

Opportunity Title: Chemical Combustion Emissions Research at EPA

Opportunity Reference Code: EPA-SSP-0023-11

Organization U.S. Environmental Protection Agency (EPA)

Reference Code EPA-SSP-0023-11

- How to Apply**
- Submit application and supporting documents by clicking on Apply Now button.
 - *For more information, contact EPAjobs@orau.org. Do not contact EPA directly.*

Description The EPA Environmental Research and Business Support Program has an immediate opening for a Chemical Combustion Emissions Research 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.

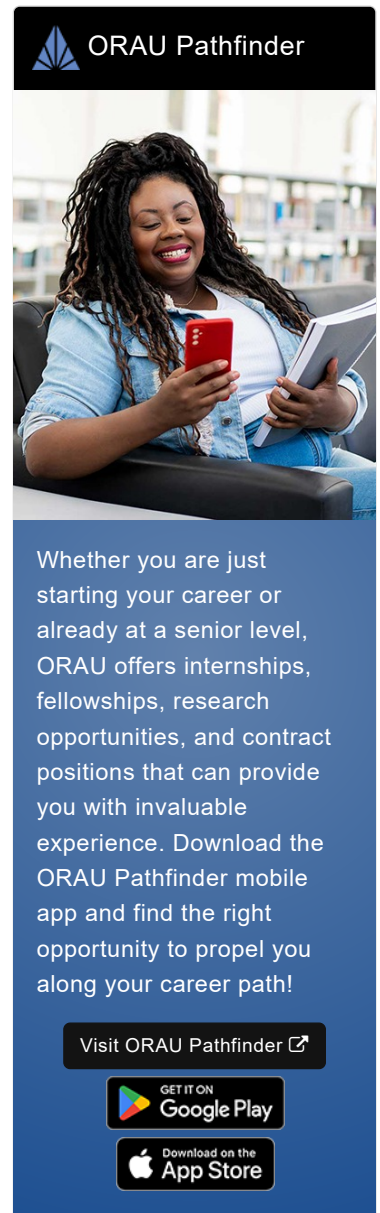
Within ORD, the National Risk Management Research Laboratory's Air and Energy Management Division (AEMD) conducts research relating to air pollution issues including measurements of particulate matter and gas phase emissions from combustion sources. This includes research on the chemical composition of emissions from combustion sources such as wildfires, prescribed fires, and residential wood combustion appliances.

The selected candidate shall be part of a team working on measuring the gas and particle phase emissions from combustion sources. Additionally, he/she shall assist in the testing of gas and particle emission sensors for characterizing combustion pollutants. This work will support team efforts to characterize emissions from combustion sources in a laboratory scale combustion systems and field sampling on ground and aerial platforms. Past efforts have included measuring emissions from prescribed fires, oil fires, cook stoves, and woodstoves.

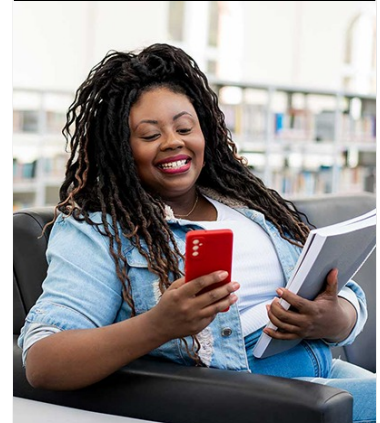
The selected candidate shall support team members in preparing sampling media, cleaning sampling equipment, extracting samples, and assisting preparation for sample analyses. Analyses include gravimetry, X-ray fluorescence, ion chromatography, inductively coupled mass spectrometry, and gas chromatography/mass spectrometry analysis. He/she shall assist with laboratory experiments, including weighing fuel, taking samples, and monitoring continuous emissions measurements. Additionally, the selected candidate will assist in collecting data and summarizing results.

The selected candidate shall assist the mentor in:

- General laboratory work, including sample preparation, extraction, and cleaning;
- Calibrating and operating continuous particle and gas phase measuring instruments;
- Preparing, sampling, and analyzing gas and particle phase samples



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from combustion systems;

- Analyzing and reporting sampling data; and
- Participating as a member of a multi-disciplinary research team.

Location: This job will be located at EPA's facility in Research Triangle Park, NC.

Salary: Selected applicant will become a temporary employee of ORAU and will receive an hourly wage of \$21.27 for hours worked.

Hours: Full-Time.

Travel: A limited number of field tests involving overnight travel may be required.

Working Conditions: The selected candidate shall be supervised by a mentor who will provide day-to-day direction, as well as coach, advise and counsel the selected candidate, and review his/her work.

Sample preparation, collection, and analysis will take place in a laboratory environment. A limited duration field effort (2-3 weeks) is possible in which measurements will be made at an industrial or natural site. The position is not expected to involve exposure to hazardous elements.

Expected Start Date: The position is full time and expected to begin January 2019. The initial project is through May 14, 2019, followed by up to one (1) 12-month optional period.

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Qualifications Eligible applicants must:

- Be at least 18 years of age and
- Have earned at least a bachelor's degree in in engineering, chemistry, physics, 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.

Required Knowledge, Skills, Work Experience, and Education

The applicant shall have:

- Experience with field sampling techniques and/or general laboratory procedures;
- Demonstrated education and/or experience in gas flow systems including experience with gas phase measurements and measurement systems, pump systems, gas cylinder operation, and instrument calibration; and
- Strong written and oral communication skills are required with

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demonstrated experience using Microsoft Office products.

Desired Knowledge, Skills, Work Experience, and Education

It is desirable that the candidate have:

- Experience with Swagelok (or similar) fittings;
- Experience in preparing sampling media (i.e. filters, SUMMA canisters, DNPH cartridges), cleaning and maintaining sampling equipment, and cleaning glassware;
- Experience with particulate matter sampling and instrumentation;
- Experience with gas chromatography/mass spectrometry instrumentation; and
- Experience with data analysis software packages R, Matlab or equivalent.

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| Eligibility Requirements | <ul style="list-style-type: none">• Citizenship: LPR or U.S. Citizen• Degree: Bachelor's Degree, Master's Degree, or Doctoral Degree received within the last 24 month(s).• Discipline(s):<ul style="list-style-type: none">◦ Chemistry and Materials Sciences (12)◦ Engineering (27)◦ Physics (16) |
|---------------------------------|---|

Affirmation I certify that I am at least 18 years of age; have earned at least a Bachelor's degree in in engineering, chemistry, physics, or a related field of study 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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