

PureCycle Technologies

July 2023

Chris Talarek





**THE FUTURE OF PLASTIC WASTE IS
CLEAR.**



What We Do

PureCycle uses a new, disruptive technology taking scrap polypropylene (plastic #5) and recycling it into an ultra-pure recycled resin. We eliminate odors, color, and contaminants from recycled plastic.



Simply put...

- We collect, sort, and shred recycled plastic.
- We purify it.
- We produce pellets.



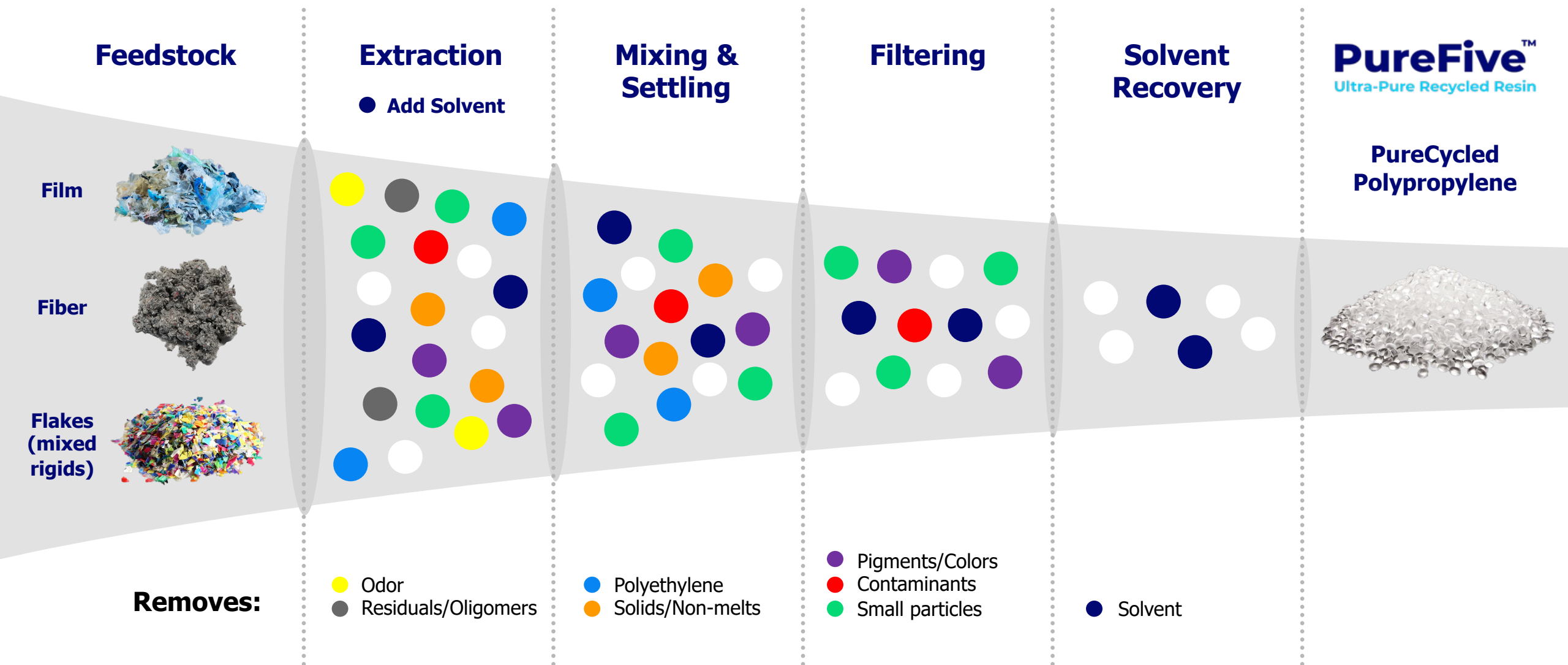
WHAT WE DON'T DO

- We don't chemically break down the polymer. We use solvent-based purification.
- We don't alter polypropylene properties. They remain the same, but purified, allowing it to be used multiple times.
- We don't have an emissions or byproduct problem.
- We don't have supply concerns. Our feed is approaching halfway to one billion pounds.
- We don't shut other polypropylene recyclers down but rather complement and provide a market for them.

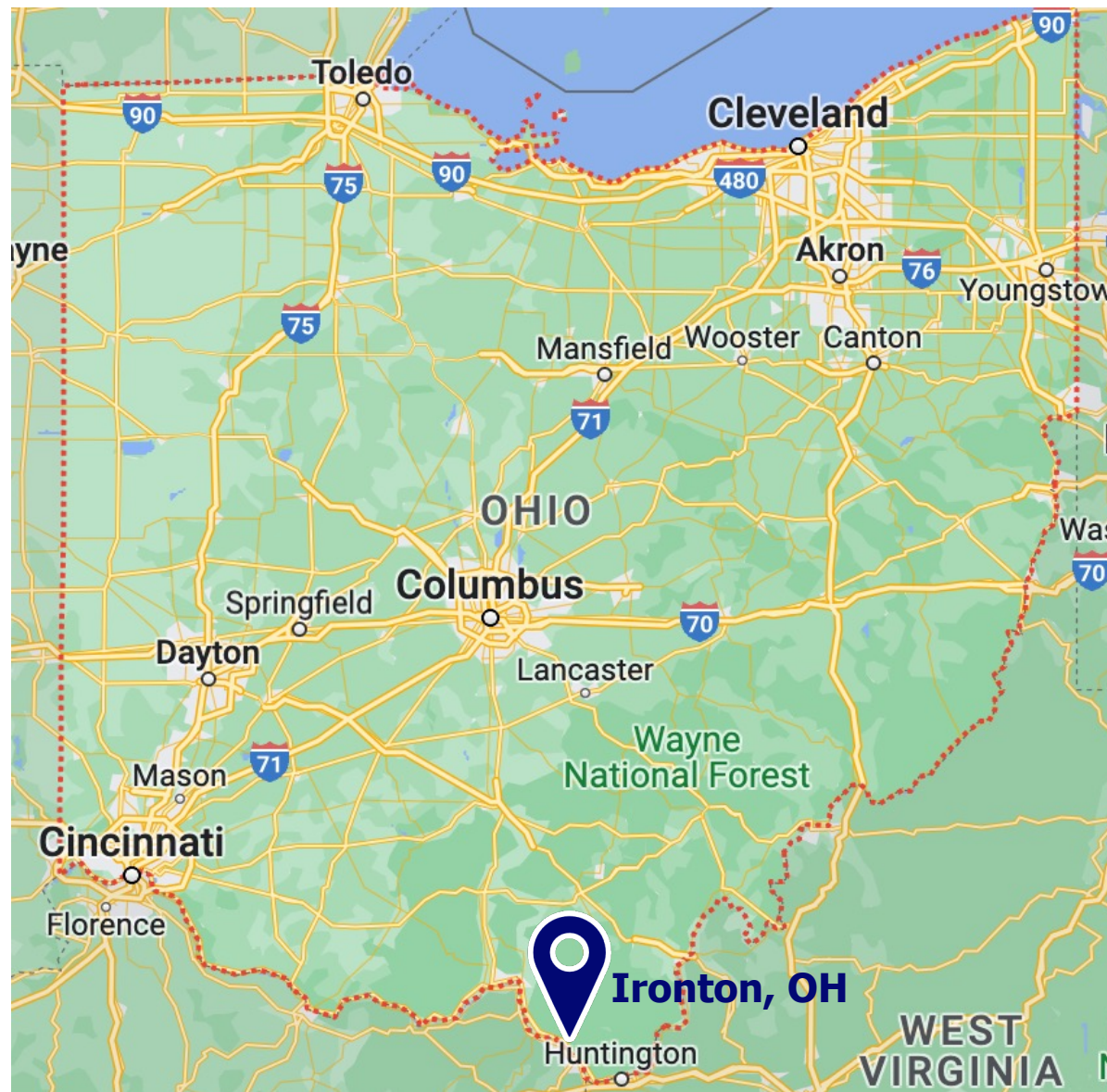
WHAT WE WILL DO

- We recycle polypropylene plastic to plastic.
- We use an advanced mechanical process that purifies polypropylene.
- We have conducted an initial LCA: lower GHG and carbon compared to virgin production
- We use our solvent repeatedly with negligible loss over the course of a year unlike surfactants used in traditional recycling.
- Ironton flagship facility will recycle more than 120M pounds at capacity

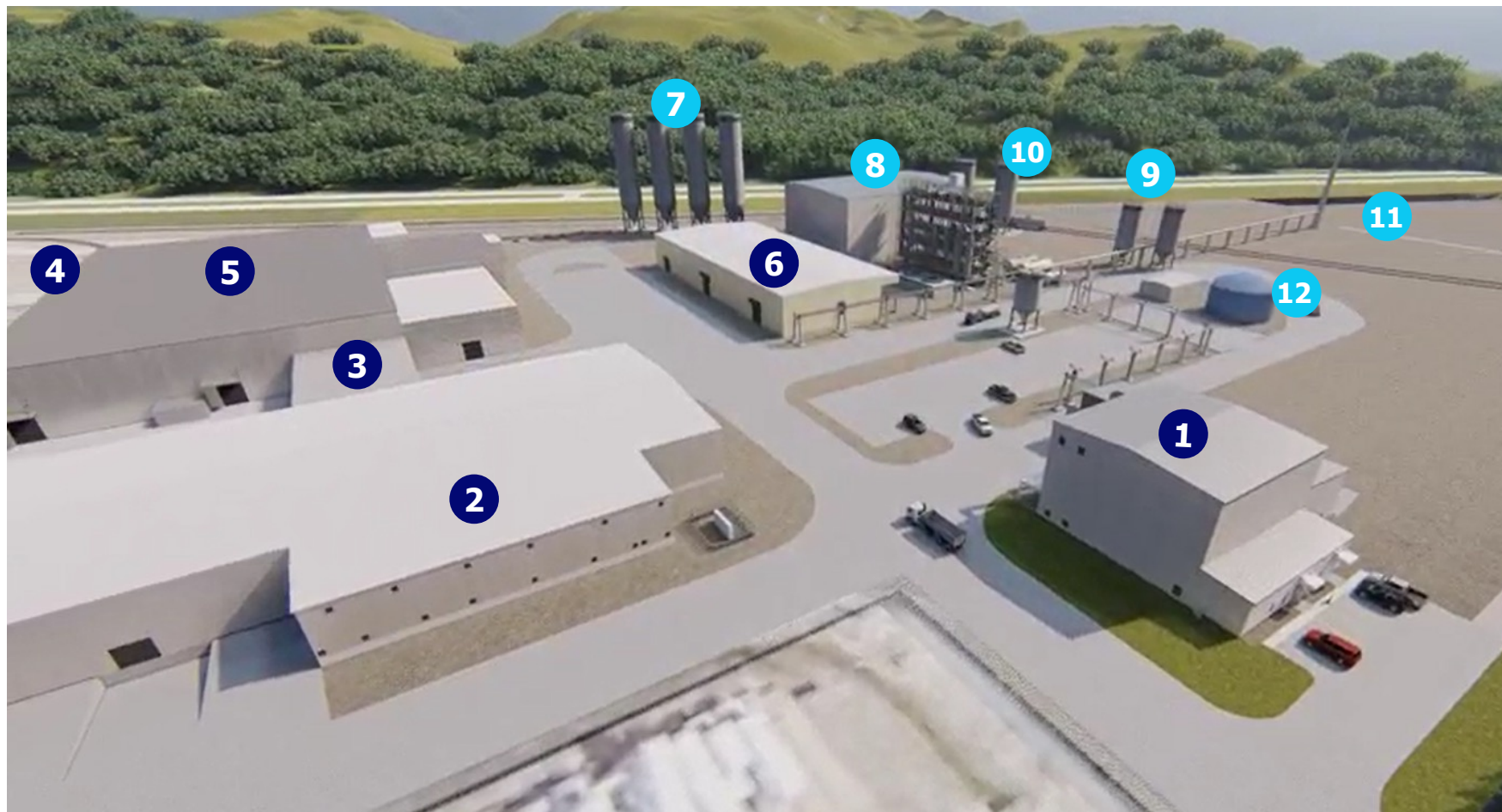
PureCycle's Purification Process



Our Flagship Facility



Ironton Facility Site Plan Overview



Existing Infrastructure # New Infrastructure / Improvements

- 1 Phase 1 Unit
- 2 Feedstock Storage
- 3 Feedstock Receiving – Truck
- 4 Feedstock Receiving – Rail
- 5 Feedstock Processing
- 6 Utility Building / Spares
- 7 WIP Silos
- 8 PCT Purification Process
- 9 Rail Loading Silos
- 10 Storage Silos
- 11 Process Flare
- 12 Water Tank

July 2019: Commenced operation of Phase I, the FEU



- Produced first UPRP July 2019
- Successfully processed rigid, fiber, and film feedstocks to date
- All feedstocks have produced product meeting contractual commercial product specifications

Ironton: Then & Now

June 2021



April 2023









Extracting Value from Feedstock Co-Products

Feedstock

Pre-Processing Steps

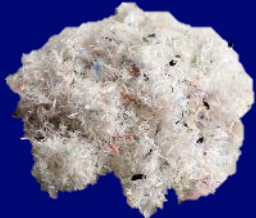
Purification

Offtake

Rigids



Fiber



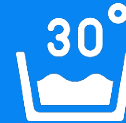
Film



Sort



Grind



Wash



Shred



Clean



Agglomerate



Shred



Clean



Agglomerate



Co-Products



PE Wax



Competitively Positioned to Source Feedstock

From Both New and Existing Waste Streams



Post Consumer Curbside

- #5 bales
- #3-#7 bales
- Residue



Post Consumer Non-Curbside

- Co-recycling
- International import
- Special events
- Circularity programs / targeted streams
- PureZero™



Post Industrial

- Direct from manufacturing
- Compounding waste
- Virgin production waste



Advocacy

- New PP collection
- PP conversion
- Strategic alignment
- Local, regional, national relations
- Industry representation

PureCycle is targeting high- and low-value PP streams before they enter the end-of-life waste systems to renew and recycle the maximum amount of PP.

LCA Overview



Evaluated the life cycle inputs and impacts per kilogram of PP produced through PureCycle's purification process, considering all material and energy inputs and outputs of its preprocessing and processing stages.

The system boundary of this study starts at the point facilities receive their feedstock and ends at the moment a kilogram of polypropylene resin is produced.

Used OpenLCA v.1.10.3 and the IPCC 2013, Cumulative Energy Demand, and Selected LCI Results methodologies when calculating life cycle impacts of material and energy systems.



Calculated Environmental Metrics

The calculations are based on the measured impact per kilogram of polypropylene produced.



GHG Footprint (Kg CO₂e / kg PP)

Greenhouse gas impact per kilogram of polypropylene produced, measured in kilograms of carbon dioxide equivalent

Energy Footprint (MJ / kg PP)

Fossil fuel energy inputs in megajoules per kilogram of polypropylene produced, including the processes, embodied energy of materials, and transportation steps in the supply chain

Water Footprint (Liters / kg PP)

The volume, in liters per kilogram of polypropylene produced, of all water drawn from surface water, groundwater, seawater, or a third party for any use by the organization during the reporting period



Credits

No credits were included in the calculated results to ensure a fair comparison



1.54 Kg CO₂e
per kilogram of PP resin
↓ **35%** below virgin PP



16.5 MJ
per kilogram of PP resin
↓ **79%** below virgin PP



8.8 Liters
per kilogram of PP resin
↑ **3%** above virgin PP

Recycled Polypropylene



THE PAST



**THE FUTURE IS
NOW!**



Questions?

Chris Talarek

513-704-4904

ctalarek@purecycle.com

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