

Management Implication Report: Extramural Research and Scientific Integrity Concerns

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OFFICE OF INSPECTOR GENERAL
U.S. ENVIRONMENTAL PROTECTION AGENCY

July 7, 2025

MEMORANDUM

SUBJECT: Management Implication Report: Extramural Research and Scientific Integrity Concerns

FROM: Nic Evans, Acting Assistant Inspector General
Office of Investigations 

TO: Maureen Gwinn, Acting Assistant Administrator and EPA Science Advisor
Office of Research and Development

PURPOSE: The U.S. Environmental Protection Agency Office of Inspector General has identified a concern with the EPA's requirement that extramural research reports be submitted to the EPA via email. In this report, we detail the limitations of using email to receive such reports and discuss an alternative method that would allow the EPA to better protect the integrity of its research, allow for increased detection of research fraud, and allow for seamless transitions between EPA personnel while creating a better record retention method. We conducted this investigative work in accordance with the *Quality Standards for Investigation* published in November 2011 by the Council of the Inspectors General on Integrity and Efficiency. Those standards require that we conduct investigations in a timely, efficient, thorough, and objective manner.

BACKGROUND: The OIG Office of Investigations has a pivotal role in helping the EPA protect its research and associated funding through investigations and management implication reports. We have issued management implication reports on protecting EPA funding from [foreign influence](#) and both OIG and Agency personnel's inability to extract EPA research contract [data](#) in a way that would allow for oversight through data analytics.

The EPA funds several different extramural research programs, including the People, Prosperity, and the Planet program; the Science to Achieve Results program; and the Small Business Innovation Research, or SBIR, program. The OIG has led and contributed to several high-profile SBIR program investigations that resulted in criminal prosecutions and restitution to the government, including investigations in [Kentucky](#), [North Carolina](#), and [Florida](#). Two of the investigations led to charges of wire fraud.

To prove [wire fraud](#), the government must show that interstate wire communications were used. This is often done by identifying the originating IP address of the device used to facilitate the fraudulent scheme. IP addresses are trackable and can identify a device's approximate location.

The EPA's extramural research programs have similar processes that awardees must follow when submitting extramural research reports to the EPA. Specifically, [People, Prosperity, and the Planet](#) and [Science to Achieve Results](#) program grantees must submit annual performance progress reports with associated summaries and a final report with an executive summary via email to the technical contact named in the solicitation. [SBIR](#) contractors must email their monthly reports and invoices to the contracting officer, contracting officer's representative, and alternate contracting officer, as described in their contract. In other words, the EPA receives all extramural research reports related to these programs via email.

CONCERNS IDENTIFIED: The OIG has concerns with the EPA's requirement that awardees submit federally funded research reports via email. Email providers go to great lengths to obscure the originating IP address from an email's header information. This makes it very difficult to determine the location from which the email was sent. The location is useful for identifying whether a research report was sent from within the United States.

The EPA's 2025 SBIR Phase I [solicitation](#) states, "for Phase I, the research or R&D [research and development] work must be performed in the United States." That requirement helps ensure that the SBIR award is fostering innovation within the United States. An out-of-country IP address may be a red flag indicating that the awardee performed research outside the United States. Further, if an IP address indicates that the submission originated from a [foreign country of concern](#), the EPA should be concerned about whether the awardee is participating in a malign foreign talent recruitment program, which could result in the unauthorized transfer of intellectual property or other nonpublic information. Capturing IP addresses is a proactive method that could help the EPA identify bad actors and prevent the bad actors from receiving further federal funding.

Many of these issues could be resolved by using a web portal to receive and structure data from research reports. A web portal would allow the EPA to be proactive in fraud prevention because data would be stored in a centralized, searchable location. The EPA is already using web portals to receive applications for the People, Prosperity, and the Planet and Science to Achieve Results programs and proposals for the SBIR program. Specifically, applications for People, Prosperity, and the Planet and Science to Achieve Results grants are submitted through Grants.gov and SBIR proposals are submitted through the FedConnect portal.

Web portals can be used to collect important metadata such as IP addresses, which may be useful in identifying shell companies. Specifically, if report submissions are received from more than one company using the same IP address, that could indicate that there is not a distinguishable separation between the companies. This is especially applicable to SBIR recipients, who may only submit one proposal.

A web portal would also allow the EPA to have all research reports centrally located, providing functional organization to its workflow and increasing government employee and program efficiency. On February 4, 2025, EPA Administrator Lee Zeldin announced the Agency's [Powering the Great American Comeback Initiative](#), which aims to "achieve the Agency's mission while energizing the greatness of the

American economy.” This initiative, which comprises five pillars, will “guide the EPA’s work over the first 100 days and beyond.” Pillar 4, “Make the United States the Artificial Intelligence Capital of the World,” discusses the importance of the United States leading the world in the new age of artificial intelligence. Pillar 1, “Clean Air, Land, and Water for Every American,” discusses “remaining good stewards of tax dollars and ensuring that every penny spent is going towards advancing this mission.”

With all EPA-funded research reports centrally located behind the web portal, the EPA could use artificial intelligence or machine learning processes to scour the reports for indications of serious research misconduct, including conflicts of interest or overlapping research studies, while strengthening the integrity of the EPA’s programs. If fraud, waste, or abuse is identified, the EPA should notify the OIG. This could lead to actions such as criminal or civil prosecutions, recommendations to suspend payments or terminate awards, or suspension and debarment actions.

A web portal would also allow for more continuity when switching the EPA employees associated with the research projects. Further, a web portal would allow for better record retention and should be engineered to have an audit history trail for deleted items and have the reports in a structured database to facilitate proactive artificial intelligence fraud detection and machine learning processes.

MEASURES FOR IMPROVEMENT: To mitigate the concerns that we discuss above, we suggest that the Agency consider:

- Suspending the practice of receiving research reports via email.
- Implementing a web portal to receive extramural research reports.
 - Engineering the web portal to require users to disconnect from a VPN before entering the portal.
 - Ensuring that the web portal requires usernames, passwords, and two-factor authentication via text or email.
 - Ensuring that the web portal captures and stores user and applicant metadata, including IP addresses, for all submissions.
- Requiring an attestation statement for every report submission.
- For SBIR awards, requiring the [lifecycle certification](#) to be completed for every submission.
- Ensuring that research reports and information collected via the web portal are stored in a structured database to facilitate proactive artificial intelligence fraud detection and machine learning processes.

My office is notifying you of this issue so that the Agency may take whatever steps it deems appropriate. If you decide it is appropriate for your office to take or plan to take action to address these matters, the OIG would appreciate notification of that action. Should you have any questions regarding this report, please contact me at [REDACTED] or [REDACTED], or acting Assistant Special Agent-in-Charge [REDACTED] at [REDACTED] or [REDACTED].

cc: Nicole N. Murley, Acting Inspector General
Erica Kavanagh, Associate Deputy Inspector General performing the duties of the
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Whistleblower Protection

U.S. Environmental Protection Agency

The whistleblower protection coordinator's role is to educate Agency employees about prohibitions against retaliation for protected disclosures and the rights and remedies against retaliation. For more information, please visit the OIG's whistleblower protection [webpage](#).

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