WHAT ARE C-SERIES AND VOLATILE ORGANIC COMPOUNDS?

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C-Series Compounds

- The term "C-series compounds" is used to describe a group of organic chemicals that were manufactured, or derived as a result of the manufacturing process, at the OCC facility.

- For a C-series compound, the first number refers to the amount of carbon atoms the compound contains and the second number refers to the amount of chlorine atoms the compound contains. For example, C-56 or hexachlorocyclopentadiene, an organic chemical manufactured at the OCC facility and used as a chemical intermediate for resins, dyes, pesticides, and pharmaceuticals, contains 5 carbon and 6 chlorine atoms. C-56 was manufactured by reacting chlorine produced at the plant with pentane or dicyclopentadiene.

- In the process of manufacturing C-56, other C-series compounds were derived. They include:

  C-26 or hexachloroethane
  C-46 or hexachlorobutadiene
  C-58 or octachlorocyclopentadiene
  C-66 or hexachlorobenzene

- C-series compounds are generally insoluble in water, adsorb readily to soil or sediment particles, persist in the environment, and may bioaccumulate in organisms.

Volatile Organic Compounds

- Volatile organic compounds are a group of carbon-containing chemicals that evaporate readily at room temperature.

- Certain volatile organic compounds such as chloroform, carbon tetrachloride, trichloroethylene, and tetrachloroethylene can be derived from the electrolytic cell reaction that was used at the OCC facility to produce gaseous chlorine, hydrogen gas, and sodium hydroxide from brine.

- Volatile organic compounds are relatively insoluble in water but more soluble than C-series compounds and will volatilize when exposed to air.