# PERFORMANCE WORK STATEMENT

**Task Order Title: CEMM Support**

**Task Order Solicitation # 7**

**PWS Title: Inorganic bioavailability assessment PWS #: 25**

1. **Summary**

|  |  |
| --- | --- |
| **EPA Organization** | ORD/CEMM/WECD |
| **Location** | Research Triangle Park, NC |
| **Required Level of Education** | Bachelor’s Degree |
| **Average Hours Per Week** | 40 |
| **Number of Students Sought** | 1 |

1. **Agency & Office Mission**

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 Center for Environmental Measurement & Modeling (CEMM) conducts research to advance EPA’s ability to measure and model contaminants in the environment, including research to provide fundamental methods and models needed to implement environmental statutes. The methods and models developed by CEMM are typically applied at the airshed, watershed and ecosystem level. Within CEMM, the Watershed and Ecosystem Characterization Division (WECD) conducts research to advance EPA’s ability to characterize the presence, transport, transformation, sources, and impacts of contaminants in watersheds and ecological systems.

# Description of Student Services

The student shall conduct laboratory work, generate and organize laboratory data, perform data reduction, perform literature reviews, and interface with experts in the respective technical specialties. The student shall work on extractions and methods refinement for inorganic metals analysis using analytical equipment such as Inductively Coupled Plasma-Optical Emission Spectrometry (ICP-OES). Resulting data shall be entered into laboratory database(s) and reports generated. Data generation shall also include performing literature searches for scientific journals and entering these journal articles into an Endnote database. The student shall maintain careful and accurate records in designated laboratory notebooks.

These notebooks and all other data produced under this order will be the property of the Environmental Protection Agency.

Laboratory work and data generation shall include:

* + Methods development and analyses using an extraction test to assess the potential bioavailability of soil inorganics
  + Performing inorganic metal extractions for biological tissues
  + Preparation of analytical calibration and quality control standards
  + Analysis of extracts using Inductively Coupled Plasma-Optical Emission Spectrometry (ICP- OES)
  + Conducting descriptive statistical analyses (i.e., mean, standard deviation, minimum, maximum, median, etc)
  + Refinement of standard operating procedures
  + Data generation will also include performing literature searches for scientific journal articles and entering these journal articles into an Endnote database collecting, processing, compiling and organizing data or other information into databases/spreadsheets using a variety of Windows-based software (e.g., Microsoft Excel/Word/Access, EndNote, WordPerfect, etc).
  + Resulting data will be entered into laboratory database and reports generated
  + Using general laboratory skills and keeping laboratory notebooks.

# Required Knowledge, Skills, Work Experience, and Education

The student shall have:

* + A Bachelor’s degree in in an environmentally related discipline such as chemistry, environmental science, biochemistry or chemical engineering.
  + Academic training/work experience in conducting inorganic analysis and extractions
  + General skills/experience in laboratory work
  + A working knowledge of analysis of extracts and samples using analytical equipment such as Inductively Coupled Plasma-Optical Emission Spectrometry (ICP-OES)
  + Excel software skills for data entry and descriptive statistical analyses (i.e., mean, standard deviation, minimum, maximum, median, etc)
  + Strong written, oral and electronic communication skills
  + Basic safety requirements in the laboratory (additional safety training will be provided).

# Description of Working Conditions

Work shall be performed at the following location:

U.S Environmental Protection Agency 109 TW Alexander Drive

Research Triangle Park, NC 27709

The student shall be supervised by a mentor who will provide day-to-day direction and review the student contractor’s work. The mentor for this position will be a federal EPA employee. The COR will inform the contractor of specific mentor information at the time of award.

# Travel

No travel is required.

# Duration

The period of performance shall be from the start date through 14 May 2021, plus four (4) additional 12- month option period.

# Use of Government Vehicles

Use of government vehicles by the student(s) is not needed.