

Thank you for your attention to the grave concern of residents regarding the W.R. Grace Pilot Project, permit docket 16-23. The Cedar Creek Community has summarized key findings and statistics on why advanced recycling has no place in our Maryland communities. We have also included flaws in Grace's permit application. **You will find many reasons below to vote YES to HB1092 to protect public health and the health of Marylanders.**

### Flaws in Grace's Recycling Claims

1. **Recycling Misconception:** The industry promotes chemical recycling as a solution to plastic waste, but it is often just a way to **greenwash** incineration ([NRDC](#), 2022, p. 1; [Beyond Plastics](#), 2025)
2. **EPA regulations define pyrolysis units as incinerators:** The EPA stated in a letter to the Maryland Department of the Environment that the W.R. Grace Pilot Plant "would meet the definition of an [Other Solid Waste Incinerator](#), as OSWI expressly includes pyrolysis units" (U.S. Environmental Protection Agency, Region 3. (2025, January 8). Applicability Determination Request - OSWI Rule and Proposed Pilot Plant in Maryland [Letter to Suna Yi Sariscak, Maryland Department of the Environment].).
3. **Energy Recovery:** Burning plastic for fuel (plastic-to-fuel) does not count as **recycling** by international standards, as it generates the same harmful pollutants as fossil fuels ([NRDC](#), 2022, p. 3). [HOWARD COUNTY ZONING REGULATIONS | Zoning | Howard County, MD | Municode Library](#)

### Health and Environment Concerns of Plastic Incineration

4. **Health Risks:** The chemicals released or disposed of by these facilities are highly toxic, with many being **carcinogenic, neurotoxic, or reproductive toxicants**. For instance, **VOC's** are among the substances that pose severe health risks, including cancer and developmental harm ([NRDC](#), 2022, p. 5,6) ([Dragon](#) et al. 2023) ([Smolker](#) et al, 2024) ([Brumberg et al. 2021](#)) ([EPA 2024](#)) ([American Lung Association 2024](#))
5. **Hazardous Waste:** Most "chemical recycling" facilities in the U.S. are **not recycling plastic**, and instead, generate **hazardous waste** that is often incinerated ([NRDC](#), 2022, p. 3, 4; [Beyond Plastics](#), 2025).
6. **Air Pollution:** "Chemical recycling" facilities are known to release **hazardous air pollutants** like styrene, toluene, and dioxins. These pollutants are linked to serious health issues such as **cancer, birth defects, and respiratory problems** ([NRDC](#), 2022, p. 5,6; [Beyond Plastics](#), 2025).
7. **Polymer Burning Evidence in Grace's Own MDE Application:** Grace will burn 2,588 kg/yr of polymer following a gasification step in the reactor as indicated in their permit application. In addition, burning will also take place in the catalyst regeneration unit. (Maryland Department of the Environment [MDE], 2023, [Docket #16-23](#), p. 29 and p. 16, respectively).
8. **Harmful Chemicals:** About 16,000 chemical additives are used in making plastics. More than a quarter (4,200) of these chemicals are known to be harmful to human health and/or the environment while even more have not yet been studied ([PlastChem](#), 2024).
9. **Increased Risk as a Pilot Plant:** A study looking at health impacts on a similar facility concluded that hazards of a pilot-plant can be greater than those of a production plant, since pilot-plants are operated to test different process conditions, far from the optimized ones. ([Paladino](#) et al, 2021).

### Flaws in Grace's Claims that R&D Emissions will be Negligible

- 10. An Independent Scientific Review Conducted for Maryland House of Delegates Concluded that Emissions Are Likely Greater than Stated by Grace:** Grace has strongly denied that there will be any emissions of PFAS, benzene, or other chemicals that residents have expressed concern about. However, **according to an independent chemical engineer, Dave Arndt who reviewed Grace's permit application for Maryland State Delegate [Jennifer R. Terrasa](#)**, *"W.R. Grace has stated that the materials that they are going to feed into their reactor are "hard to recycle" plastics, resin identification code 1-7. These plastics 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, 1,2-dichloroethane, Chromium, Vinyl chloride, Barium, Styrene, Benzene, Toluene, Mercury, Arsenic, Dioxins, Ethyl benzene, Xylenes, Naphthalene, Acetaldehyde, Formaldehyde, Hydrochloric acid, Methanol, 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."* The above findings by Mr. Arndt are consistent with a near-unanimous consensus among the scientific community, all of which identify many of the above emissions as probable byproducts from similar incineration/pyrolysis operations.
- 11. Grace's MDE Application Uses One Polymer as its Benchmark Feedstock for Emission Calculation Purposes, While Acknowledging that It May Use Several "Other" Polymers:** Grace says that its MDE application is focused on homogeneous polypropylene (*"The proposed Project is designed to process 1 kg/hr of commercially available plastic pellet feedstock (the benchmark feedstock can be 100% homogeneous polypropylene (PP))"*) but acknowledges the intention to use several other polymers as feedstock (*"However, a typical mixed plastic also can include low density polyethylene (LDPE), high density polyethylene (HDPE), polyethylene terephthalate (PET), polystyrene (PS), polyvinyl chloride (PVC), and others"*). The use of the term "others" in the list of polymers is a major concern, as it would open the door for Grace to include any type of polymer imaginable and potentially produce new kinds of emissions that are not contemplated in the initial report. (Maryland Department of the Environment [MDE], 2023, [Docket #16-23](#), p. 15).
- 12. Chemical Recycling Facilities Release Pollutants that Can be Dangerous Regardless of R&D Size and Scale:** Even small R&D facilities release pollutants, and many of these pollutants (like benzene, dioxins, and VOCs) are harmful even in small amounts and have no safe threshold for exposure. According to Dave Arndt, the chemical engineer who reviewed Grace's permit application for Maryland State Delegate [Jennifer R. Terrasa](#), *"W.R. Grace only presents that 0.218 lb of VOCs will be emitted daily, however [they] don't give the chemical make-up of the VOCs being emitted. Some VOCs are highly carcinogenic and even at that volume should not be release[d] to the public."*

### Grace's Regulatory Non-Compliance and Application Omissions

- 13. Failure to Comply with the Clean Air Act:** As discussed earlier, Grace's pyrolysis unit is classified as an "Other Solid Waste Incinerator." [Federal Clean Air Act Section 129](#) addresses emissions from solid waste combustion, and incinerators are regulated under the Clean Air Act's incinerator provision, [Section 7429](#). There is no mention of compliance with Sections 129 or 7429 of the Federal Clean Air Act in [Grace's application](#) or MDE's tentative determination for the permit. Both the text and legislative history of the Clean Air Act indicate that Congress intended Section 7429 to cover all facilities that combust solid waste, except those expressly exempted by Congress. Since Congress did not expressly exempt small units combusting plastic and other wastes from the

Clean Air Act, they are still covered by the Act and need a Section 129 Clean Air Act permit. Indeed, subsequent court decisions have affirmed that Congress did intend to regulate these small facilities burning waste. [See *Sierra Club v. EPA*, 167 F.3d 658, 662 (D.C. Cir. 1999)].

14. **Zoning Non-Compliance:** Since the plant is established as an incineration facility, then the Zoning regulations of Howard County preclude the facility to be located in a PEC District. Bill No. 17-2021(ZRA-197), § 1, 5-6-2021; Bill No. 39-2023(ZRA-204), § 1, 11-6-2023) The Solid Waste District permits processing facilities for non-hazardous solid waste which are not covered elsewhere in the Zoning Regulations, while requiring detailed review of each proposal to evaluate its land use impacts and its potential contribution to the County's solid waste management system. **Because many solid waste processing facilities are of a heavy industrial nature, the SW District is an overlay district which may be applied only to land in the M-2 District.** [HOWARD COUNTY ZONING REGULATIONS](#)
15. **Grace's Emission Numbers Ignore Contributions from Several Factors, including:** Early plant trials; operation outside of steady-state (e.g. start-ups, shutdowns); catalyst regenerator venting; leaks; fugitive emissions; and accidents.
16. **Flaws in Grace's Environmental Justice Report:** Grace's Environmental Justice (EJ) report indicates that there are no high schools, grocery stores, or land restoration facilities within Census Tract 6055.05, Howard County, Maryland (Maryland Department of the Environment [MDE], 2023, [Docket #16-23](#), p. 9). However, public maps confirm that River Hill High School, the River Hill Shopping Center, and the Forest Retention Area on the property line between Cedar Creek and Grace all fall within this tract.
17. **Regulatory Concerns:** Many facilities are not subject to stringent regulations because some states have sought to reclassify chemical recycling as a non-solid waste facility, reducing oversight ([NRDC](#), 2022, p.7,8). MDE's grant funding from the federal government to oversee an operation like Grace's plant has been eliminated ([WYPR](#), 2025).

## Safety Concerns

18. **Incidents of Fires:** Two advanced recycling plants, **New Hope Energy** and **Brightmark**, experienced fires within the first year of operation, highlighting the potential safety hazards ([NRDC](#), 2022, p.8).
19. **Grace's Application Indicates there will be Fuel Storage and Transfer, which Increases Fire and Accident Risk:** Grace will be regularly producing, warehousing, and transporting multiple 55-gal drums of fuel and shipped to a third party waste treatment facility (Maryland Department of the Environment [MDE], 2023, [Docket #16-23](#), p. 16). This is not accurate reporting. Every drop needs to be accounted for, plus shipment dates and times, method of shipment and name of the treatment facility must be documented. Therefore, a hazardous liquid permit must also be obtained.
20. **Documented Accidents Involving the use of Pyrolysis Reactors and Thermal Oxidizers:** These include Husky Energy Refinery in 2018 in Superior, WI ([36 workers injured, 39,000 lb. of flammable hydrocarbons released](#)) and Exxon-Mobil in 2018 in Torrance, CA ([four contractors were injured, neighborhood was dusted with a coat of ash](#)).
21. **Exempt from Emergency Planning and Community Right-to-Know Act (EPCRA):** [EPCRA](#) enhances **public safety** by ensuring first responders and communities have critical information to prevent and manage hazardous incidents, reducing risks to human health and the environment. However, this facility's classification as a research and development facility (NAICS code [541715](#)) exempts Grace from much of this reporting.

## Effects on Minorities, Low-Income Households, and Children:

- 22. Environmental Justice Issues:** Many advanced recycling facilities are located in communities with a high percentage of **low-income** residents and **people of color** (NRDC, 2022, p. 7, Beyond Plastics, 2025). **The Environmental Justice (EJ) score of 29% indicated in Grace's MDE application is understated and misleading, as it does not include groups of minorities and low-income households who moved into residential communities adjacent to Grace after the 2020 census.** The 2020 census indicates a 54.33% minority population per Grace's EJ report (Maryland Department of the Environment [MDE], 2023, [Docket #16-23](#), p. 11). However, we believe as many as 80% of residents in Cedar Creek, all of whom moved in after the 2020 census, are people of color. Additionally, **Robinson Overlook Apartments, an affordable housing community adjacent to Grace's headquarters, only opened in August 2021** ([Woda Cooper Companies](#), 2021). **Outreach from Cedar Creek residents confirmed that Robinson Overlook residents are unaware of Grace's plans.**
- 23. Growing Children in the Community:** The Cedar Creek neighborhood consists of 100+ children. Children breathe more air relative to their body weight than adults, breathing in 2 to 3 times as much air per minute, making them more susceptible to harmful air pollution ([Unicef](#), 2019).

## Benefits Do Not Outweigh Risks:

- 24. Current Evidence Suggests Benefits of Projects like Grace's are Overstated:** Of 11 constructed chemical recycling facilities in the U.S., two of these facilities closed in the first half of 2024: Regenyx in Oregon and Fulcrum in Nevada. Most of the remaining nine facilities are not operating at full capacity. Even if they were operating at full capacity, the remaining nine facilities could only process 1.2% of all U.S. plastic waste ([Beyond Plastics](#), 2025). More concerning, a study published by the [Federal Governments Renewable Energy Lab](#), found that chemical recycling was actually 10-100 times worse for the environment than simply producing new, virgin plastic.
- 25. Hours of Facility Operation Increase Risks:** The plant will operate 16 hours a day (Maryland Department of the Environment [MDE], 2023, [Docket #16-23](#), p. 16), five days a week, all year round, potentially for many years. The long-term cumulative effects of this persistent exposure on the health of children and adults residing just yards from the facility are unknown, but remain a major concern.
- 26. Grace Has a Documented History of Contaminating this Location with Hazardous Waste, Suggesting this Project Carries Elevated Risks:** There is a public report on the [EPA's website](#) describing the efforts to clean-up environmental pollutants around Grace's headquarters. According to the EPA, "*The contaminants of concern include trichloroethene (TCE), 1,1,2,2-tetrachloroethane, tetrachlorethene, 1,1-dichloroethene, 1,1-dichloroethane, 1,2-dichloroethane, and trichlorofluoromethane.*"

## Unanimous Recommendation from Howard County Department of Planning & Zoning:

- 27. Howard County Department of Planning & Zoning Recommendation:** DPZ reviewed all the facts and the 3 board members **unanimously** recommended for the Council to come up with legislation/amendments to move the project because of potential hazards.

The Board in their discussions suggested that this project be moved to M1/M2 districts. James Cecil testified for a bill presented by Senator Clarence Lam regarding rendering a

tax credit to residents impacted by these plants, and he suggested that the state should instead use the money contemplated for the tax credit to move the project to M1, M2.

Maryland's mission includes striving to be a place with safe and healthy communities. Vetoing or tabling HB1092, and allowing WR Grace to build their pilot plant facility, will cause irreparable HARM to our community and surrounding communities. This includes health impacts to our children and elderly, safety impacts from possible leaks/fires/explosions, and environmental justice impacts to resources like Robinson Nature Preserve. The Howard County Planning Board unanimously approved the proposed ZRA-211 as they were concerned about the impacts to the community. As constituents and members of the Howard County community, we trust you to uphold the county's values and do the right thing and vote yes for HB1092.

Thank you!

Sincerely,

Cedar Creek Residents