**INTERNSHIP:** Lead a project focused on improving paint transfer efficiency (Summer 2019)

**COMPANY:** Verta Inc., Delano, MN

The Minnesota Technical Assistance Program (MnTAP) is seeking a junior- or senior-level college student to lead a project focused on reducing paint and solvent usage in an industrial coating and finishing operation. The intern will work with Verta and MnTAP staff to understand how paints and solvents are used and propose solutions to minimize waste. The intern will design experiments to study the effects of process variables in the paint line in order to optimize settings which maximum transfer efficiency. These variables include: spray painting rate, duration, nozzle position, line speed, part spacing, paint temperature, pressure, and viscosity. The intern will also investigate the operation of the RO system used in purifying water for the pretreatment process for water conservation opportunities.

**JOB DUTIES:**
As part of this project, you will be asked to complete the following tasks:
1. Quantify current usage of solvents and paints at the facility
2. Assess equipment and procedures at each stage of the coatings process and identify key areas of opportunity for potential waste reduction
3. Develop and propose paint and solvent reduction methods and conduct testing of transfer efficiency variables
4. Quantify and evaluate reductions in paint and solvent waste and recommend modifications to the system based on reduction potential, transfer efficiency improvement, and cost savings
5. Analyze RO system to determine operational parameters and limitations and evaluate opportunities for increasing permeate or recycling of RO reject water
6. As time allows, conduct analysis and make recommendations for additional waste reduction-related projects
7. Prioritize recommendations using simple payback methods to financially justify the alternative processes or equipment
8. Work with the company’s staff to determine feasibility of alternative processes, methods, and equipment
9. Implement and document approved changes or outline a strategy for implementation
10. Summarize findings in a detailed report, including recommended procedures and vendor proposals along with an economic analysis and justification of changes
11. Present findings to the company and at MnTAP-hosted public presentation events

As an intern, you will work at the company and report back to MnTAP. The position is full time, 40 hours per week, for three months to start after the conclusion of spring semester or quarter. Pay is $14.00/hour, with a lump sum stipend of $1,000 upon completion of the project deliverables: a final report and presentations. Cumulatively, this equates to $16.00/hour when averaged over the project. Candidates must pass a background check.

**QUALIFICATIONS:**
- Cumulative GPA of at least 3.0
- Good oral & written communication skills
- A technical academic background
- Troubleshooting skills
- Self-motivated
- Excel and other software skills
- Appropriate majors: Engineering, environmental or physical sciences and others as applicable

**TO APPLY:**
Apply online at: [www.mntap.umn.edu/intern/student_apply.htm](http://www.mntap.umn.edu/intern/student_apply.htm)

Remember to submit your application form, cover letter, resume, and unofficial transcript.

Cover letters can be addressed to:
Nathan Landwehr, Intern Program Administrator
200 Oak Street SE, Suite 350-1
Minneapolis, MN 55455 • landwehr@umn.edu

MnTAP is the hiring body: Do not contact the company.