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Opportunity Title: Experimental Research Laboratory Scientist
Opportunity Reference Code: EPA-NSSC-0008-38-10-19-21

Organization U.S. Environmental Protection Agency (EPA)

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How to Apply Click HERE to Apply

Description The EPA National Student Services Contract has an immediate opening for a full time Experimental Research Laboratory Scientist position with the Office of Research and Development at the EPA facility in Research Triangle Park, NC.

The Office of Research and Development at the EPA supports high-quality research to improve the scientific basis for decisions on national environmental issues and help EPA achieve its environmental goals. Research is conducted in a broad range of environmental areas by scientists in EPA laboratories and at universities across the country.

What the EPA project is about

The Center for Environmental Solutions & Emergency Response (CESER)? plans, coordinates and conducts applied, customer-driven, national research and development program to improve decision making by EPA, federal, state, tribal and local agencies, when faced with challenging environmental problems in the built environment. The Homeland Security Research Program (HSRP), within CESER develops and provides applied scientific and engineering solutions, technologies, and cutting-edge innovations to protect and remediate our air, land, and water resources, and critical infrastructure challenged by systemic and acute environmental contamination. The Wide Areas and Installations Decontamination Branch (WAIDB), within HSRP, focuses on assisting CESER customers across the nation with effective and innovative approaches to decontaminate wide areas contaminated chemical and biological (CB) agents. The WAIDB develops, evaluates, and applies research and demonstration methods at various scales spanning laboratory to pilot to full field scale to provide the most useful and efficient scientific solutions in support of EPA's mission and the Office of Research & Development (ORD) mission and strategic vision.

To understand the science behind decontamination and deactivation of airborne CB agents, the WAIDB will conduct an experimental project to demonstrate efficacy of a small Mobile Hot-Zone Decon (MHD) system. The project goal is to conceptually demonstrate the deactivation of select airborne CB agent simulants at the EPA-RTP's High-Bay facilities. The primary goal will be achieved by building a small MHD system with particulate filters, metal oxide catalysts, and a perlite sorption bed in the treatment train; and evaluate the system with benign simulants of SARS-CoV-2 (e.g., MS2), and a chemical warfare agent (Mustard) simulant, such as 2-chloroethyl ethyl sulfide (2-CEES).

What experience and skills will you gain?

As a team member, you will provide support to accomplish experimental research in a laboratory environment. The team member will be a member

of a multi-disciplinary research team and will assist with building a small MHD system, conducting experimental runs, and analyzing the particulate samples. The team member will also help carry out the necessary calibration of the instruments. The team member will also assist with sample analysis of the CB agents with other analytical facilities available to the research team. The team member will also actively participate in conducting literature search and summarize the experimental results.

Research Data Development and Analysis responsibilities:

- Conduct a comprehensive review of thermophysical technologies for deactivation of airborne CB agents;
- Assisting with fabrication of the experimental MHD system;
- Calibration of air flow, temperature, pressure measuring systems;
- Assist in the development of a quality control plan for experimental research;
- Analysis of particulates, and CB agent simulants; and
- Experimental data analyses, and creation of monthly research progress reports.

Communications-related responsibilities:

- Participating as a member of a multi-disciplinary research team;
- Interacting with other members of the development team as well as EPA scientists;
- Contribute to prepare research reports, and manuscripts for journal articles; and
- Presenting work performed at a scientific conference as required.

Required Knowledge, Skills, Work Experience, and Education

- Demonstrated education and hands on experience with laboratory chemistry and physics experiments, data collection, analyses, preliminary interpretation of the experimental results. Laboratory experience shall include analyses of chemicals, and biological simulants; and
- Strong written, oral, and electronic communication skills.

Desired Knowledge, Skills, Work Experience, and Education

- Experience with chromatographic analytical methods, and Fourier Transform Infrared Spectroscopy (FTIR) spectral analysis, and scanning electron microscopy and
- Experience with air flow measurements, particulate filtration, particulates, and characterization.

Location: This job will be located at EPA's facility in Research Triangle

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Park, NC.

Salary: Selected applicant will become a temporary employee of ORAU and will receive an hourly wage of $30.16 for hours worked.

Hours: Full-time.

Travel: Travel may be required for this position.

Expected start date: The position is full time and expected to begin November 2021. The selected applicant will become a temporary employee of ORAU working as a contractor to EPA. The initial project is through May 14, 2022, with up to 3 additional option periods.

For more information, contact EPAjobs@orau.org. *Do not contact EPA directly.*

Qualifications

- Be at least 18 years of age **and**
- Have earned at least a Master's degree in the fields of chemical engineering, environmental engineering, mechanical engineering, chemistry, physics, environmental science, or a related field from an accredited university or college within the last 24 months **and**
- Be a citizen of the United States of America or a Legal Permanent Resident.

EPA ORD employees, their spouses, and children are not eligible to participate in this program.

Eligibility Requirements

- **Citizenship:** LPR or U.S. Citizen
- **Degree:** Master's Degree received within the last 24 month(s).
- **Overall GPA:** 2.00
- **Discipline(s):**
  - **Chemistry and Materials Sciences** (12 👁)
  - **Earth and Geosciences** (1 👁)
  - **Engineering** (27 👁)
  - **Environmental and Marine Sciences** (14 👁)
  - **Physics** (16 👁)

Affirmation I certify that I am at least 18 years of age; a recent graduate with at least a Master's degree in the fields of chemical engineering, environmental engineering, mechanical engineering, chemistry, physics, environmental science, or a related field from an accredited university or college within the last 24 months; a citizen or a Legal Permanent Resident of the United States of America; and not a current employee of EPA ORD or the spouse or child of an EPA ORD employee.

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