

## De-Oil-It can also manage (degrade, de-toxify, etc.) the following ::

- Hydrocarbons with carbon chains ranging from C-5 to C-40
- Benzene, xylene, glycols and toluene
- Trichloroethylene (TCE)
- Polycyclic Aromatic Hydrocarbons (PAH)
- Polychlorinated Biphenyls (PCB)
- Fuel oils Fossil fuels gasoline, diesel, aviation gas
- Fluids: hydraulic, transmission (ATF), brake and power steering
- Solvents, Paints, Thinners, Inks, Resins, Lubricants, pesticide, algae and their associated toxins



**Trichloroethylene** (**TCE**) is a volatile, colorless liquid organic chemical. **TCE** does not occur naturally and is created by chemical synthesis. It is used primarily to make refrigerants and other hydrofluorocarbons and as a degreasing solvent for metal equipment. TCE is carcinogenic

#### TCE is used as a solvent for

- degreasing
- a spot cleaner in dry cleaning
- consumer **products** (cleaners and solvent degreasers, adhesives, lubricants, hoof polishes, mirror edge sealants, and pepper spray).

**Polycyclic aromatic hydrocarbons** (**PAH**) are a group of more than 100 chemicals that are also called polynuclear aromatic hydrocarbons. **PAHs** are released from burning coal, oil, gasoline, trash, tobacco, and wood.

PAHs are found in industries that produce or use coal tar, coke, or bitumen (asphalt). They are emitted by coal gasification plants, smokehouses, municipal incinerators, and some aluminum production facilities

**Polychlorinated biphenyls (PCB)** are a group of manmade chemicals. They are oily liquids or solids, clear to yellow in color, with no smell or taste. PCBs are very stable mixtures that are resistant to extreme temperature and pressure. PCBs were used widely in electrical equipment like capacitors and transformers.

## **Products that may contain PCBs include:**

- Transformers and capacitors.
- Electrical equipment including voltage regulators, switches, re-closers, bushings, and electromagnets.
- Oil used in motors and hydraulic systems.
- Old electrical devices or appliances containing PCB capacitors.
- Fluorescent light ballasts.
- Cable insulation.

# Benzene, Xylene, and Toulene

#### **Natural Processes That Produce Benzene**

- Volcanoes
- Forest fires

### **Products Containing Benzene**

- Paint, lacquer, and varnish removers
- Industrial solvents



- Gasoline and other fuels
- Glues
- Paints
- Furniture wax
- Detergents
- Thinners
- Inks
- Adhesives and coatings
- Rubbers
- Industrial cleaning and degreasing formulations

# **Activities/Uses Involving Benzene**

- Emissions motor vehicle exhaust
- Burning coal and oil
- Painting and lithography
- Dry cleaning
- Making chemicals used to make:
  - Plastics
  - Resins
  - Nylon and synthetic fibers
- Making some types of:
  - Lubricants
  - Rubbers
  - Dyes
  - Detergents
  - Pharmaceutical drugs
  - Agricultural chemicals (pesticides)

## **Industries Using Benzene**

- Petrochemical manufacturing
- Petroleum refining
- Coke and coal chemical manufacturing
- Rubber tire manufacturing
- Gasoline storage, shipment, and retail operations
- Plastics and rubber manufacturing
- Shoe manufacturing
- Aviation fuels

## Occupations/People Who May Be Exposed To Benzene

- Steel workers
- Printers
- Rubber workers
- Shoe makers



- Laboratory technicians
- Gasoline service station employees
- Aviation, Industrial manufacturing

## Places Where Benzene May Be Found

- Air around waste sites and gas service stations
- Contaminated well water, as a result of benzene leaks from underground storage tanks or hazardous waste sites containing benzene
- Ends of airline runways

**Xylene** is primarily used as a solvent (a liquid that can dissolve other substances), particularly in the printing, rubber and leather industries. Xylene is also used as:

- Cleaning Agent
- Paint Thinner and Remover
- Varnish
- Airplane Fuel
- Gasoline
- Shellac
- Rust Preventatives
- Pesticides
- Lacquers

**Toulene** is primarily used in various cosmetic products, fuels, and other uses or found in products / elements such as:

- · Nail polish
- · Hair dyes
- Crude oil
- · Pain thinners, stain removers
- · Adhesives, glues
- Rubber
- · Gasoline especially racing fuel