Case Study

Destruction of Persistent Organic Pollutants (POPs)
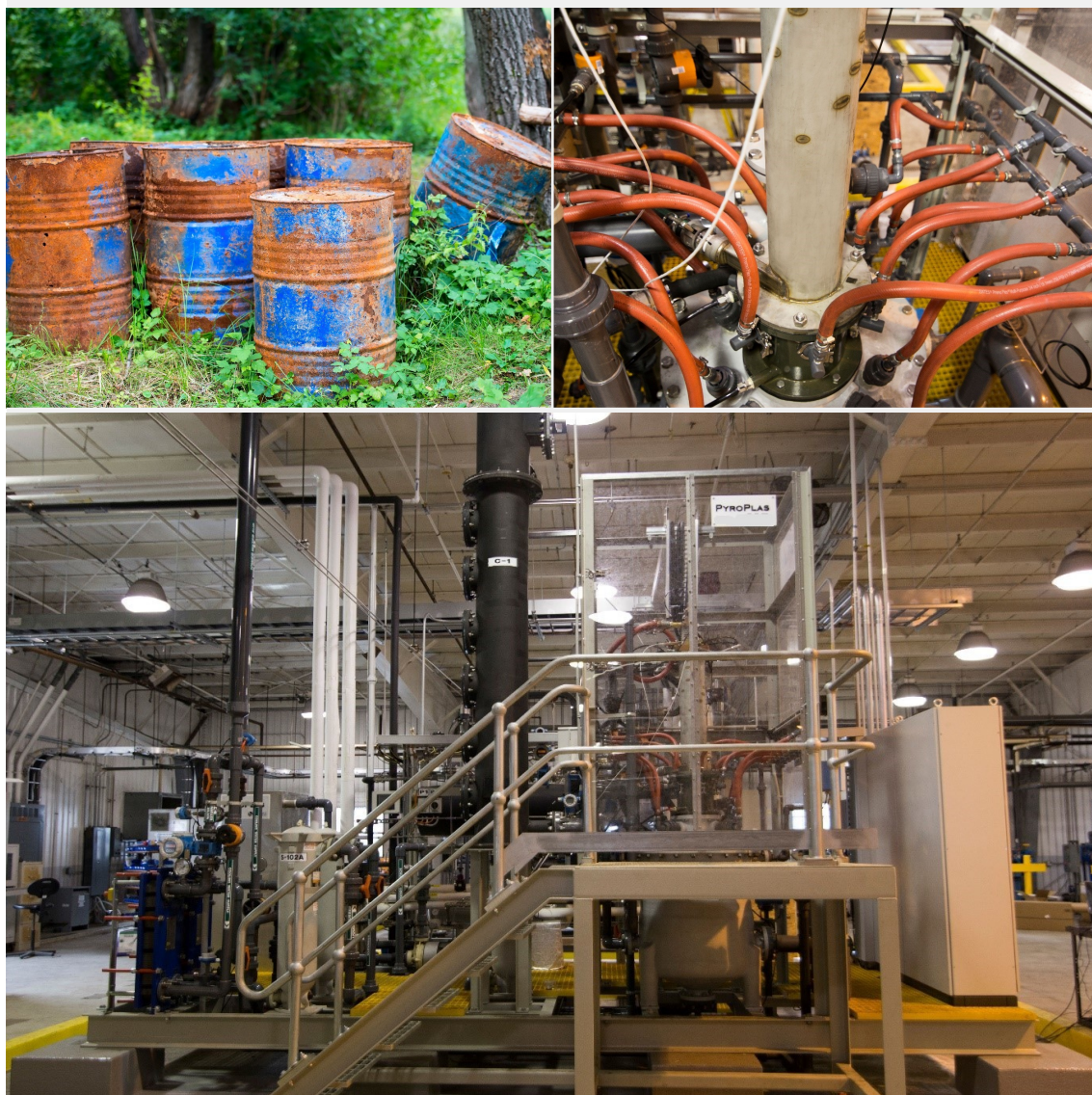
Destruction of Persistent Organic Pollutants

PyroPlas Technology

POPs are molecules that persist in the environment due to their low degradability due to natural processes, and their characteristic of bio-accumulation. Due to their persistence, the bio-accumulation of these molecules over long periods of time causes hazardous effects on flora and fauna, and through the food chain, on human health.

Many POPs are suspected human carcinogens and can also disrupt the immune and endocrine systems. Some are known to cause developmental defects, chronic illnesses and death.

High Temperature Incineration is often considered not applicable due to concerns relating to the requirements for long distance transportation of the wastes, desire to avoid technologies that would create Dioxins and Furans, and fears of ability to maintain consistency of destruction.

PyroPlas is considered to be amongst the most environmentally friendly, safe and economical technologies able to destroy hazardous and environmentally damaging substances especially POPs.

Performance data

- Operation: Continuous feed
- Operating Temperature :   > 3,200 °C
- Residence Time :   30 miliseconds
- Plant Utilisation :   > 90%
- Destruction Removal Efficiency (DRE):   99.9999%
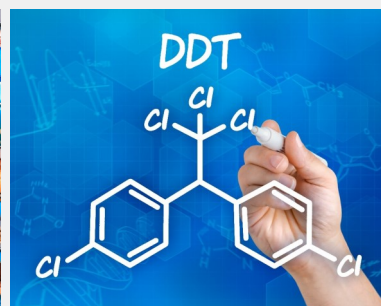
Design characteristics

- Superior waste mixing supporting a high destruction efficiency
- High temperatures producing a high destruction efficiency
- Excellent heat transfer systems allowing for lower system thermal inertia
- Compact Process and extremely safe operation
- Emissions to the atmosphere are substantially lower than existing and proposed international standards
- Servicing is simple, clean and inexpensive
- The PyroPlas can be shut down and back up and running in less than half an hour