



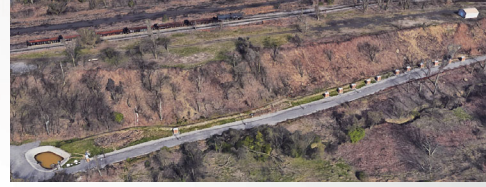
Former Hillside Landfill Water Treatment System Fast Track Design and Implementation for Treating PCBs and Heavy Metals

Presented by: Ben Trask

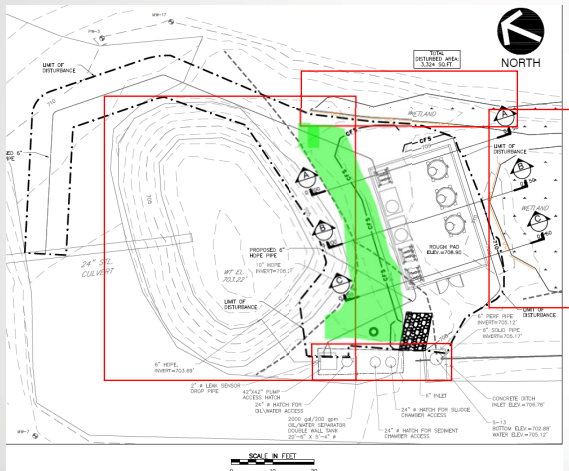


Timeline of the Landfill

- 1952: Landfill Built
- 1977: Landfill Closed
- May 5, 1977: Oil Plume released into Ohio River
- 1977 post release: Original Siphon Pond Constructed
- July 15, 2009: AK Steel and PADEP enter a Consent Order and Agreement
- February 9, 2012: PADEP approves the Surface Water and Seep Collection Plan
- October 2013: Collection system completed
- October 1, 2019: NPDES Permit goes into effect
- October 1, 2019 - September 30, 2022: Effluent Limits on pH and Oil and Grease required
- May 3, 2021: Cleveland Cliffs receives permit modification approval to implement a system design from another consulting firm
- July 29, 2022: CEC submits an Interim Water Treatment system plan to the PADEP
- October 1, 2022 – September 30, 2024: Effluent Limits on pH, Oil and Grease, **Total Iron, Total PCB's required**



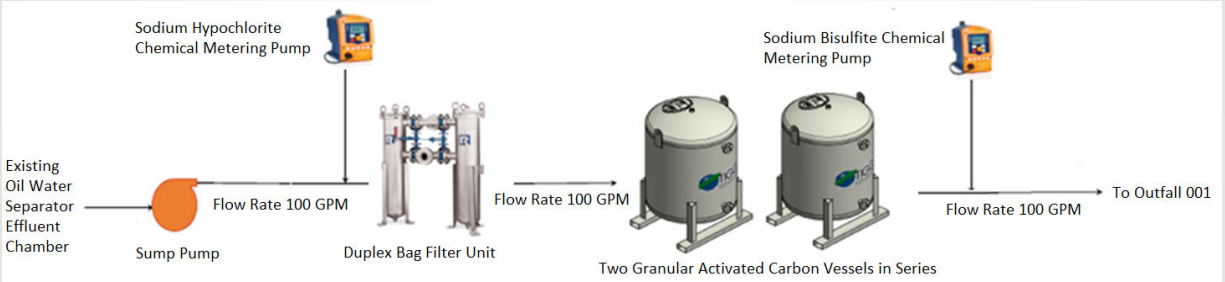
Primary Challenges



- Lack of Information on Feed Water
- Pressing Deadlines
- Space Constraints
- Site Accessibility



The Initial System

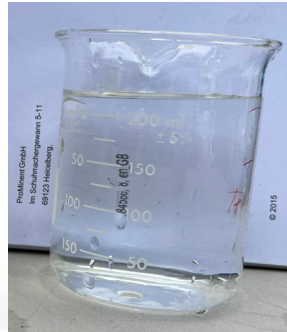
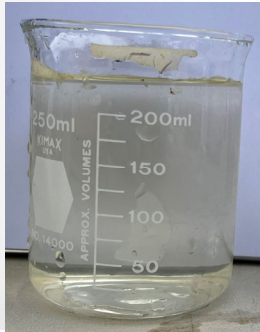


Phase I Construction



Phase I Startup

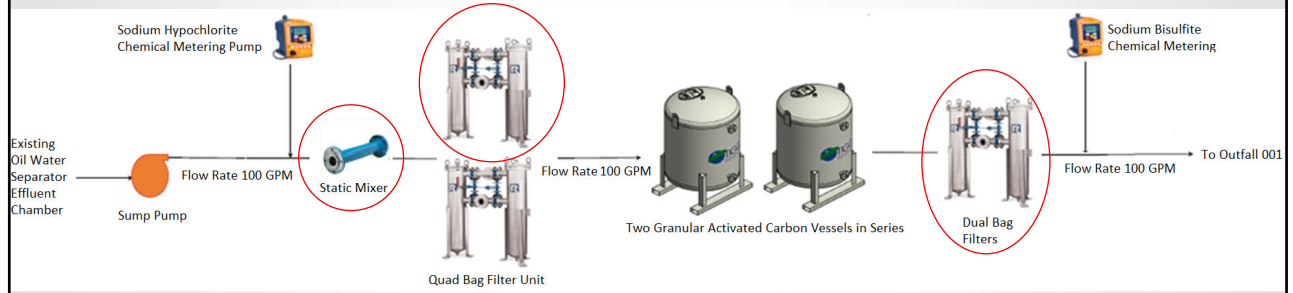
Permit Limits	Pre-Treatment:	Post-Treatment:
Iron: 1.5 mg/L PCBs: <.5 ug/L	Iron: 1.94 mg/L PCBs: 0.520 ug/L	Iron: 0.08 mg/L PCBs: <0.200 ug/L



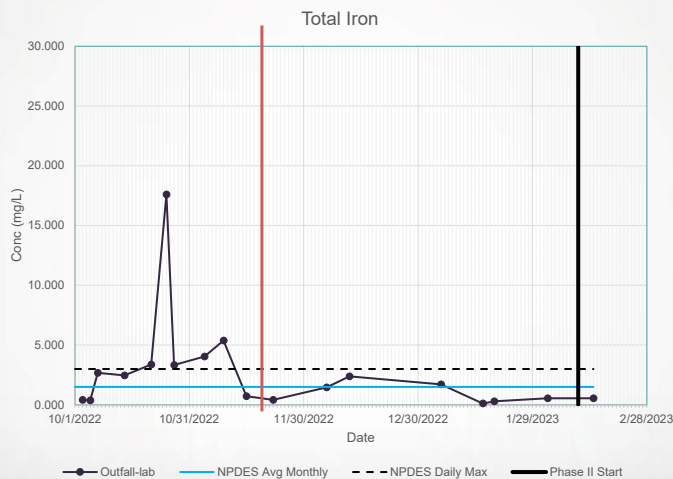
Phase I Operations and Maintenance Issues



Modifications to Treatment Method



Sampling Results Post Modification



Summary/Conclusion

- The system was operational within two months
- Met permit limits almost immediately
- Lessons Learned: Expect the unexpected and have a good response team
- What's Next? Phase II of the system is operational and continues to meet permit deadlines



Presenter

Ben Trask



Project Scientist

Btrask@cecinc.com

724-858-5953

CEC Pittsburgh

Environmental Practice



QUESTIONS?

