Trainees, Technicians, and Contractors

Trainees
Students, postdoctoral fellows, interns and other trainees (hereafter referred to as “trainees”) can be an important part of a project team. Because trainees are typically at an early stage in their career and are appointed for a limited period of time, they are sometimes viewed as subordinate by other members of the project team who have more experience and seniority. Nevertheless, the same authorship criteria apply to all members of a project team including trainees. Authorship on any EPA work product should always represent the significance of the individual’s contribution to the work product regardless of institutional status.

Trainees often rely on the recommendations of more senior members of the project team for future job opportunities. Therefore, trainees should be aware of the clauses specified in Appendix 2 of the contract. Because naming contractors as authors could create the appearance of a contractor subject to the same authorship best practices as other members of the project team. Authorship on any EPA work product should always represent the significance of the individual’s contribution to the work product regardless of institutional status.

Technicians
Technicians are subject to the same authorship best practices as all other members of a project team. A technician should be listed as an author if the technician fulfilled all of the authorship criteria. However, simply performing routine tasks does not qualify a technician for authorship. The possibility of authorship can be a powerful incentive that enhances employee engagement. If a technician and their supervisor agree that the technician is a candidate for authorship, the authority to designate authorship lies within the supervisor’s domain. The designation of authorship plays a critical role in transparency by identifying who is responsible for the information and conclusions in EPA work products and how they were developed. The Scientific Integrity Policy requires that EPA employees represent and acknowledge the significant contributions that individuals have made to EPA work products.

Contractors
Project contributors who work under an EPA contract and are not federal employees are subject to the same authorship best practices as other members of the project team. Because naming contributors as authors could create the appearance of a contractor performing an inherently governmental function, the EPA Acquisition Regulations require that contractor’s role did not include establishing Agency policy. Authorship on any EPA work product should always represent the significance of the individual’s contribution to the work product regardless of institutional status.

Other Important Authorship Topics
Please refer to the full Best Practices for Designating Authorship for important information about plagiarism, self-plagiarism, author and co-author order and roles and responsibilities, authorship approval and dispute resolution, shared authorship, contribution statements and authorship agreements, conflicts of interest and bias, and copyright issues.

Scientific Integrity Committee
The Scientific Integrity Committee provides oversight for the implementation of the Scientific Integrity Policy. Led by the Deputy Scientific Integrity Official, it is comprised of the Deputy Scientific Integrity Officials, who are senior agency officials from each Region and Office. A list of committee members and their contact information can be found on our website.

Scientific Integrity Committee

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EPA Publication Number: 601F04001

Scientific Integrity at U.S. EPA
Safeguarding science to protect human health and the environment

How to Report a Scientific Integrity Allegation

Formal scientific integrity allegations may be reported to the Scientific Integrity Official, any Deputy Scientific Integrity Official or to the Office of Inspector General. Allegations may come from outside or inside the Agency.

• Allegations that concern waste, fraud, abuse or other criminal violations should be reported to the Office of Inspector General.
• Allegations that concern reprisal should be reported to the Office of Inspector General or the Office of Special Counsel.
• Allegations that concern a financial conflict of interest or other ethics issues involving federal employees should be referred to the appropriate Deputy Ethics Officials or Office of General Counsel/Ethics, or the Human Subjects Research Review Office, as appropriate.

All allegations can also be reported to the Scientific Integrity Official without revealing the identity of the person making the allegation. While there is no formal process for resolving these “informal” allegations, the Scientific Integrity Official is still interested in obtaining information about these allegations and can take some steps to help resolve them. When a formal allegation is resolved, the Scientific Integrity Official is responsible for preparing a summary and recommendations for corrective actions to safeguard the relevant science and will provide follow-up to ensure that the scientific recommendations are carried out appropriately. In addition to the resolved allegations, summaries are also maintained in the Scientific Integrity Annual Report and on the internet in a way that protects the identities of the parties involved.

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Authorship Criteria

The term “author” applies to any individual who makes a substantial contribution, as defined below, to an EPA work product. Authorship refers to the listing of contributors to the work product.

To qualify as an author, an individual must make a substantial contribution to the work product that fulfills all of the following three criteria:

1. Made a substantial intellectual contribution to the work product. An individual may make a substantial intellectual contribution in several different ways, including:
   a. Conceptual design (e.g., formulation of hypotheses, refining research ideas, development of study objectives; or the definition of experimental, statistical, modeling, or analytical approaches), or
   b. Acquisition of data or development of models (e.g., non-routine fieldwork, such as adapting or developing new techniques or equipment necessary to collect essential data; non-routine lab work such as development of new methods or significant modification to existing methods essential to the research; statistical, computational, or mathematical calculations; or development and application of modeling specific to the project), or
   c. Analysis and interpretation of data.

2. Wrote or provided editorial revisions to the work product containing critical intellectual content.

3. Approved the final version to be published and agreed to be accountable for all aspects of the work product.

Any individual who has met these three criteria, independent of their rank, status, or affiliation, should be named as an author. Any individual who has not met these three criteria, independent of their rank, status, or affiliation, should not be named as an author. An individual who knowingly publishes the intellectual work of another individual may make a substantial intellectual contribution in several different ways, including:

- Analysis and interpretation of data.
- Acquisition of data or development of models (e.g., non-routine lab work such as development of new methods or significant modification to existing methods essential to the research).
- Conceptual design (e.g., formulation of hypotheses, refining research ideas, development of study objectives; or the definition of experimental, statistical, modeling, or analytical approaches).

Case Studies

Yours, Mine, or Ours

You are assigned the task of completing a work product that was started by another EPA employee in a different office a few years ago. The other employee had designed an approach, researched and compiled information, and developed a rough draft, but was reassigned to more urgent projects and never completed the work product. You are told to revise the draft. However, you soon realize the draft needs more, and you essentially rewrite the entire document. You remove the other employee’s name from the author list because you completely reorganized the document, the other employee apparently doesn’t care about authorship because he never finished the project, and after all, we are “one EPA.” Is this consistent with best practices?

No. The previous employee made a substantial intellectual contribution (criterion #1), wrote critical intellectual content (criterion #2), and may be willing to help you finalize the work product if given an opportunity (criterion #3). Substantially revising someone else’s work does not discount the significance of the original contribution. You should at least contact the previous employee to discuss on the issue of authorship for the final work product.

Taking Stock

You inherit stock worth $26,000 in a company that manufactures a particular chemical. There are lots of other companies that manufacture this same chemical. You’re not sure what to do with the stock, so you ask a colleague who is working hard on a paper about the toxicological effects of that same chemical in drinking water. Is this a violation of EPA’s Scientific Integrity Policy and should be reported to EPA’s Scientific Integrity Official?

Yes. Even if there are other companies that manufacture this same chemical, your ownership interest is greater than the regulatory de minimis level. You cannot own more than $15,000 in any particular entity and still work on matters of general applicability, which is what this example describes.

Can We Renegotiate?

At the start of a project, all of the team members agree on authorship order, with the project leader as primary author. Just as the project begins, the project leader is promoted and can no longer lead the day-to-day operation of the project. She assigns one of the team members as the new project leader. Assuming the role of primary author, the new project leader begins discussing a new authorship order. However, the branch chief says the existing authorship order will remain. Is this consistent with best practices?

It depends. Authorship order does not need to change simply because the status of an author has changed. However, the new branch chief may refuse to recognize an author’s responsibilities changes. With a promotion to a more “senior” position and reduced day-to-day project responsibilities, the new branch chief may want to suggest taking the role of “senior” author and be listed last, with the new project leader taking the role (and responsibilities) of primary author and listed first.

Common Authorship abuses

All of these types of authorship are unacceptable:

- Honorary, gift, or courtesy authorship is given to an individual who does not meet the criteria for authorship. This type of authorship is provided for various reasons. Sometimes authorship is provided to employees who do not meet the criteria for authorship to protect the project leader as primary author from being individually accountable for a project. This can happen if a project leader has been reassigned or is otherwise unable to complete the work product. Alternatively, it may be given to an employee who worked on the project but does not meet the criteria for authorship. In either case, authorship may be given authorship for the final work product.

- Surprise authorship is the failure to give authorship to an individual who meets the criteria for authorship. Surprise authorship is also sometimes used to obfuscate the involvement of an individual or institution in a work product.

- Ghost authorship is authorship given to an individual who makes a substantial contribution to a work product but does not meet the criteria for authorship. Ghost authorship is a violation of EPA’s Scientific Integrity Policy and should be reported to EPA’s Scientific Integrity Official.

- Authorship order does not need to change simply because the status of an author has changed. However, the new branch chief may refuse to recognize an author’s responsibilities changes. With a promotion to a more “senior” position and reduced day-to-day project responsibilities, the new branch chief may want to suggest taking the role of “senior” author and be listed last, with the new project leader taking the role (and responsibilities) of primary author and listed first.

- Anonymous authorship is a violation of EPA’s Scientific Integrity Policy and should be reported to EPA’s Scientific Integrity Official. Individuals who make a substantial contribution to a work product but do not meet the authorship criteria specified above should be listed in an acknowledgments section with a brief description of what they did. Creditable worthy contributions can include literature searching, contract or project management, supervision, mentorship, or other uncredited authorship. Such an individual should be listed in the acknowledgments section. If an individual makes a substantial contribution to a work product without having contributed to the work or accepting responsibility for the publication’s content, please consult with their own ethics officials or the Office of General Counsel/Ethics in Advance.
What Did You Think?

We strive to constantly provide the highest level of value for you. Please take a few minutes to tell us about your experience using this product.

To be taken to a short consumer satisfaction survey, please click here or copy and paste the following URL into your browser:


Thank you for your feedback.

Sincerely,

Office of the Science Advisor
United States Environmental Protection Agency
www.epa.gov/OSA@epa.gov