



Waste Treatment

The Chemical Waste Treatment System

Three waste streams have been identified for treatment; photographic wastewater solutions, acidic & basic corrosive aqueous solutions and aqueous solutions with trace organic compounds by using the application of different types of technology, Ion exchange, Neutralization, Oxidation. After proper treatment, the hazards once present in the wastewaters are eliminated. What remains is water that can be sent to the City of Boulder wastewater treatment system.

Processes Description:

Silver Recovery/Recycling



“Great for jewelry, but not for drinking water”

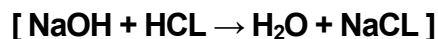
Using an ion exchange system, Silver compounds found in photographic solutions can be removed. The silver is trapped in a cartridge for future recovery / recycling.



Neutralization



“Sodium Hydroxide & Hydrochloric Acid to Water & Sodium Chloride”



Pure acids and bases in aqueous solutions can be used to neutralize each other, in effect canceling out their corrosive natures. All that remains after the reaction is water and common salt compounds. Sodium chloride and potassium sulfate are two examples of the salts that remain.

Oxidation



O₃ or ozone oxidation can be used to split various carbon bonds that compose organic toxins. Organic compounds are reduced to a manageable form that can be handled by City wastewater treatment systems. In addition to this, further purification is conducted by ultraviolet light, leaving us with only non-toxic, drain disposable components.