Incentives to Change
Using alternative products, optimizing processes, and implementing new technologies can improve air quality for the workers and the Phillips community, and reduce operational costs.

Organization
Smith Foundry specializes in low/medium production of ductile and gray iron using sand as molds and cores to shape castings, and are located in Phillips area of Minneapolis.

Intern Project
Improve air quality inside and outside of the foundry by optimizing processes, using alternative products, and looking for ways to increase energy efficiency and reduce waste.

Solutions

Alternative Binders:
Switching to a greener sand binding system will generate lower VOCs, HAPs, and particulate matters.

Pneumatic to Electric tools:
Switch from pneumatic grinders to electric ones.

Optimize Filling Pipe:
Optimize the silica sand filling pipe to minimize sand degradation and fracture.

Mull-to-Energy System:
Implement Mull-to-Energy system to optimize the mulling process of sand.

Blackwater System:
Investigate blackwater system to restore the binding effect of the clay.