

## Homework 6 Plastics in a Circular Economy

This week Carrie Harms from Cincinnati Recycling and Reuse Hub held a discussion. I also began a presentation about tire recycling.

a) The Hub and Rumpke operate independently to address the solid waste problem. Consider how they could work together for example in developing joint facilities, in working with the City of Cincinnati to develop comprehensive solid waste activities, in applying for federal and state funds through the EPA, DOE, Commerce to support regional efforts, in organizing local business partners such as P&G, LyondellBasell, Jergens, Gorilla Glue, Formica and in working with UC among other things.

b) A list of materials that are not accepted by CRRH is given on the following webpage: <https://www.cincinnati recycling and reuse hub.org/what-we-dont-take>

Pick 10 of these and explain why they are difficult to recycle. Is there a solution other than land fill or incineration for these materials?

c) A list of materials that are taken for a fee is given on the following webpage: [https://static1.squarespace.com/static/5ecd724f782c903df8dbd2bc/t/66edff0715be8d4b69197eff/1726873352040/CRRH+Fee+based+price+list+Updated+09\\_2024.docx.pdf](https://static1.squarespace.com/static/5ecd724f782c903df8dbd2bc/t/66edff0715be8d4b69197eff/1726873352040/CRRH+Fee+based+price+list+Updated+09_2024.docx.pdf)

Explain why a fee is necessary for 10 of these items. Does the fee seem reasonable? What alternative is possible except for landfill or incineration?

d) List and explain the possible end-of-life fates for tires. (At least 7) What is the most desirable fate?

e) 6-PPDq is a known hazard of tires. Explain what 6PPD-q is, what danger it poses (include a fate-and-transport sketch source to people say), and how it might be important to each of the end-of-life fates for tires that you listed in question d.