

**Opportunity Title:** Pollution Reduction and Fuel Economy Savings at U.S. Ports  
Research

**Opportunity Reference Code:** EPA-OTAQ-2018-11

**Organization** U.S. Environmental Protection Agency (EPA)

**Reference Code** EPA-OTAQ-2018-11

**How to Apply** A complete application consists of:

- An application
- Transcripts – [Click here for detailed information about acceptable transcripts](#)
- A current resume/CV, including academic history, employment history, relevant experiences, and publication list
- Two educational or professional references

All documents must be in English or include an official English translation.

If you have questions, send an email to [EPArpp@orau.org](mailto:EPArpp@orau.org). Please include the reference code for this opportunity in your email.

**Description** A research opportunity is available at the U.S. Environmental Protection Agency's (EPA) Office of Transportation and Air Quality (OTAQ). This appointment will be served with the Transportation and Climate Division (TCD) at the National Vehicle and Fuel Emissions Laboratory (NVFEL) in Ann Arbor, Michigan or at EPA Headquarters offices in Washington, DC.

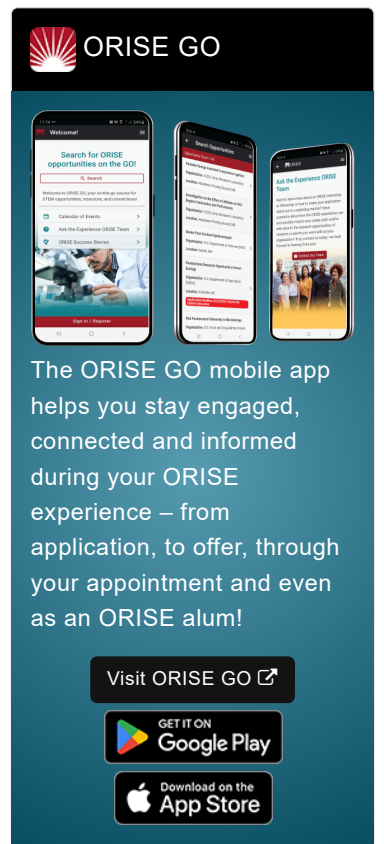
The participant will begin by gaining familiarity with the port industry in the United States by reviewing public sources, reports, technical bulletins, and information developed within the EPA Ports Initiative. Participants that already have some basic understanding of the ports industry will augment their knowledge on ports. The participant will then engage in targeted research to further their understanding of port operations, emission reduction opportunities, and efficiency improvements. The participant will acquire knowledge of the EPA Ports Initiative, the port industry, diesel emissions at and around ports, port emission reduction technologies, and community relations and stakeholder engagement dynamics.

The participant will research indicators, metrics and data that will form the basis for strategies, efforts, and policies aimed at reducing emissions at U.S. ports. The participant will evaluate data for usefulness, accuracy, robustness, and the potential to enable emission reductions at ports. Using a database system, the participant will help to populate the database with their research findings, and make recommendations as to optimal display and use of the data, including possible use of a geographic information system (GIS) framework, although the participant need not have prior experience with GIS. At the end of their time, the participant will document the results of their data collection efforts and have the opportunity to present their findings to internal and external audiences.

The participant will learn about the US EPA Ports Initiative, the port industry, port operations and technologies, market based program design principles, fuel saving and emission reduction strategies. The participant will learn how to develop and conduct a real world research study using existing resources and programmatic constraints, execute a program



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design, develop communication and presentation skills, evaluate data from a data quality and programmatic perspective, learn how to identify correlation and demonstrate causality, and use and manipulate data to demonstrate and test a research hypothesis.

The participant will be exposed to policy development, decision-making, ongoing research, and program design work that will benefit their knowledge and understanding of how government works, and will gain a first-hand experience of government operations, rules, and procedures.

This program, administered by ORAU through its contract with the U.S. Department of Energy (DOE) to manage the Oak Ridge Institute for Science and Education (ORISE), was established through an interagency agreement between DOE and EPA. For additional information about this program, please visit <https://orise.orau.gov/epa/>. This appointment may be full time or part time for one year and may be renewed upon recommendation of EPA and contingent on the availability of funds. The participant will receive a monthly stipend based on level of education. Funding may be made available to reimburse the participant's travel expenses to present the results of his/her research at scientific conferences. No funding will be made available to cover travel costs for pre-appointment visits, relocation costs, tuition and fees, or participant's health insurance. The participant must show proof of health and medical insurance. **The participant does not become an EPA employee.**

The mentor for this project will be Mike Moltzen (moltzen.michael@epa.gov) if the participant is appointed in Ann Arbor, MI or Sarah Froman (froman.sarah@epa.gov) if the participant is appointed in Washington, DC. The desired start date is September 15, 2018; however, earlier or later start dates will be considered.

**Qualifications** Applicants should be currently pursuing a Master's degree or have received a Bachelor's degree or Master's degree in Environmental Sciences/Studies, Engineering or Natural Resources within the past five years.

- Eligibility**
- **Degree:** Bachelor's Degree or Master's Degree.
- Requirements**
- **Discipline(s):**
    - **Chemistry and Materials Sciences** ([12](#))
    - **Engineering** ([27](#))
    - **Environmental and Marine Sciences** ([3](#))
    - **Social and Behavioral Sciences** ([3](#))