of 140 degrees Fahrenheit if not specifically exempt meets the criteria for ignitable. Examples of ignitable waste may include spent fuel (e.g. gasoline) and waste solvent (e.g. petroleum naphtha).

*Corrosive Waste:* Aqueous waste that has a tested, pH equal to two or lower (acidic); or an aqueous waste having a pH of 12.5 (alkaline) or greater. There are other tests available for corrosivity, measuring the rate of erosion of certain materials. Common examples of corrosive waste pool acid and drain cleaner.

*Toxic Waste:* Waste that may cause deleterious health or environmental effects (e.g. carcinogen) is potentially toxic waste. There are numerous constituents that can make a waste toxic. Therefore, toxic waste streams are abundant and diverse. The certified laboratory can be a valuable resource, as well.

*Reactive Waste:* These wastes typically can generate dangerous gases (e.g. cyanide or sulfide containing compounds), accelerate combustion (e.g. oxidizers) or unstable and capable of explosive exothermic release.

\*In certain special cases, the presence of any amounts of waste constitutes a hazardous waste even if the representative sample indicates as not hazardous. Therefore, a sample representing the maximum concentration possible is necessary. i.e. This is often relevant when treating your waste.

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**Note:** This fact sheet is intended for informational purposes only and may not encompass all the laws and regulations to this topic. More details may be found at Cal/EPA Department of Toxic Substance Control: [www.dtsc.ca.gov](http://www.dtsc.ca.gov). If further information is needed, call the County of Los Angeles CUPA at (323) 890-4045, or your local district office.

#### References

- ◆ Title 22 California Code of Regulations 66261.20-24, 66262.11