**2016 MnTAP Summer Internship: TEL-FSI Inc. in Chaska, MN**

*Research water conservation and reuse opportunities, optimize nitrogen use, and improve recycling capabilities*

The Minnesota Technical Assistance Program (MnTAP) is seeking a junior or senior college student to lead a project focused on researching multiple water conservation and reuse opportunities in the R&D lab, investigating and optimizing the use of liquid nitrogen in equipment applications, and looking for new opportunities for materials recycling. This internship will provide a hands-on experience in managing a project, researching and documenting improvement opportunities, and potentially implementing water, gas, and waste solutions at Tokyo Electron Ltd (TEL-FSI), a sophisticated, high tech semiconductor equipment research and manufacturing facility located in Chaska, MN.

**JOB DUTIES:**

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

1. Understand and investigate water resource use in the research and development process lab, adding detail to current data on deionized process water inputs, schematic mapping, circulation, and disposal pathways. Work toward water use improvements, and water reduction goals using cost analysis justifications.
2. Analyze and refine the schematic mapping of liquid nitrogen applications. Investigate and evaluate usage to determine efficiencies. Make recommendations to reduce usage and waste.
3. Evaluate current recycling and investigate additional priority materials that can be cost-effectively managed for recycling. Propose improvements to reduce facility solid wastes and increase recycling percentages.
4. Work with facility personnel to research, measure, and quantify potential opportunities and best management practices and determine feasibility of options. Strive to ensure that the efficiency and functionality of each system explored is maintained or improved.
5. Implement approved changes or outline a strategy for implementation.
6. Overall, manage project tasks, activities, and project documentation effectively, work competently, professionally, and safely.
7. Summarize findings in a detailed report, including prioritized recommendations and/or procedures along with an economic analysis using simple payback methods and justification of any changes.
8. 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 $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 have a valid driver license and pass a drug test.

**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.

Applications can be addressed to:

Linda Maleitzke, Intern Coordinator
200 Oak Street SE, Suite 350-1
Minneapolis, MN 55455 • lmaleitz@umn.edu

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