

Business Item 2023-248: **Seneca Polymer Contract 22P297**

Rebecca Hurley, Senior Engineer

Environment Committee: October 24, 2023



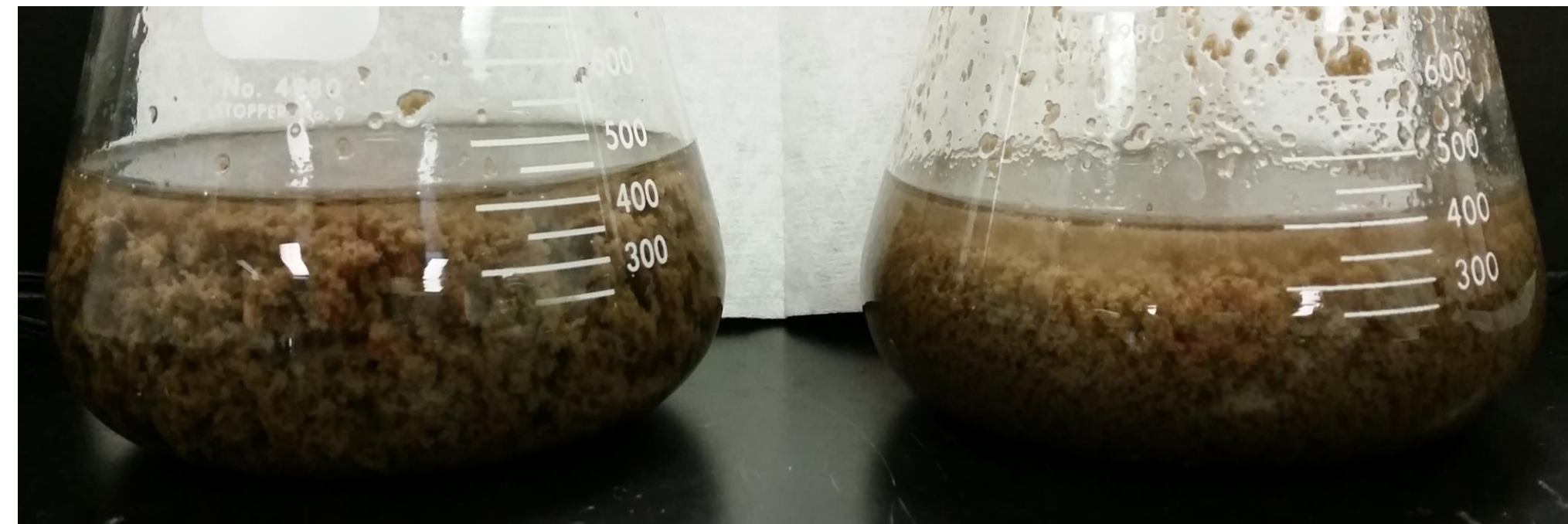
What is sludge?

- Particles that settle naturally in wastewater from primary tanks (primary sludge)
- Excess microorganisms from aeration tanks (secondary sludge)



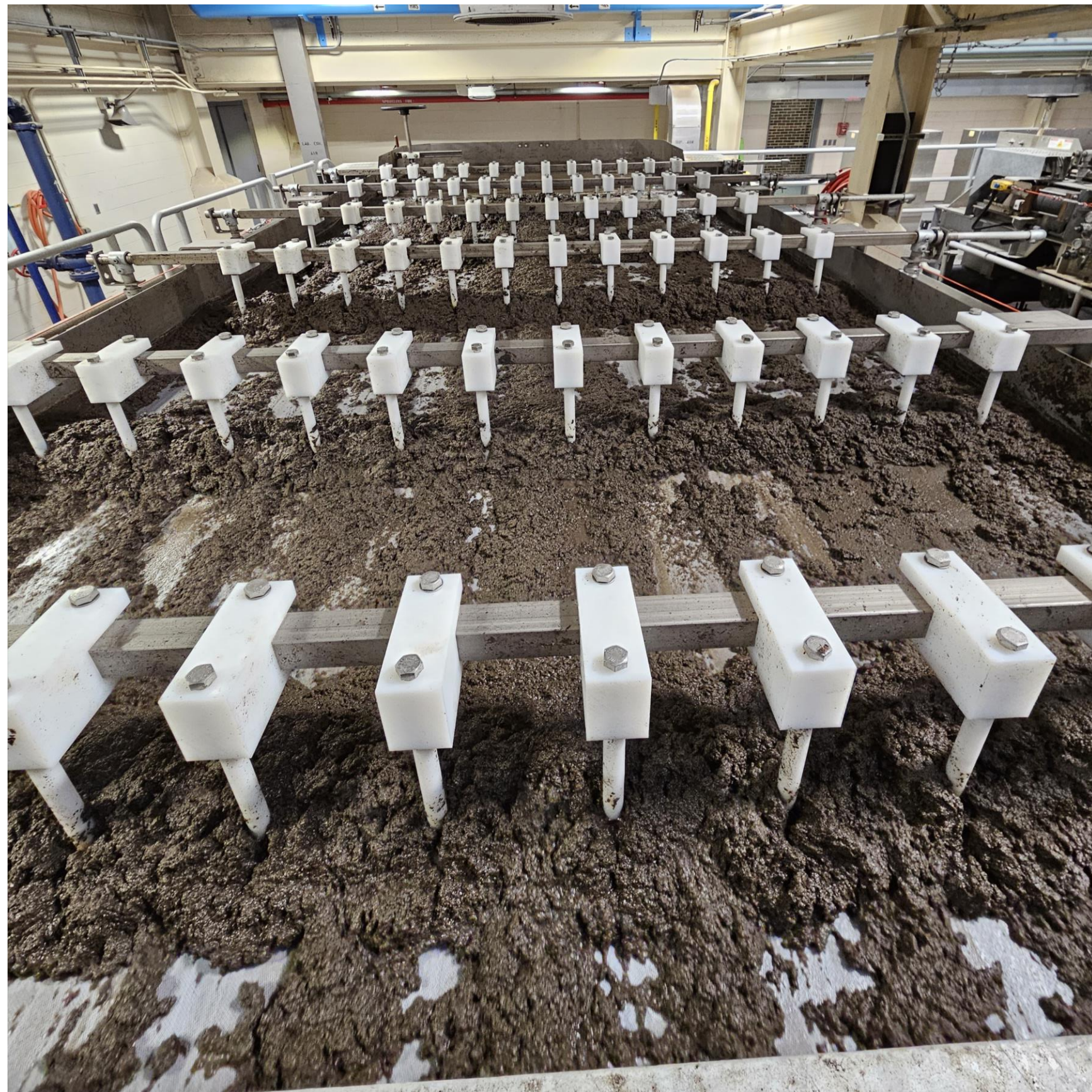
What is polymer?

- Made of mineral oil (light naphtha), polyacrylamide, and water
 - Raw materials are oil and natural gas
- Causes sludge particles to agglomerate (flocculation)
- Allows dewatering equipment to separate solids from water
- Different sludges need a different polymer to be most effective

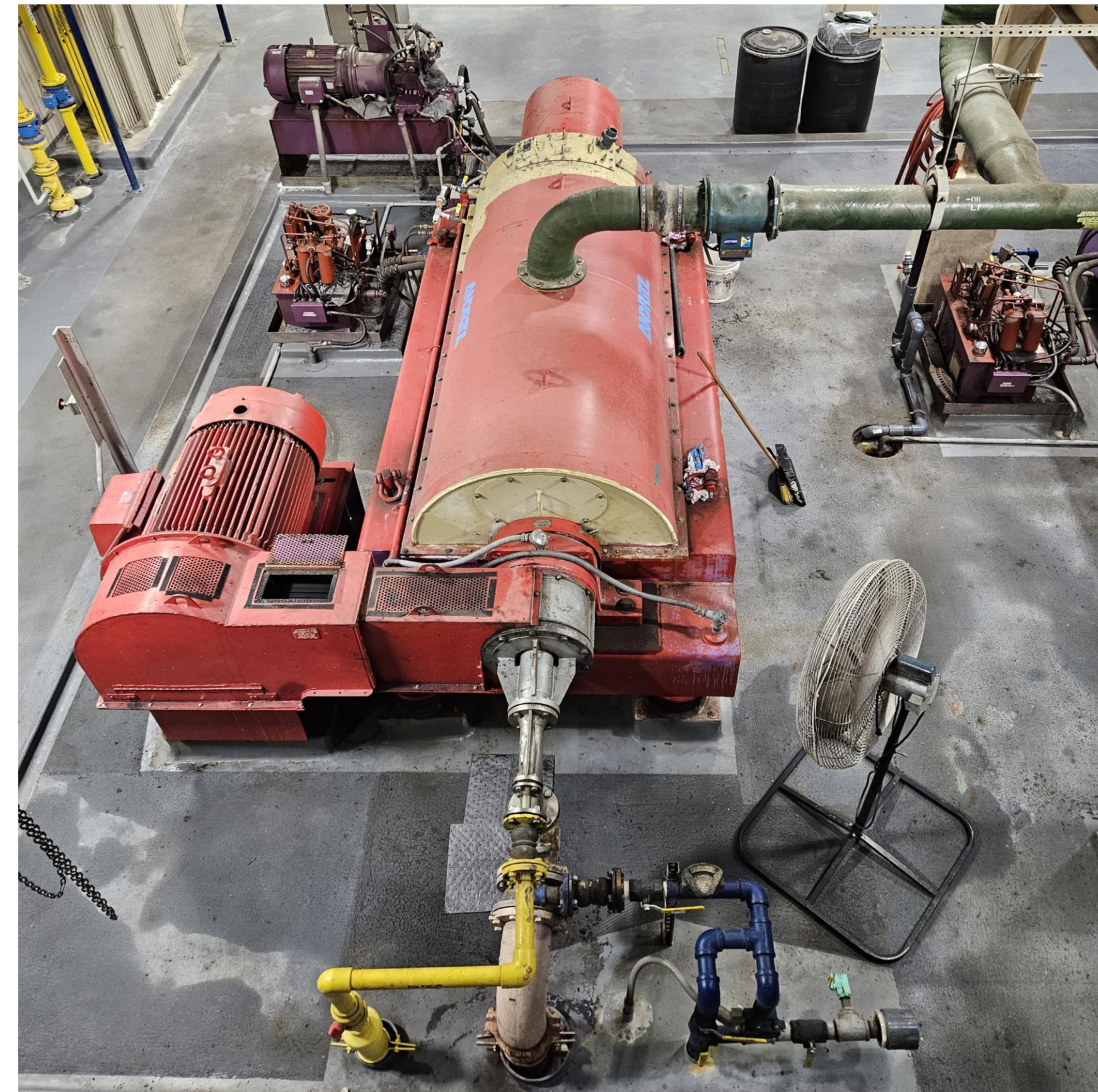


How is polymer used at Seneca?

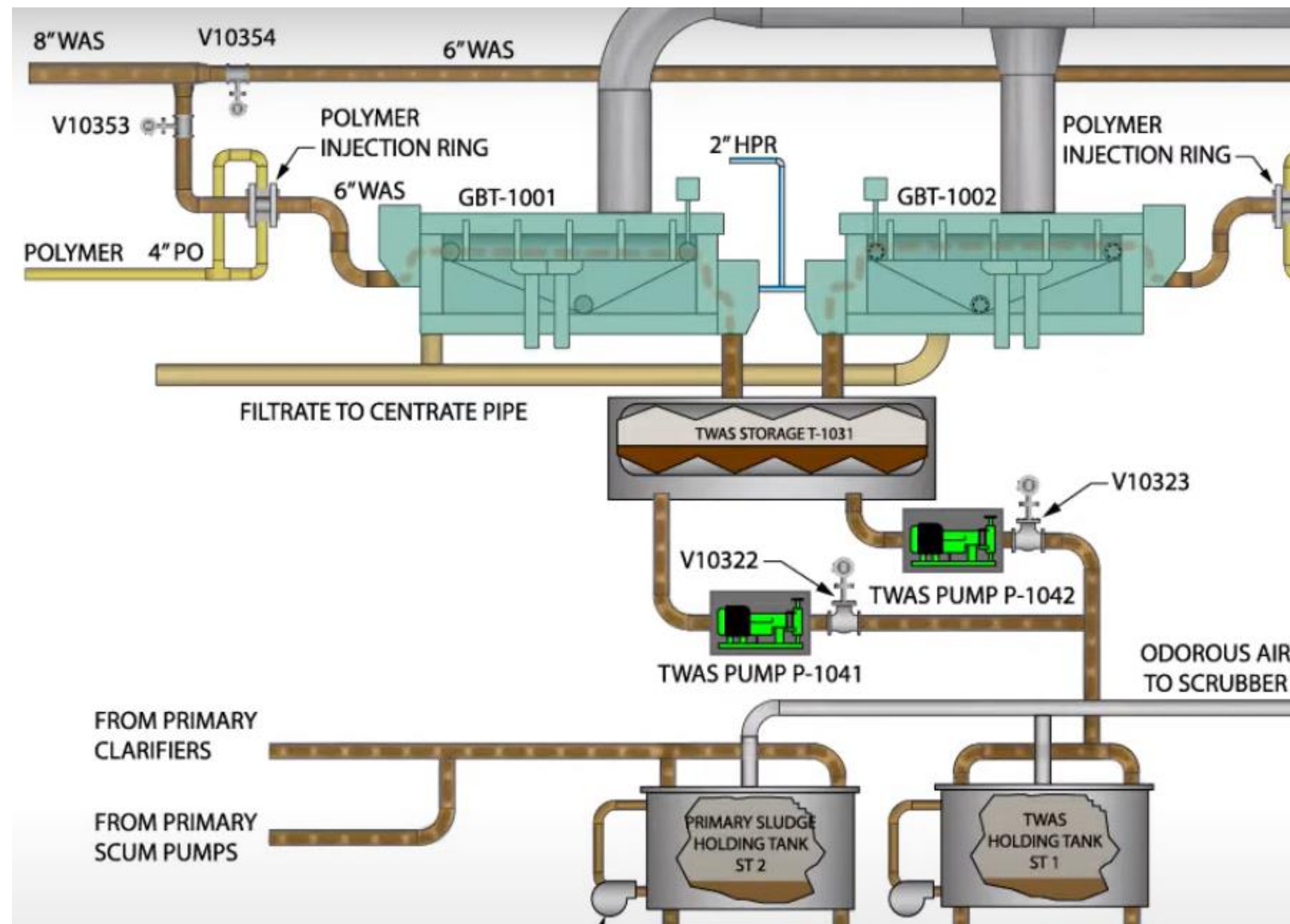
- Gravity Belt Thickeners



- Centrifuges

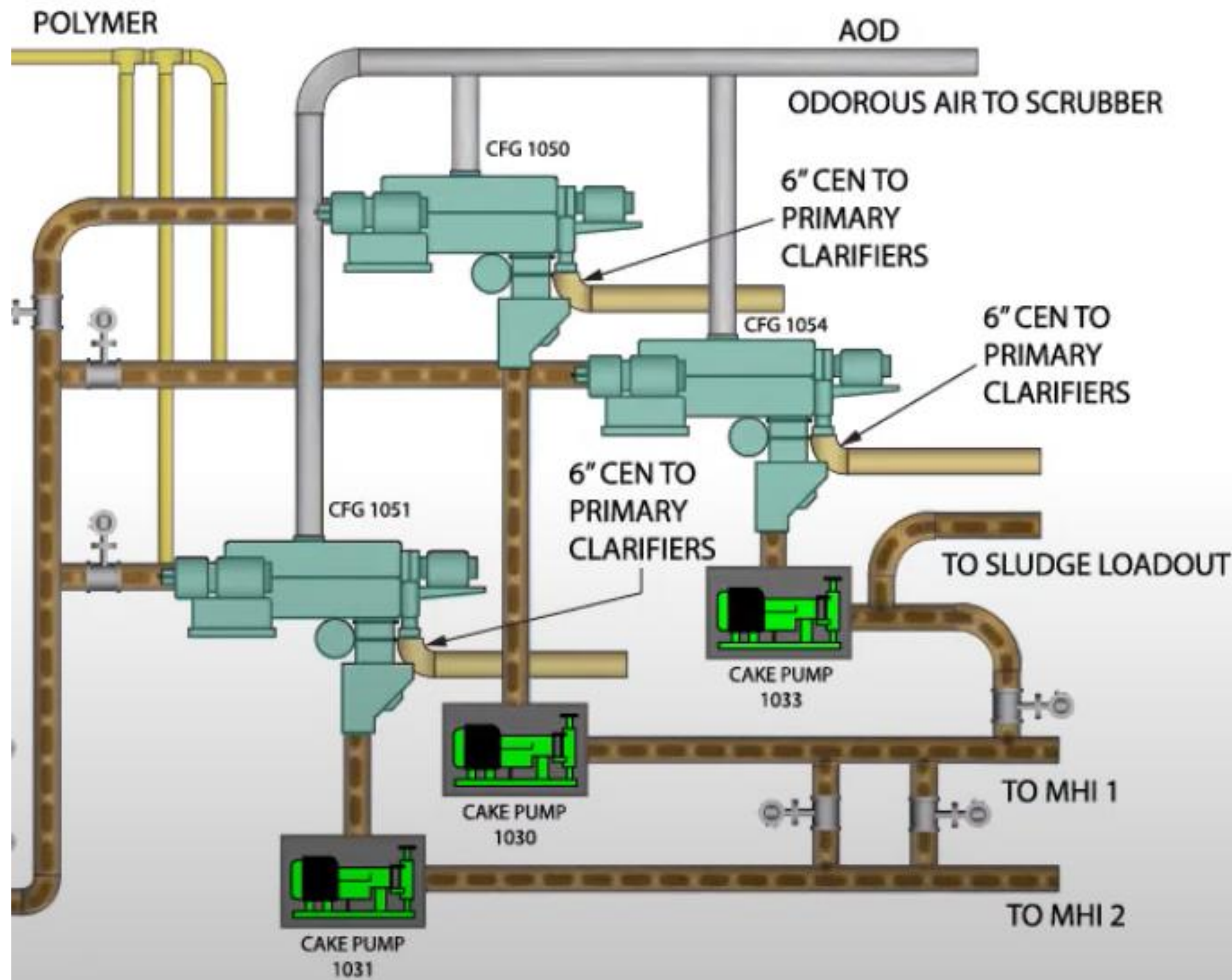


Gravity Belt Thickeners



- Reduce the water content of waste activated sludge to maximize capacity of the storage tank
- Increase waste activated sludge solids concentration from 1% to 6-7%

Centrifuges



- Remove water from the mixture of primary and secondary sludge to reduce the volume of solids being fed to the incinerator.
- Drier solids reduce the need for using natural gas in the incinerator
- Increase solids concentration from 5% to 25%

Background

- Two-step Procurement process
 - Invitation for Prequalification – January 9, 2023
 - Identify acceptable polymer options through a full-scale evaluation of performance and prequalify those vendors/products
 - Only vendors that have prequalified products are allowed to participate in the Invitation for Bids which is the second step in the procurement process.
 - Invitation for Bids – September 6, 2023
 - One vendor bid received and opened – September 28, 2023
- Polydyne, Inc. met evaluation process requirements for three products. Lowest cost product selected for the contract
- \$1,210,000 annual expenditure, 5-year contract not to exceed \$7,048,000
- Office of Equity and Equal Opportunity did not set a Metropolitan Council Underutilized Business (MCUB) goal

Proposed Action

- That the Metropolitan Council authorize the Regional Administrator to award and execute contract 22P248A with Polydyne, Inc. to provide polymer to the Seneca Wastewater Treatment Plant in amount not to exceed \$7,048,000.

Questions

Rebecca Hurley

Senior Engineer

651-602-4474

Rebecca.Hurley@metc.state.mn.us

