

# EPA's Approaches for Expressing and Resolving Differing Scientific Opinions

## Safeguarding Science to Protect Human Health and the Environment

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### Introduction

Differing scientific opinions (DSO) should be welcomed and encouraged as a legitimate part of the scientific process. The expression of differing scientific opinions is necessary for independent, robust science. This document recommends a progression of approaches that employees and managers can use to encourage the expression and satisfactory resolution of differing scientific opinions.

- Scientific products and decisions are strengthened by considering all pertinent evidence and exploring various plausible explanations of that evidence.
- Vigorous internal discussion of different points of view helps to anticipate counter-arguments and alternative positions that could arise during public comment, peer review, and litigation.
- This process of challenging and improving ideas helps to guard against inadequate science and flawed analyses.
- It also creates a stimulating work environment where employees can develop professionally.

EPA's Scientific Integrity Policy "Mandates the Scientific Integrity Official, with input from the Deputy Scientific Integrity Officials, to develop a transparent mechanism for Agency employees to express differing scientific opinions [§IV.A.3]." The Scientific Integrity Policy is based on the Presidential memorandum on scientific integrity,<sup>1</sup> the Office of Science and Technology Policy memorandum on scientific integrity,<sup>2</sup> and has been affirmed by this Administration.<sup>3</sup> In addition, under EPA's Principles of Scientific Integrity,<sup>4</sup> EPA employees must "Welcome differing views and opinions on scientific and technical matters as a legitimate and necessary part of the process to provide the best possible information to regulatory and policy decision-makers."

### Applicability

- The approaches suggested in this document apply to differing opinions regarding scientific data, interpretations, or conclusions. They do not apply to opinions regarding policy options or decisions. The distinction between science and policy is fundamental, and these approaches are focused on professional opinions regarding scientific information, methods, models, analyses, results, and conclusions. These approaches do not address personal opinions about scientific issues that are not accompanied by scientific arguments.
- All EPA employees (including scientists, managers, and political appointees) are required to follow EPA's Scientific Integrity Policy<sup>5</sup>. In addition, EPA contractors, grantees, collaborators, and student volunteers who engage in scientific activities agree to comply with the Policy as part of their agreements with EPA<sup>6</sup> [Policy §III].

### Paths Towards Resolution of a Differing Scientific Opinion

#### INTERNAL DELIBERATIONS

<sup>1</sup> Presidential memorandum on scientific integrity (March 9, 2009): <https://www.gpo.gov/fdsys/pkg/FR-2009-03-11/pdf/E9-5443.pdf>

<sup>2</sup> OSTP memorandum on scientific integrity (December 17, 2010): <https://obamawhitehouse.archives.gov/administration/eop/ostp/library/scientificintegrity>  
<https://www.whitehouse.senate.gov/download/letter-from-epa-on-nbep>

<sup>3</sup> EPA's Principles of Scientific Integrity (1999): <https://www.epa.gov/osa/epas-principles-scientific-integrity-fact-sheet>

<sup>4</sup> EPA's Scientific Integrity Policy: [https://www.epa.gov/sites/production/files/2014-02/documents/scientific\\_integrity\\_policy\\_2012.pdf](https://www.epa.gov/sites/production/files/2014-02/documents/scientific_integrity_policy_2012.pdf)

<sup>5</sup> General terms and conditions for grants: <https://www.epa.gov/grants/epa-general-terms-and-conditions-effective-october-1-2018>

Hallmarks of a constructive, free and open discussion are:

- Being respectful of others and their views
- Listening to others without interrupting
- Including persons with different points of view, including potential dissenters
- Involving everyone in the discussion
- Linking to and building on what has already been said
- Avoiding documentation by one person or point of view

#### **DISCUSSIONS AUGMENTED BY ADDITIONAL SUBJECT MATTER EXPERTS**

- Invite subject matter experts to enrich the discussion

#### **INVOLVING OFFICE MANAGEMENT**

- Managers might suggest additional approaches or bring additional expertise

#### **SEEKING ADVICE FROM A SCIENTIFIC INTEGRITY OFFICIAL**

- The organization's deputy scientific integrity official or the Agency's Scientific Integrity Official are available to provide advice and assistance

#### **PEER REVIEW**

- While these approaches do not create a right to peer review, differing scientific opinions may be addressed during scientific peer review
- The responsible manager works with all sides to formulate a charge to guide the peer review
- Peer review may be internal, external, ad hoc or included in an already established peer review for the product

#### **DOCUMENTATION**

- A factual, impartial, clear, concise summary of the differing scientific opinion should be prepared. Commonly this will be up to 500 words, plus a table or figure if needed, and references.

### **Resolution**

The Differing Scientific Opinion may be resolved at any of the steps outlined above. But if it is not, then it is included in the deliberative documents presented to decision makers. If it is resolved through peer review, then reports from those peer reviews will be made available to for consideration by decision officials.

### **Safeguards**

- EPA's Scientific Integrity Policy states that the policy "extends whistleblower protections to all EPA employees who uncover or report allegations of scientific and research misconduct, or who express a differing scientific opinion, from retaliation or other punitive actions [§IV.A.3]." <sup>7</sup> Differing scientific opinions should be welcomed and encouraged as a legitimate part of the scientific process. Retaliation, even the threat of retaliation, against employees who express differing scientific opinions shall not be tolerated and may result in disciplinary action. <sup>8</sup> An employee who experiences or fears retaliation based on expressing a differing scientific opinion may contact EPA's Scientific Integrity Official for advice and assistance. <sup>9</sup>
- In addition, for employees who feel they cannot openly express a differing scientific opinion, a confidential option for bringing their concerns to the attention of the Scientific Integrity Official is available.

Learn more: <https://www.epa.gov/osa/basic-information-about-scientific-integrity>

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<sup>7</sup> Information on whistleblower protection is available at: <https://www.epa.gov/office-inspector-general/whistleblower-protection>

<sup>8</sup> Information on protection from retaliation is available at: <https://www.eeoc.gov/laws/types/retaliation.cfm>

<sup>9</sup> Other resources include EPA's Whistleblower Protection Coordinator ([https://www.epa.gov/office-inspector-general/whistleblower-protection#wbp\\_ombudsman](https://www.epa.gov/office-inspector-general/whistleblower-protection#wbp_ombudsman)), the Office of Inspector General Hotline ([https://www.epa.gov/office-inspector-general/epa-oig-hotline#file\\_now](https://www.epa.gov/office-inspector-general/epa-oig-hotline#file_now)), and the Office of Special Counsel (<https://osc.gov/>).