Committee: **Environment and Transportation**
Testimony on: **HB1092 Recycling - Prohibition on the Chemical Conversion of Plastic**
Submitting: **Dave Arndt, Co-Chair**
Position: **Favorable**
Hearing Date: **Feb. 26, 2025**

Dear Mr. Chair and Committee Members:

Thank you for allowing our testimony today in support of HB1092. I urge you to vote favorably on HB1092.

Around the world, companies are drawing up plans for pyrolysis plants, promising relief from the crushing problem of plastic pollution. Small startups and demonstration projects are joining with larger companies, including petroleum and chemical giants. Chevron Phillips was recently awarded a patent for its proprietary pyrolysis process, and ExxonMobil has a plant in Texas which the company claims will recycle 500,000 tons of plastic waste annually by 2026.

But what pyrolysis mostly does is make oil to be refined and then sold as fuel. An analysis by the Minderoo Foundation, an Australia-based philanthropic organization focused on the environment, calculated that of the roughly 2 million tons of advanced recycling capacity scheduled to come online over the next five years, less than half a million tons of this material will actually be recycled back into plastic goods. The rest of the output is destined to power airplanes, trucks, and other heavy transportation.

This is not recycling. The benefit of recycling comes when you return materials into the production cycle, which reduces the demand for virgin resources. If you are taking plastic and burning it as fuel, it's not feeding back into plastic production. And so, to keep making new plastic, you have to keep extracting fossil fuel.

However, even worse is that chemical conversion, advanced recycling or pyrolysis is actually an incineration process. Which have the same and greater pollution issues of other incinerators.

Here are the possible issues:

The materials that they are going to feed into their reactor are "hard to recycle" plastics, resin identification code 1-7. You might think, what is the big deal, we handle these plastic products daily. However, making things out of plastics is like playing a game with molecules. The aim is to re-organize them into new shapes without their changing color, sticking to the mold, or doing anything that could spoil the finished article. Additives help with all these problems. In fact, processing plastics without additives is virtually impossible. Additives come in 19 different categories defined by their purpose and in each category, there may be 100s of compounds. Examples of additives are: catalysts, lubricants, flame retardants and stabilizers, most are added at the request of customers.

Plastics included in code 1-7 have been found to include the following items which have been documented to be released in incineration emissions:

PFAS, Bisphenols, Phthalates, Chlorine, Florine, Lead, Cadmium, Selenium, Benzene, Chromium, Vinyl chloride, Benzene, Toluene, Mercury, Arsenic, Dioxins, Formaldehyde, Hexane and PM2.5. Please note that this is not an all-inclusive list, there may be other compounds released depending on the plastic feedstock being used. Many of these compounds are known carcinogens, others are known to cause brain development issues and items like PFAS, we are just beginning to understand their effects, the EPA is just now putting restriction on PFAS in drinking water.

Also, new data suggest that black plastic cookware, typically made in China has recycled plastic from computer circuit boards, making even cooking with them dangerous.

Even though companies tout that their process are oxygen free, oxygen is a key component of most plastics making their flameless oxidizer process by definition an incinerator.

Dioxins and furans are unavoidably created in the oxidation process. Unless they are further captured, they are emitted to the environment. Dioxins are highly toxic and can cause cancer, reproductive and developmental problems, damage to the immune system, and can interfere with hormones. Some dioxins and furans are toxic in the parts per trillion range.

Make no mistake, this is an incineration process that will produces deadly compounds, fires, explosions, accidents and leaks, can happen. Unfortunately, we all have seen that time and time again monitoring or using self-regulation does not work. There are just too many compounds to monitor and there is no way to know what if any this is being emitted is benign or cancerous.

For all of these reasons, I strongly support HB1092 and urge a **FAVORABLE** report in Committee.

Dave Arndt
Co-Chair Maryland Legislative Coalition – Climate Justice Wing