REQUEST FOR INFORMATION (RFI)

Department of Homeland Security (DHS)
Science and Technology (S&T) Directorate

Chemical Security Analysis Center (CSAC) Rapid Cyanide Detection

NOTE: THIS IS A REQUEST FOR INFORMATION (RFI) ONLY. This RFI is issued solely for information and market research planning purposes. This RFI shall not be construed as an obligation on the part of the Government. This is NOT a Request for Quotations or Proposals. No solicitation document exists, and the Government may or may not issue a formal solicitation as a result of the responses received to this RFI.

The Government will not pay for any response or demonstration expenses. All costs incurred responding to this RFI will be solely at the interested party's expense. Failure to respond to this RFI will not preclude participation in any future solicitation. Any information received will become the property of the Government and will not be returned to the submitter. Interested parties are responsible for adequately marking proprietary or sensitive information.

The Government's explicit intent, in this request for information, is to not receive from respondents any proprietary data, trade secrets, business sensitive information, or information considered CONFIDENTIAL under 18 U.S.C. §1905. The Government's constraint does not in any way relieve contractors from their responsibility to properly mark proprietary data when it is provided, nor does it alleviate any requirement for the Government to protect marked data. The Government is not obligated to protect unmarked data.

The information provided in this RFI is subject to change and is not binding on the Government. All submissions become the property of the Federal Government and will not be returned.

Government technical experts drawn from staff within the Department of Homeland Security (DHS) and other federal agencies may review responses. The Government may use selected support Contractor personnel to assist in the review of the RFI responses. These support Contractors will be bound by appropriate non-disclosure agreements to protect proprietary information.

I. PURPOSE OF THIS RFI

The purpose of this RFI is to collect information from qualified and interested sources with the capability and experience in providing the services identified in the RFI.

II. BACKGROUND/DESCRIPTION

DHS S&T is tasked with researching and organizing the scientific, engineering, and technological resources of the United States and leveraging these existing resources into technological tools to help protect the homeland. S&T Chemical Security Analysis Center (CSAC) is the only federal studies, analysis, and knowledge management center for assessing critical chemical dependencies, emerging threats and technologies, and accidental or intentional chemical events in the United States. CSAC supports the homeland security community by providing a crucial knowledge repository of chemical threat information, design and execution of laboratory and field tests, and a science-based threat and risk analysis capability, among other services.

DHS has patented a human biomarker system and method for cyanide exposure detection. In order to advance the patented technology, S&T CSAC is looking to enter into a Cooperative Research and Development Agreement (CRADA) with relevant collaborator(s) to inform a development pathway for its cyanide exposure detection system. This collaboration will expand interaction with industry to ensure that first responders and the American public are afforded access to state-of-the-art detection technology solutions that save lives.

Relevant DHS patents are:

- Patent US 11272878 B2 “System and Method for Detecting Cyanide Exposure” March 15, 2022
- Patent US 11589808 B2 “Detecting Cyanide Exposure Based on Thiocyanate Measurement” February 28, 2023
- Patent US 12023174 B2 “Detecting Cyanide Exposure Based on Thiocyanate Measurement in Saliva” July 2, 2024

The objective of this RFI is to gather detailed insights from companies and consortia engaged in the engineering, testing, and manufacturing of medical device prototypes relevant to the detection of human cyanide exposure. DHS seek collaborator(s) with expertise in chemical medical countermeasures, particularly those that can demonstrate a robust background in developing detection technologies for hazardous substances, including past projects and relevant experience. Responses should outline the engineering and design processes utilized in creating prototypes, including biomarker selection and validation methodologies, as well as comprehensive cost estimates and timelines for development from proof of concept through regulatory approval and manufacturing. Additionally, respondents should provide information on navigating the regulatory landscape for medical devices, including experience with agencies like the Food and Drug Administration (FDA), and detail their manufacturing capabilities, including scalability and compliance with industry standards. DHS encourages insights into novel technologies or methodologies for cyanide detection and the potential for integration with existing medical countermeasures or emergency response protocols. The optimal collaborator will possess a comprehensive understanding of the complexities involved in developing effective medical devices for hazardous chemical detection, contributing to the urgent need for reliable and efficient detection methods to safeguard the homeland against intentional or non-intentional toxic cyanide exposure threats, specifically:

- Proof of concept testing
- Device development capable of deployment and use by First Responders
- Device use protocol to include saliva collection, testing, and documentation of results
- Testing protocol sufficient to characterize the diagnostic capabilities of the system and method in preparation for regulatory approval
- Navigating federal requirements to obtain needed regulatory approvals
- Manufacturing and distribution of the device

III. QUESTIONS FOR INDUSTRY

To respond to this RFI, please provide a data package describing the capabilities of the interested party. The information requested would include how an interested party could contribute information to developing a pathway; and estimated cost and schedule for a

cyanide exposure detection system that is handheld for operations. Please explicitly include the following in the response:

- Describe the feasibility of meeting the objectives above.
  - What experience can be provided to achieve this objective?
- What survey capabilities currently exist?
- Describe experience with similar detection systems related to:
  - Nonclinical studies and analytical assays
  - Clinical studies
  - Regulatory strategy, plan and execution to obtain regulatory clearance
  - Manufacturing
  - Quality assurance activities to ensure regulatory requirements are met
- Describe experience with the U.S. federal government to advance innovation and development of detection technologies:
  - Department of Homeland Security
  - Department of Defense
  - Department of Health and Human Services/ Food and Drug Administration

IV. SUBMISSION REQUIREMENTS

Responses from all interested sources are encouraged to respond. Responses shall be a maximum of 10 pages and shall include a cover letter with the following information:

1) Response to RFI Notice 70RSAT26RFI000021
2) Company Legal Business name and Physical address;
3) Identify business socio-economic status;
4) Recommend the NAICS Code most aligned with the requirement;
5) Company points of contact including phone numbers and email addresses;
6) A comprehensive response that addresses the questions delineated above;
7) Identify if your firm currently holds any Best-in-Class (BIC) vehicles (e.g. 8 (a) STARS III, Alliant 2, VETS 2, POLARIS, NITAAC, and GSA MAS contracts, etc.), to include the applicable contract number; and
8) Identify if your company would be interested in competing for this requirement as prime contractor or subcontractor, if solicited. If subcontracting, identify any joint ventures or teaming arrangements that would be pursued.

Submissions shall be made using Microsoft Office applications. Font shall not be smaller than 12-point Times New Roman.

All Responses shall be submitted to the Office of Procurement Operations (OPO) at the following email address: Contracting Officer (CO) Jennifer Koons (jennifer.koons@hq.dhs.gov) and Contract Specialist (CS) Frances Gray (frances.gray@hq.dhs.gov) no later than 5:00pm on Wednesday, September 2, 2026.

V. INDUSTRY DAY

The Government may hold an Industry Day for this requirement. Details regarding an Industry Day will be provided at a later time.

Note: The Government reserves the right to hold one-on-one meetings as a result of responses received from this RFI as part of its market research. Meetings may be held with companies who provide comprehensive and relevant responses to the topic and questions in this notice.