

**Opportunity Title:** Gas Sensor Engineer at EPA (Part-time)

**Opportunity Reference Code:** EPA-SSP-0023-7

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

**Reference Code** EPA-SSP-0023-7

**Description** The EPA Environmental Research and Business Support Program has an immediate opening for a part-time (20 hours per week) Gas Sensor Engineer at EPA 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 Pollution Prevention and Control Division (APPCD) conducts research relating to air pollution issues including measurements and source characterization. This includes research on use and development of miniaturized gas/particle sensors and sampler systems on aerial (helium-filled aerostats and unmanned aerial systems, UASs).


The EPA's National Risk Management Research Laboratory has a part-time position available for a candidate with an engineering or engineering-related background working on testing gas emission sensors and developing them into systems for a unique field sampling program that utilizes aerial systems, including tethered aerostats and unmanned aerial vehicles.


The selected candidate shall participate as part of a team developing a lightweight sensor/sampler-based system that would be deployed for aerial emission sampling on aerostats and UASs such as multicopters. Past field sampling applications have included at-sea oil fires, waste pile fires, prescribed forest burns, and open burning/open detonation of military ordnance.

The selected candidate shall participate in various aspects of development including testing the performance of new gas sensors, designing pump systems, developing control code programs, and field system trials.

**Duties include but are not limited to:**


- Testing the accuracy, responsiveness, range, and selectiveness of small gas and particle sensors;
- Developing calibration software for sensors;
- Selecting, designing and testing pump systems and associated electronic and programming control software;
- Incorporating these sensors into sampling systems for use on mobile and aerial unmanned systems;


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- Testing these systems in field efforts;
- Participating as a member of a multi-disciplinary research team; and
- Interacting with other EPA, NASA, USGS, NOAA, and USFS scientists.

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

**Salary:** Selected applicants will become temporary employees of ORAU and will receive an hourly wage of \$25.19 for hours worked.

**Hours:** Part-time; up to 20 hours per week.

**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 candidate, and review his/her work. The mentor for this position will be a federal EPA employee.

This position will primarily involve work in a laboratory, with limited in-field measurement work. A limited duration field effort (2-3 weeks) is possible conducting measurements at an industrial or natural site.

This position is not expected to involve exposure to hazardous elements.

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

**Expected Start Date:** The position is part-time up to 20 hours per week and expected to begin February 2017. The selected applicant will be a temporary employee of ORAU working as a contractor to EPA. The initial contract period is through May 14, 2017, followed by three (3) additional 12 month option periods.

*For more information, contact [EPAjobs@orau.org](mailto:EPAjobs@orau.org). Do not contact EPA directly.*

**Qualifications    Eligible applicants must:**

- Be at least 18 years of age **and**
- Have earned a Bachelor's degree and have completed at least one year of coursework and research toward an advanced degree in engineering, chemistry, physics, or related field of study 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.*

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### **Required Knowledge, Skills, Work Experience, and Education**

Successful candidate shall have:

- Demonstrated education and/or experience in gas flow systems including experience with gas phase measurements and measurement systems, pump systems, gas cylinder operation, pump control and construction, Swagelok (or similar) use, laboratory testing, instrument calibration, proportional–integral–derivative (PID) operation
- Arduino programming skills
- Strong written, oral and electronic communication skills

### **Desired Knowledge, Skills, Work Experience, and Education**

It is desirable for the candidate to have:

- Experience with LabView and MatLab
- Experience with 3D printing and computer aided design
- Experience with circuit board design

### **How to apply**

- Submit application and supporting documents by clicking on Apply Now button.
- *For more information, contact* [EPAjobs@orau.org](mailto:EPAjobs@orau.org). Do not contact EPA directly.

### **Eligibility Requirements**

- **Citizenship:** LPR or U.S. Citizen
- **Degree:** Master's Degree or Doctoral Degree received within the last 24 month(s).
- **Discipline(s):**
  - **Chemistry and Materials Sciences** (12 👁)
  - **Engineering** (27 👁)
  - **Physics** (16 👁)

### **Affirmation**

I certify that I am at least 18 years of age; Have earned a Bachelor's degree and have completed at least one year of coursework and research toward an advanced degree in engineering, chemistry, physics, or 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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