

Strengthening Minnesota businesses by maximizing efficiency and lowering costs through energy, water and waste reduction

JOB DUTIES: Lead a project focused on foundry optimization for air quality improvement (Summer 2017)

COMPANY: Smith Foundry, Minneapolis, MN

The Minnesota Technical Assistance Program (MnTAP) is seeking a junior or senior college student to lead a project focused on reducing particulate and VOC emissions in an iron foundry. The intern will work with Smith staff to: understand sand and binder usage and how sand handling, molding, and core room procedures affect sand life and VOC emissions; obtain and test low VOC binders, collect baseline data for sand use and air emissions. Other projects may be pursued as time permits.

JOB DUTIES:

As part of this project, you will be asked to complete the following tasks:

1. Understand foundry processes and how they impact VOC and particulate emissions, including sand handling, molding, and core room procedures.
2. Plan and execute experiments to determine the feasibility of lower VOC alternative binders.
3. Identify procedures that lead to sand waste or reduce sand life and recommend improvements.
4. Collect baseline data for sand usage and VOC and particulate emissions.
5. Assist staff with studies related to planned foundry improvement project.
6. Summarize findings in a detailed report, including recommended procedures and vendor proposals along with an economic analysis and justification of changes.
7. Present findings to the company and at MnTAP-hosted public presentation events, one of which may include a presentation at the Minnesota Pollution Control Agency (MPCA).

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 \$13/hour, with a lump sum stipend of \$1,000 upon completion of the project deliverables: a final report and presentations. Cumulatively, this equates to \$15.00/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

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

Cover letters can be addressed to:

Nathan Landwehr, Intern Program Administrator
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Minneapolis, MN 55455 • landwehr@umn.edu

MNTAP IS THE HIRING BODY: DO NOT CONTACT THE COMPANY