



Ayla Pavelka
Chemical Engineer

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Academic and Professional Profile

Ayla Pavelka is a Chemical Engineer and Consultant with Paustenbach and Associates, focused on toxicology, industrial hygiene, risk assessment, and environmental engineering. Her current focus is on airborne chemicals, radionuclides and soil contamination. With a B.S. in Chemical Engineering from the University of Notre Dame, Ayla uses her engineering background and technical knowledge to analyze data and problem solve effectively. Her interest in the field of consulting and environmental engineering is driven by her passion for sustainability and improving the quality of life for generations to come.

Education and Degrees Earned

- Bachelor of Science in Chemical Engineering, University of Notre Dame, 2021
- The Green Program in Renewable Energy Innovation & Sustainability

Experience Summary (Professional Career)

Paustenbach and Associates
Chemical Engineer
Jackson Hole, Wyoming
August 2021 – Present

- Consultant in toxicology, consumer products, industrial hygiene, risk assessment, and safety
- Involved in litigation work, interpreting toxicological studies, and characterizing risks posed by chemicals and radionuclides in the environment
- Analysis of large data sets including identification of trends, statistical analysis, and data visualization.

MTS Systems Corporation
Material Science Intern
Eden Prairie, Minnesota
Summer 2019

- Traced corrective action reports retroactively and lead a cross functional team in the implementation of solutions to prevent further customer and company issues of the same likeness

- Determined optimal methods for bonding components of a kinetic energy recovery system motor
- Potted and bonded pieces of a biomedical knee implant for test
- Communicated with representatives of other companies for the purpose of commissioning work and/or purchasing products

Key Projects

1. **Sustainability and Resiliency of Indiana Infrastructure Under Climate Change.** Collaborated with faculty of the Civil and Environmental Engineering Department at Notre Dame to compose an article about climate change impacts on various forms of infrastructure in Indiana and potential strategies for mitigation and adaptation. Conducted extensive research concerning wastewater and drinking water facilities throughout the state to identify existing climate change mitigation strategies and analyze effectiveness.
2. **Grey Hydrogen Production.** Conducted a start to finish analysis of the process of hydrogen production including creation of decision matrices, economic analysis, and feasibility assessment. Regular communication with industry mentor for project guidance and feedback.
3. **Modeling Contaminant Flow and Dispersion.** Alongside a team, developed a program to model the varying concentration of contaminants in a river, derived from a set of user input data. Created a graphical user interface in MATLAB to allow users to input simulation values and run calculations, outputting tabulated data in an accessible format.

Professional Honors and Awards

- University of Notre Dame College of Engineering Dean's List Spring 2018, Fall 2019, Spring 2020, Spring 2021

Membership and Service to Professional Societies

- American Institute of Chemical Engineers
- Society of Women Engineers

Leadership Summary

- Adopt a Family Christmas Initiative – Secretary; 2020 - 2021
- UCapture – Campus Ambassador; 2019 - 2020
- Notre Dame Hall Council – Sustainability Commissioner; 2019 - 2020
- Notre Dame Learning Center – Peer Tutor; 2018 - 2019