

# Mika Rodrigues

## Project Abstract - Rust-Oleum



### INTERN

**Mika Rodrigues**

BS Chemical Engineering & Chemistry, University of Minnesota 2021 (*expected*)

### PROJECT FOCUS

**Chemicals and Waste Reduction**

### ADVISOR

**Paul Pagel**

### COMPANY

**Rust-Oleum**



### COMPANY DESCRIPTION

Rust-Oleum produces surface coatings for many applications. The Brooklyn Park facility works primarily in concrete coatings, which are sold to contractors and distributed to big box stores like Menards, The Home Depot, and Lowe's.

### INCENTIVE

Despite being removed from the EPA's list of hazardous air pollutants in 2005, MEK is a VOC (volatile organic compound), an EPA F-listed waste, highly flammable, and requires the use of a respirator. Many non-hazardous options simply don't have the solvency to cut through the products produced in the facility. Solvents of various flammability and hazards were tested as alternatives to MEK, as well as new cleaning processes and equipment. Converting to a non-hazardous solvent will help the facility

achieve a small quantity waste generator status with the county, reduce the cost of waste disposal, and improve worker safety.

### **FOCUS OF RESEARCH / RECOMMENDATIONS**

The primary directive of the project was to reduce the waste generation of the facility. The main target was reduction or elimination of methyl ethyl ketone (MEK), a highly effective and highly flammable solvent used in cleaning operations.